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Analyzing Gen Z's Travel Influence in the Digital Age: The Correlational Effect of Social Media



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ABSTRACT: This study explores the impact of social media on the travel decision-making process of Generation Z, utilizing the Engel-Kollat-Blackwell (EKB) model as a framework. Generation Z, comprising individuals born between 1997 and 2012, is characterized by their high level of digital fluency and reliance on social media for gathering information and making informed travel choices. Conducted with 350 Generation Z travellers in Santa Fe, Bantayan Island, Cebu, Philippines, this research employs a descriptive-correlation design and a survey questionnaire to gather insights. The findings reveal that social media significantly influences three key stages of the Engel-Kollat-Blackwell (EKB) model: need recognition, information search, and post-purchase behavior. In the need recognition stage, travel content on social media sparks Generation Z's desire for exploration. During the information search phase, users seek reviews and recommendations from peers and influencers to better understand their travel options. After making their travel decisions, Generation Z shares their experiences on social media, influencing their peers and encouraging ongoing engagement. While social media's impact on the alternative evaluation and purchasing stages is recognized, it appears less pronounced than in the earlier stages. This underscores the critical role that social media plays in shaping the travel decision-making process for Generation Z, highlighting the need for engaging content and authentic interactions to effectively influence their choices. These insights underscore the essential role of social media in shaping travel preferences among Generation Z. To effectively engage this demographic, travel and tourism businesses should craft targeted marketing strategies that emphasize authentic content and influencer partnerships, thereby fostering brand loyalty and driving purchasing decisions.

KEYWORDS: Social Media, Generation Z, Purchase Decision, Engel-Kollat-Blackwell Model, Travel Influence, Correlation

I. INTRODUCTION

The rapid growth of technology and easy access to the internet have significantly transformed how people shop and make decisions (Cavlak, 2021). On average, individuals spend around 2 hours and 27 minutes online daily (Chaffey, 2022), with social media becoming a crucial tool, particularly for Generation Z. Generation Z, or Gen Z, represents individuals born approximately between 1997 and 2012, positioning them as the generation that comes after Millennials (Generation Y). Presently, they are in the age range of early teens to mid-20s. Known for being highly tech-savvy, Generation Z uses social media more than any other age group, which greatly influences their buying habits (Al Masud, 2023).

Brands have recognized the potential of influencers and content marketing to connect with consumers by sharing engaging and informative content (Pulizzi, 2020). Major companies like P&G, Microsoft, and John Deere have effectively employed content marketing to reach their target audiences. As Generation Z frequently turns to social media to discover new products, seek advice, and check reviews, content marketing exerts a powerful influence on their purchasing decisions. In fact, a study found that social media impacts the buying decisions of 81% of consumers (Forbes, 2021).

Content marketing serves as a "pull" strategy, focusing on creating valuable content that aligns with consumers' interests and needs (Liu & Huang, 2015, as cited by Ho Zhen et al., 2021). Ansari et al. (2021) found that social media content marketing has a moderately positive and significant impact on consumer purchase decisions. Moreover, a Forbes (2021) study highlighted that 81% of consumers are influenced by social media posts from friends when making purchasing decisions. Similarly,

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GlobalWebIndex reported that 54% of social media users utilize these platforms for product research, and 71% are more likely to purchase products or services based on social media referrals (Barysevich, 2020).

Content marketing has emerged as the foundation for internet marketing campaigns, with social media marketing becoming a subsequent step (Chris, 2021). As social media continues to gain traction, it plays an increasingly important role in promoting websites and brands, often surpassing traditional link-building methods.

In the tourism industry, social media has proven to be an influential factor in tourists' destination selection (Tham et al., 2020). While social media consistently impacts destination choices, its influence can vary depending on when tourists are exposed to such content. This contextual influence suggests that social media's role in decision-making can be valuable under specific conditions.

Abdullaev and Anggraini (2023) further emphasized that globalization and the rapid evolution of communication technologies have revolutionized the way individuals connect worldwide. Consequently, social media marketing (SMM) has gained popularity across various industries to enhance customer interactions, word-of-mouth marketing, brand value, and recognition. Travelers, in particular, are increasingly turning to social networks to make decisions, highlighting the growing influence of social media in tourism marketing.

Despite these developments, industries have not fully explored the potential of social media marketing for branding purposes (Sundaram et al., 2020). A limited understanding of digital marketing strategies poses a risk to long-term brand viability. Dwivedi et al. (2021) echoed this sentiment, stressing the need to expand the literature on digital and social media marketing as it continues to be an integral part of organizational marketing strategies.

While research has explored how social media affects consumer behavior in general, there remains a need to understand its specific impact on Generation Z's travel decisions. Gen Z interacts with online content differently from other generations, relying heavily on online reviews, influencers, and trends. It is essential for businesses to understand how these factors shape Gen Z's buying patterns to develop more effective marketing strategies.

This study examines how social media influences Generation Z's travel behavior, providing insights that help travel industry create targeted marketing strategies tailored to this demographic. The findings also offer valuable information for students and professionals in fields such as hospitality, tourism, and marketing, contributing to a clearer understanding of the factors that shape Gen Z's buying decisions in today's digital world.

II. CONCEPTUAL BACKGROUND AND HYPOTHESES

To support this investigation, the Engel Kollat Blackwell (EKB) model, also known as the consumer decision process model, was employed. The EKB decision-making model, proposed by Engel, Kollat, and Blackwell in 1968, organizes and describes consumer behavior by illustrating how decisions are made when selecting from a range of available options (Osei & Abenyin, 2016). This model is particularly relevant to Generation Z's travel and destination choices, as it highlights how social media influences each stage of their decision-making process.

The EKB model identifies five key stages of consumer decision-making: need recognition, information search, alternative evaluation, purchase, and post-purchase behavior (L.M, 2021). For Generation Z, who are tech-savvy and spend significant time on social media, these stages are heavily influenced by online content marketing, particularly in their travel-related decisions. Figure 1 illustrates how social media content marketing influences each dimension of the EKB model, demonstrating how Gen Z interacts with social media to make informed travel decisions.

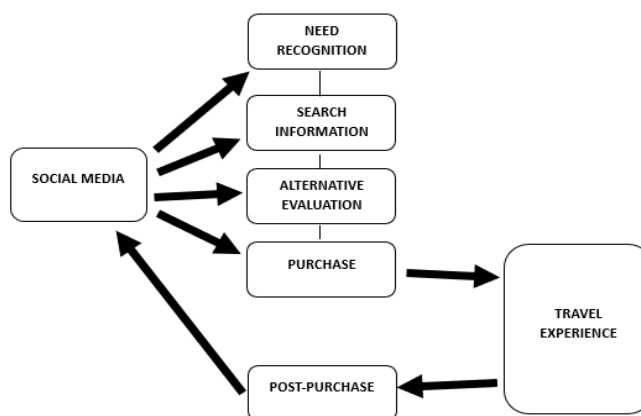


Figure 1: Conceptual Model (Source: Author's work)

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Need Recognition. For Generation Z, the need for travel is often triggered by exposure to social media content, such as influencer posts, travel vlogs, or destination photos. According to Milner and Rosenstreich (2013), the consumer's journey begins when a need or problem is identified. In this case, the desire to explore new places is often sparked by social media stimuli, which play a significant role in creating a sense of wanderlust. This aligns with Grimsley's (2021) idea that marketing is centered on identifying needs and creating products or services to meet them. Social media platforms like Instagram and TikTok are prime examples of where Gen Z consumers often first recognize their need for travel. When they see peers or influencers visiting a particular destination, they become aware of their own desire to experience similar adventures, thus beginning their decision-making process.

Information Search. Gen Z actively searches for travel information through social media platforms, blogs, and travel review websites. According to GlobalWebIndex, 54% of social media users conduct product research on the platform (Barysevich, 2020). In the context of travel, Gen Z relies on user-generated content, reviews, and travel tips shared by influencers or fellow travelers. This stage is crucial as it helps them gather information about various destinations, accommodations, and travel experiences. The study by Volo & Irimiás (2022) supports this, indicating that online travel information searches play a vital role in shaping travel choices. Generation Z's reliance on smartphones and social media apps for information makes this stage even more prominent in their travel decision-making.

Alternative Evaluation. At this stage, Generation Z evaluates different travel options by comparing destinations, accommodations, and travel packages, often using social media as a reference. They assess factors like price, quality, reviews, and the unique experiences each destination offers. According to Mishra (2018), this evaluation process is based on criteria such as price, product quality, and offers, all of which are heavily influenced by social media marketing. For Gen Z, visual content such as destination photos, travel itineraries, and user reviews play a significant role in shaping their preferences. They often create comparison lists based on social media content, enabling them to make informed travel decisions.

Purchase. When it comes to purchasing travel services, Generation Z often relies on online platforms to book flights, accommodations, and experiences. According to GlobalWebIndex (2020), 71% of consumers are more likely to purchase products and services based on social media referrals. Therefore, engaging and authentic content on social media platforms is crucial in converting Gen Z from potential travelers into actual customers. Brands that successfully leverage social proof, positive testimonials, and influencer endorsements are more likely to influence Gen Z's purchasing decisions for travel experiences.

Post-Purchase Behavior. After making travel purchases, Generation Z continues to engage with social media by sharing their experiences, leaving reviews, or engaging with brands. Their satisfaction or dissatisfaction can influence future travel choices and the choices of their peers. According to Butkouskaya et al. (2021), customer satisfaction significantly mediates the relationship between marketing communications and post-purchase behavior.

Positive travel experiences often result in Gen Z sharing their journey on social media, which, in turn, influences others within their network to consider similar destinations. Conversely, negative experiences may lead to unfavorable reviews or posts, impacting the brand's reputation and future travelers' choices.

The EKB model provides valuable insights into how Generation Z's travel and destination choices are influenced by social media content marketing. The model's stages—need recognition, information search, alternative evaluation, purchase, and post-purchase behavior—are all impacted by the extensive use of social media in Gen Z's decision-making process.

In line with the study's objectives, the research sought to understand the influence of social media content marketing on Generation Z's travel decisions across the different stages of the Engel-Kollat-Blackwell (EKB) model. The EKB model provides a comprehensive framework for analyzing consumer decision-making processes, which include need recognition, information search, evaluation of alternatives, purchasing, and post-purchase behavior. Using this model, the study conceptualized the influence of social media on each stage of Generation Z's travel decision-making process.

To guide the investigation, the following null hypotheses were formulated and tested at a 0.05 level of significance:

- H1:** There is no significant relationship between social media and Gen Z's need recognition in travel decisions.
- H2:** There is no significant relationship between social media and Gen Z's information search for travel destinations.
- H3:** There is no significant relationship between social media and Gen Z's evaluation of alternative travel options.
- H4:** There is no significant relationship between social media and Gen Z's purchasing decisions for travel.
- H5:** There is no significant relationship between social media and Gen Z's post-purchasing behavior in travel decisions.

III. RESEARCH METHODOLOGY

The study utilized a descriptive-correlation research design to explore the relationships between social media and the travel decision-making processes of Generation Z. This research was conducted in Santa Fe, Bantayan Island, Cebu, Philippines, a location renowned for its vibrant tourism industry and beautiful attractions.

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To gather data, the researchers employed convenience sampling, which involved selecting 350 respondents from the target demographic of Generation Z travellers. Participants were chosen based on their proximity to the researchers and their willingness to engage in the study. This method was deemed appropriate given the challenges in identifying a specific population of Generation Z travellers in the area.

Before the main survey, a dry run of the questionnaire was conducted to ensure its reliability and effectiveness. The internal consistency of the survey items was assessed using Cronbach's alpha, a widely accepted measure for reliability in research instruments. The results yielded a Cronbach's alpha of 0.914, indicating a very high level of internal consistency. As noted by George and Mallery (2003), a score above 0.90 reflects excellent reliability (Saidi and Siew, 2019). This affirms that the questionnaire is a credible tool for investigating how social media content marketing influences Generation Z's travel decisions.

Moreover, the data management plan was created which included an accurate recording of collected data, data documentation, storage, and proper disposal of data. These were important considerations for the researchers to ensure the privacy of the data collected for this study.

IV. RESULTS AND DATA ANALYSIS

The study began with a descriptive analysis of how Generation Z respondents engaged with social media and its impact on their consumer decision-making processes. This analysis offered valuable insights into their digital behaviors and preferences. Subsequently, the study examined the significance of the relationship between social media and the decision-making process for selecting a travel destination. This part emphasized how social media influenced decision process stages, including need recognition, information search, alternative evaluation, purchase decisions, and post-purchase behavior.

Table 1: Gen Z's Social Media Engagement

Indicators	Mean	Standard Deviation
1. I used social media daily.	4.5	0.68
2. I engage with content on social media (likes, comments).	4.3	0.69
3. I share posts or updates on my social media accounts.	4.1	0.91
4. I follow trends and topics on social media.	4.4	0.82
5. I feel connected to others through social media.	4.6	0.85
TOTAL	4.38	0.64

The findings indicate that Generation Z respondents are very active on social media, with many using it daily and feeling connected to others through these platforms. They regularly engage with content by liking and commenting, follow trends, and often share their own posts. The overall mean of 4.38 reflects a high level of social media engagement among the respondents.

Table 2: Normality Test

	Statistic	p
Kolmogorov-Smirnov	0.236	> .005

Normality Test. The normality of the data was assessed using the Kolmogorov-Smirnov test. The results of the Kolmogorov-Smirnov test indicated that the p-values for each variable were above the significance level of 0.05, suggesting that we failed to reject the null hypothesis of normality for the variables examined. This result support the appropriateness of using Pearson's correlation to analyze the relationships between social media engagement and the stages of the EKB model.

Table 3: Correlation Results and p-Values

	Social Media Pearson's r	p-value
Need Recognition	0.68	0.043
Information Search	0.87	0.008

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	Social Media Pearson's r	p- value
Alternative Evaluation	0.79	0.064
Purchase	0.74	0.110
Post-Purchase	0.77	0.007

Test of Significance. The analysis shows that social media influences how Gen Z makes travel decisions in different ways. For H1, which said there would be no link between social media and recognizing travel needs, the results showed a moderate connection ($r = 0.68$, $p = 0.043$). This means social media does play a role, so H1 is rejected. The same goes for H2, where a strong link was found between social media and how Gen Z searches for travel information ($r = 0.87$, $p = 0.008$), leading to the rejection of this hypothesis. For H3, which claimed there was no link between social media and evaluating travel options, the results did not show a strong connection ($r = 0.79$, $p = 0.064$), so this hypothesis is accepted. Similarly, H4 found no strong link between social media and Gen Z's purchasing decisions ($r = 0.74$, $p = 0.110$), so this hypothesis is also kept. Finally, H5 is rejected because there was a strong link between social media and post-purchase behavior ($r = 0.77$, $p = 0.007$).

These findings suggest that social media has a significant impact on specific stages of the decision-making process, especially in Need Recognition, Information Search, and Post-Purchase behavior, while its influence is less evident in the Alternative Evaluation and Purchase stages.

V. DISCUSSIONS

The results of the analysis highlight the significant role that social media plays in Gen Z's travel decision-making process. The data indicated that social media greatly affects all dimensions of this process (need recognition, information search, alternative evaluation, purchase, and post-purchase behavior). This extensive influence suggests that social media is a key factor for Gen Z when selecting travel destinations.

For Gen Z, social media is not just a platform for social interaction; it is a primary source of information and inspiration. According to Varkaris & Neuhofer (2017), social media assists consumers in gathering information about products and services, evaluating different options, and making informed decisions. Potential travelers often turn to social media content at various stages of their trips, including planning, during the trip, and after returning home. This aligns with Gen Z's tendency to seek authentic experiences and rely on digital content for guidance in their decision-making.

Furthermore, Shu and Scott (2014), as cited by Saito et al. (2018), emphasize that influencers in travel choices are not limited to close friends but also include social media personalities and content creators. This is particularly relevant for Gen Z, who often trust influencers more than traditional advertising. Social media platforms shape their perceptions of destinations, creating impressions that can either entice or deter them from choosing a particular location.

These insights emphasize that Gen Z not only uses social media to discover and search for travel options but also continues to be influenced by it after making travel decisions. Therefore, marketers should focus on creating content that resonates with Gen Z's preferences, such as influencer collaborations, user-generated content, and real-time engagement, to maintain a significant presence throughout their travel journey.

V. CONCLUSIONS

In conclusion, the study demonstrates that social media significantly influences Gen Z's travel decision-making process across multiple stages. From the initial stage of need recognition to information search, alternative evaluation, purchase decisions, and post-purchase behavior, social media emerges as a vital tool that guides this generation in shaping their travel preferences. Gen Z relies heavily on social media platforms not just for discovering travel destinations but also for validating their choices through the experiences, reviews, and recommendations shared by others.

This reliance on social media reflects Gen Z's preference for authenticity, real-time engagement, and user-generated content when making travel decisions. Influencers, online reviews, and social media communities play a substantial role in forming their perceptions, building trust, and ultimately influencing their travel behaviors. As a result, businesses in the travel and tourism industry must recognize the power of social media as a strategic tool for reaching Gen Z travelers.

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Improving the Reading Level of Grade 3 Learners Using Contextualized Skill Book in English



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ABSTRACT: The researcher determined eleven grade 3 learners belonged to the struggling level where they got low scores in pre-test of the Functional Literacy Assessment Tool (FLAT) in the first quarter of SY 2022–2023. Nevertheless, with the commitment and dedication of the researcher as a teacher, the researcher decided to develop reading material that suited the learners. Moreover, it aimed to develop a contextualized skill book in English to improve the reading level of grade 3 learners.

Accordingly, the study focused on improving the reading level and effectiveness of the contextualized skill book used. Furthermore, learners' reading levels improved after the intervention's implementation. In addition, pre-test and post-test results showed a significant difference, which implies that the intervention is effective. Particularly, as perceived by the learners, the contextualized skill book improved their reading abilities and academic performance in other subjects, consequently their love for reading developed. Finally, the contextualized skill book used showed effectiveness among the respondents, as well as appropriate for struggling learners. Similarly, the skill book was extremely recommended for use by other educators in the improvement of the reading level of their learners.

Therefore, the researcher recommended that other researchers develop a contextualized skill book used as an intervention for struggling readers because it proved effective in improving the reading level of learners.

KEYWORDS: reading level, intervention, contextualized, implementation, effect, result

I. INTRODUCTION

Reading is essential for mental growth since it gives us useful knowledge and life skills and helps us understand the world. By increasing our vocabulary and enhancing our communication skills, it keeps our thoughts active and our creative juices flowing. Despite this, a number of kids currently read below the level that is expected for their respective grade levels. Nevertheless, reading remained a vital component of efficient interaction with the outside world.

A researcher looked for evidence to back up her claim about the low literacy rates. Global literacy levels have significantly increased during the previous two centuries, claim Ortiz-Ospina and Roser (2018). Only 14% of the world's population remained illiterate in 2016, down from 12% in 1820 when only 12% of people could read and write. The global literacy rate increased steadily throughout the last 65 years, increasing by 4% every 5 years, from 42% in 1960 to 86% in 2015. By making sure that every learner developed reading proficiency, this knowledge encouraged teachers to raise literacy rates.

The Philippines received the lowest reading comprehension score among the 79 nations and economies that took part in the 2018 Program for International Student Assessment (PISA), which revealed on Tuesday. additionally, PISA is a global assessment of students' knowledge in reading, mathematics, and science administered by the Organization for Economic Cooperation and Development. In the 2018 PISA, reading was the primary subject assessed among 15-year-old students. The Philippines had a reading score of 340 on average, which was more than 200 points lower than China's score of 555 and more than 100 points below the OECD average of 487. Furthermore, according to the Philippine Star (2019), both the Philippines' and girls' reading performance ranked last among PISA-participating countries.

Finally, Vice President and Secretary of Education Sara Duterte signed DepEd Order 44 Series of 2022, allowing the resumption of face-to-face classes, which disrupted for nearly two years due to the pandemic. Educators taken aback by kids' reading and academic performance, with many struggling to read at their expected level. This study also looked into the

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possibility of using modern student resources as remedial methods for teaching reading. The critical point for prioritizing our learners' current requirements and circumstances.

Learning to read starts with letter sounds, then moves on to blending, and then to three-letter words. There are no shortcuts in this procedure, which needs patience, consistency, and tenacity. Reading levels can, however, improve appropriate reading resources. Readers must integrate text-based information with past knowledge to generate a deeper understanding of the text, according to Kanninen, Kiili, Tolvanen, Aro, and Leppanen (2022). Unfortunately, some readers experienced with precise and fluent word identification, as well as spelling and decoding ability, which can contribute to reading comprehension difficulties

Research on contextualization in college settings revealed that employing materials anchored in students' cultures was helpful; in 2022, Mazzariello emphasized two types of contextualization that researched: contextualized and integrated instruction. However, as mandated by our educational system, just a few researches on contextualization carried out at the basic level for the next academic year 2022-2023. Despite the creation of contextualized materials, the researcher did not formally state that the goal of the study was to produce a recognized contextualized skill book in her name.

Reading is essential in the educational system, according to IPL.org (2021). According to Gutman, children require adequate education to improve their reading and comprehension skills. However, some students may struggle with their reading abilities owing to a variety of causes, resulting in them failing to attain the projected grade 3 level. To address this issue, a researcher ran a study at Mangan Elementary School to improve the reading competency of grade 3 learners.

As a result, the researcher used the Functional Literacy Assessment Tool (FLAT) results as the basis for creating a contextualized skill book as a study outcome that raised learners' reading proficiency and created specifically for them. The researcher developed contextualized and localized materials in accordance with the department's directive regarding the K-12 curriculum to attract their attention by utilizing familiar material.

In conclusion, it was evident that these efforts were ineffective without proper reading materials customized to their needs despite adopting a five-minute reading program before every subject and a daily remedial reading session from 1:00 to 1:30. The researcher established a weekly remedial reading session that employed assessment and training every Friday from 3:40 to 4:30 to solve the problem. Finally, an English 3 contextualized skill book found effective in this study.

II. RESEARCH QUESTION

This research aimed to improve the reading level of struggling readers at Mangan Elementary School using the contextualized skill book in English 3. Specifically, it determined to find the answer to the following questions:

1. What are the reading levels of grade three learners in pre-test and post-test?
2. Is there a significant difference in the reading level of Grade 3 after the implementation of the intervention?
3. What is the perception of the learners of the reading intervention used?

III. METHODOLOGY

3.1 Research Design

In this study, quasi-experimental one-group pre-test-post-test design used. Besides, this design doesn't require large sample size or high cost to follow up with a control group. Furthermore, the outcome of interest measured twice, before and after exposing a non-random group of participants to a specific intervention or treatment. Quasi-experimentation is a significant methodological development in the social sciences, as per Reichardt (2019). Additionally, the FLAT (Functional Literacy Assessment Tool) used as a new data-gathering tool in the elementary department during the second year, which doesn't require validation.

Finally, this design aimed to determine the improved reading level of respondents using the contextualized skill book in English 3.

3.2 Participants

For this study, Grade 3 learners as respondents represented the total population. Total population sampling is a purposive sampling technique that involves examining the entire population with specific characteristics, such as attributes, traits, experience, knowledge, skills, exposure to an event, and more, according to Tagama (2020). Although total population sampling is not commonly used, it can be particularly useful in certain types of research. Definitely, units make up the population when sampling, and in total enumeration sampling, it is likely that these units will be people.

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Moreover, all the grade 3 learners participated, since they were small and had poor reading skills. There were (6) six letter-level readers, (2) two syllable-level readers, and (3) three word-level readers in grade 3 at Mangan Elementary School in Santol District of the Division of La Union for the school year 2022-2023 during pre-test.

3.3 Intervention

Initially, the purpose of contextualized skill book was to enhance the reading level of grade 3 learners. Besides, the book designed using trusted strategies and approaches to reading, as well as reading materials such as the Marungko Approach, Dolch basic sight words, and the Fuller Method. Especially, to ensure its effectiveness, five district specialists and panels also evaluated the innovation and provided recommendations to further improve.

Particularly, the learners struggled to read even at letter level. In order to help the learners, the researcher used Marungko Approach to teach them the sounds. Once they mastered this skill, they read CVC pattern words with ease. At this time, with growing confidence in their reading ability, the researcher introduced the DOLCH basic sight words that helped improve their fluency. When they read fluently, the researcher introduced the Fuller method, which involved reading words, phrases, and sentences. In addition to this, to further develop their reading skills, the researcher gave them short stories to read and answered three to five comprehension questions. To sum up, the strategies used in this program helped learners improve their reading levels through contextualized skill books.

With regards to enhancing the reading abilities of learners and achieving better academic outcomes, additional measures taken beyond the regular 5-minute reading program and daily 1 o'clock reading habit, LUSSD (2021). For this reason, a weekly special session introduced from January to May 2023, every Friday from 3:40 to 4:30 p.m. During this session, learners reviewed and re-read weekly reading materials to ensure that they grasped the content within the given time frame. Indeed, the researcher facilitated the session, and learners' progress closely monitored, needs identified, and reading materials were adjusted accordingly.

3.4 Instrumentation and Data Collection

The innovation entitled Contextualized Skill Book in English 3 has eight focus areas in reading for twenty weeks of implementation. First, in week 1, dealt with phonics using Marungko Approach and read CVC pattern words by reading the code or letter. Second, in weeks 2–5, the Fuller Approach to Reading focuses on sound in reading three-letter words, phrases, sentences, and then short stories with minimal sentences only. Third, in week 6, there were medial vowel sounds with only three sets to ensure mastery. Fourth, in week seven, we focused on consonant blends. Fifth, in weeks 8–12, Dolch Basic Sight Words, with 10 sets to read. Sixth, in weeks 13–14, they focused on reading digraph words and sentences. Seventh, in weeks 15–17, read six short stories with comprehension. Lastly, in weeks 18–20, they focused on six contextualized stories with comprehension questions to check their reading comprehension.

3.5 Data Analysis

In order to determine the reading level of the learners before and after the intervention, as stated in problem number one, the Functional Literacy Assessment Tool (FLAT) used as the basis for the crafting of the contextualized skill book.

A t-test, according to Hayes (2022), is an inferential statistic used to assess if there is a significant difference in the means of two groups and how they related to each other. When the data sets have a normal distribution and unknown variances, T-tests utilized. Moreover, the t-test is a statistical hypothesis test that uses the t-statistic, t-distribution values, and degrees of freedom to evaluate statistical significance. Therefore, the significant difference in the reading level of the learners before and after the intervention measured using the T-test. The calculated t-value then compared against a value obtained from a critical value table called the T-distribution table. Whereas, the higher values of the t-score indicate that a large difference exists between the two sample sets and the smaller the t-value, the more similarity exists between the two sample sets.

Definitely, the formula for computing the t-value and degrees of freedom for a paired t-test is:

$$T = \frac{\text{mean 1; mean 2} - s(\text{diff})}{\sqrt{v(n)}}$$

where:

mean1 and mean2 = the average values of each of the sample sets.

s (diff) = standard deviation of the differences between the paired data values.

n = sample size (the number of paired differences).

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$n-1$ = degree of freedom.

In addition, for problem number three (3), the thematic analysis used to justify the perceptions of learners through the intervention. Moreover, the learners' responses recorded, treated, and analyzed using thematic analysis to get their perceptions on the effectiveness of the intervention materials used. The researcher meticulously examines the data to uncover reoccurring themes—topics, ideas, and meaning patterns.

IV. RESULTS

4.1 Reading levels of grade three learners.

Table 1. Reading Performance

Literacy Level	Pretest	Post Test
Mean	1.73	3.64
% of Mastery	28.78%	60.6%

The study went into the issues of readers who were having difficulty, offering several explanations. Finally, the researchers uncovered a key element during their prior grade levels: a lack of in-person engagement. Besides, the study included six letter-level students, two words-level learners, and three paragraph-level learners. Moreover, the researcher observed that after implementing the intervention and administering the post-test, none of the 11 struggling learners remained at the letter level, one was at the word level, four were at the paragraph level, four were at the story level, and two had advanced to the story + comprehension level.

The data in Table 1 reveals that the reading performance of 11 third-grade learners showed a significant improvement after receiving intervention. Their average score increased from 1.73 in pretest to 3.64 in post-test, indicating a notable improvement of 1.91 points. Furthermore, this increase in the mean score shows that their performance has gotten better. Additionally, the increase in the percentage of performance from 28.78% in pretest to 60.6% in post-test, which considered "Very Satisfactory" according to the Norms for Interpretations. Along with, this percentage change of 31.82% between pretest and posttest gives a more accurate reflection of the learners' progress. In conclusion, the intervention had a positive and significant impact on the reading performance of the learners.

4.2 Significant difference in the reading level of Grade 3 after the implementation of the intervention.

Table 2. T-test for the Significant Difference

Variables	Means	T value/ T Stat	P Value	Decision	Remarks
Pretest	1.73				
Post Test	3.64	-4.9	.000044	Reject Ho	Significant

Table 2 shows the difference in reading levels for third-grade students before and after an intervention. Furthermore, the T-test results indicated a significant difference, with a value of -4.89565 and a p-value of 0.000044, which is less than 0.05. Obviously, this means rejecting the null hypothesis and there was a significant relationship in reading levels after the use of contextualized skill books.

Educators use instructional materials, such as books, activities, and supplementary resources, to assist in teaching and learning. Apart from this, the utilization of contextualized skill books resulted in a significant increase in post test scores from 1.73 to 3.64. Similarly, Abalos, Valdez, and Ablao (2021) found that interventions and remedial instructions improved learners' reading levels.

4.3 Learners' perceptions of the reading intervention used.

The learners who used the contextualized skill book experienced several benefits apart from this, they discovered that it helped them read faster and enhanced their general reading ability. As their English reading skills improved consequently, they also noticed improvements in other subjects. Moreover, most of the respondents found the skill book beneficial both at school and at home. Along with this, they appreciated the convenience of being able to take it with them and read wherever they pleased. In summary, the learners enjoyed using the material and found that it significantly improved their reading comprehension. Besides, they also observed improvement in their fluency and spelling after using the skill book for an extended

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period. Therefore, after comparing pretest and post test results, the researcher concluded that the innovation was effective due to a significant improvement in the reading level.

V. DISCUSSION

From the famous line of an American journalist and critic, Fuller, M., "Today a reader, tomorrow a leader". In this case, the researcher believed that effective to motivate the youth through reading, respondents learn incredible knowledge and gain insight into different worlds, actions, and motivations, added by kumon.co.uk (Ltd, P.W.S.). In addition to this, a lot of benefits to developing reading skills at a young age. Moreover, as children learn to read, their vocabulary expands, and they gain a greater understanding of the meaning of words. Hence, it enables a child to be more expressive when they speak and use a broad range of words to express their ideas.

Generally speaking, developing confidence and independence in child's reading skills develop confidence and independence as they tackle unknown words on their own. Eventually, once they have a base knowledge of words, spelling, pronunciation, and grammar, they will feel more confident to learn new vocabulary alone using the knowledge they have previously acquired. Furthermore, young readers developed the ability to decipher unknown words and associated meanings and correct pronunciation as they saw patterns in the words they read in books.

Encouraging young children to engage with reading will help them develop into confident, independent learners. As a matter of fact, educators encouraged children to start reading from a young age; after all, as Margaret Fuller said, "If you have knowledge, let others light their candles in it." Moreover, the learners as seen in their responses go along with it because they were confident readers and still excited to read. Apart from this, the researcher continues to give them suitable reading materials that ignite their interest, just like this contextualized skill book that has a simple to higher level of reading difficulty.

As observed by the researcher during the study, the key concepts of consistency and conditioning helped the learners learn and appreciate reading, agreed to Kannianen (2019). In this case, the remedial teacher becomes consistent in the conduct of remedial reading sessions. In the long run, this led to keeping track of the progress of pupils from the first day up to the post-test, which ensured the remedial reading program was sustainable. Moreover, the giving of varied remedial reading materials that the learners can bring home and use in reading was a good intervention to consider. The next day, as required, learners read the text provided to them as their assignment.

It should be noted that contextualized reading passages, vivid illustrations, and word choices in each passage have guided readers to easily understand the story found in the teacher-created small books, making it an effective learning resource to help learners improve their reading abilities, as demonstrated by Abenir (2023). Absolutely, the respondents eagerly and excited to show in class that they could read the printed materials given to them with colorful backgrounds and attractive designs. Provided that, they waited when our school principal asked them again to go to her office and read. Besides, even waiting for visitors to let them read. Finally, they were not hesitant to read, just like before, now they enjoy reading confidently.

The above findings are congruent with the study of Tomelden (2019) on the effectiveness of remedial reading and agreed with Kannianen (2019) on his findings that the performance of learners improved when the correct reading materials were handed to them.

VI. CONCLUSIONS

Following the intervention, the third-grade learners' reading levels improved. As evidenced by pretest and post-test results, statistical treatment using the T-test, and learners' perceptions that they not only increased their reading levels but also their performance in all subject areas. Indeed, the intervention was beneficial and included as one of the interventions that used by other teachers with struggling readers.

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Understanding the Connection between Vitamin D and Diabetes: A Narrative Review



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ABSTRACT: Diabetes is a persistent medical condition distinguished by elevated concentrations of glucose in the bloodstream. This condition has a global impact, impacting millions of individuals, and inadequate management can result in a range of complications. Despite the absence of a cure for diabetes, exercise and diet, among other lifestyle components, can significantly impact its management. Interest in the potential function of vitamin D in the prevention and management of diabetes has increased in recent years. This article aims to investigate the correlation between vitamin D and diabetes, elucidate the possible mechanisms underlying its impacts, and survey the existing scientific literature that substantiates its efficacy.

KEYWORD: Diabetes, Vitamin D, Correlation, Review

INTRODUCTION

The relationship between vitamin D and diabetes has been extensively studied, with research indicating that vitamin D plays a significant role in both the pathogenesis and management of type 1 and type 2 diabetes. Vitamin D deficiency has been shown to predispose individuals to both types of diabetes, with its receptors found in beta cells and immune cells. Deficiency impairs insulin synthesis and secretion and may contribute to the onset of type 2 diabetes[1]. Epidemiological studies have also suggested a link between early-life vitamin D deficiency and the later development of type 1 diabetes [1]. Vitamin D supplementation has been observed to improve serum 25(OH) D levels and reduce insulin resistance, particularly in non-obese individuals, those with a vitamin D deficiency, and Middle Eastern populations. The benefits were more pronounced with high doses of vitamin D administered over a short term[2]. However, a large prospective study found no association between total vitamin D intake and type 2 diabetes, although there was a reduced risk associated with vitamin D intake from supplements and a combined intake of calcium and vitamin D[3]. A systematic review and meta-analysis highlighted that low vitamin D status, calcium, or dairy intake is consistently associated with prevalent type 2 diabetes or metabolic syndrome. Intervention studies suggest that vitamin D and calcium supplementation may prevent type 2 diabetes in high-risk populations, such as those with glucose intolerance[4]. Another study found a positive correlation between 25(OH)D concentration and insulin sensitivity, with hypovitaminosis D associated with insulin resistance and beta cell dysfunction[5]. Cross-sectional analyses have also shown independent associations of serum 25(OH)D concentration with insulin sensitivity and beta cell function among individuals at risk for type 2 diabetes[6]. Furthermore, vitamin D deficiency has been linked to an increased risk of gestational diabetes mellitus (GDM), with meta-analysis indicating a consistent association [7]. Vitamin D's role extends to its indirect influence on carbohydrate and lipid metabolism, potentially decreasing insulin resistance, severity of type 2 diabetes, and metabolic syndrome. However, the evidence from randomized control clinical trials is not conclusive, and further studies are needed to confirm these findings[8]. Vitamin D deficiency contributes to insulin resistance and the onset of diabetes by affecting inflammation, cellular calcium and ROS signaling, and epigenetic alterations of diabetes-related genes[9]. Lastly, a systematic review found that higher vitamin D intake and status were associated with a lower risk of developing type 2 diabetes, and vitamin D supplementation improved insulin resistance in patients with glucose intolerance[10]. In summary, the evidence suggests a multifaceted role of vitamin D in diabetes pathogenesis and management, with potential benefits of supplementation in improving insulin sensitivity and reducing the risk of diabetes in certain populations. However, more high-

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quality research is needed to fully understand the mechanisms and to establish clear guidelines for vitamin D supplementation in the prevention and management of diabetes.

The Role of Vitamin D in Glucose Metabolism

Vitamin D is increasingly recognized for its roles beyond bone health, with growing evidence suggesting its involvement in glucose metabolism and potential implications for cardiovascular risk and diabetes management. Vitamin D status is modestly associated with lower glycemia and insulin resistance, with a slight decrease in these markers for each increase in plasma 25(OH)D levels in children and adolescents[1]. Vitamin D supplementation in healthy men with low vitamin D levels maintained insulin levels and HOMA-IR values, suggesting a role in preventing an increase in insulin resistance[11]. Observational studies and meta-analyses indicate an inverse association between vitamin D and calcium intake and the prevalence and incidence of type 2 diabetes, with supplementation potentially beneficial in high-risk populations[12]. Vitamin D may influence insulin sensitivity and secretion, with low levels associated with increased inflammation and insulin resistance, although supplementation results are mixed[13]. The vitamin D endocrine system is involved in glucose homeostasis and insulin release, with genetic variations in the vitamin D receptor (VDR) gene potentially affecting susceptibility to diabetes and its complications [14].

Beneficial role of Vitamin D in glycemic control and lipid metabolism in diabetes mellitus

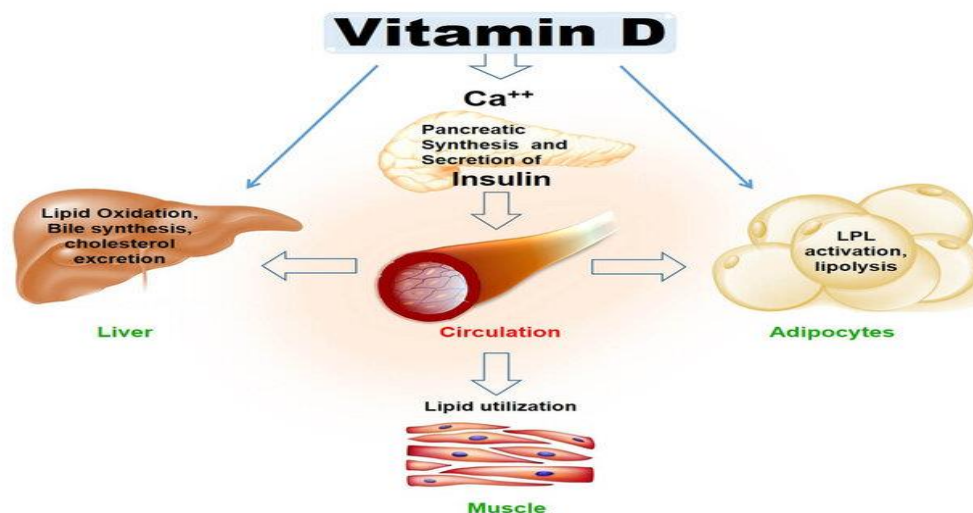


Figure 1:- Schematic role of vitamin D in insulin synthesis and secretion, and lipid metabolism in diabetic patients. Vitamin D directly or indirectly i.e. via calcium signaling enhances insulin synthesis and secretion which has impact on glycemic control in circulation enhance lipoprotein lipase activation that inhibit lipogenesis or increase lipolysis in adipose tissue; lipid utilization in muscles; and enhance lipid oxidation, bile synthesis, and cholesterol excretion by liver.

Vitamin D Deficiency and Its Impact on Diabetes Risk

Vitamin D deficiency has been extensively studied for its potential role in the development and progression of diabetes. The research indicates a complex relationship between vitamin D levels and the risk of both type 1 and type 2 diabetes, as well as the impact of vitamin D supplementation on glycemic control. Vitamin D deficiency is associated with an increased risk of type 2 diabetes, with lower plasma 25-hydroxyvitamin D [25(OH)D] concentrations linked to a higher cumulative incidence of the disease[4]. Deficiency in vitamin D may impair insulin synthesis and secretion, contributing to the development of type 2 diabetes, and vitamin D receptors have been identified in pancreatic beta cells and immune cells[8,15]. Vitamin D supplementation in individuals with prediabetes has been associated with a reduced progression to diabetes and improved insulin resistance and systemic inflammation[16]. In contrast, vitamin D supplementation did not prevent progression from prediabetes to diabetes in subjects without vitamin D deficiency, suggesting that supplementation may be more beneficial in deficient individuals[17]. Epidemiological studies suggest that vitamin D deficiency in early life could be linked to the later onset of type 1 diabetes, and certain polymorphisms within the vitamin D receptor gene are associated with type 1 diabetes in some populations[18]. Vitamin D supplementation in infancy is associated with a reduced risk of type 1 diabetes, indicating a potential preventive role[18]. Randomized controlled trials (RCTs) have shown mixed results, with some reporting moderate effects of vitamin D on glycemic control and insulin resistance in type 2 diabetes patients, while others have failed to demonstrate significant effects on insulin resistance or diabetes incidence [19].

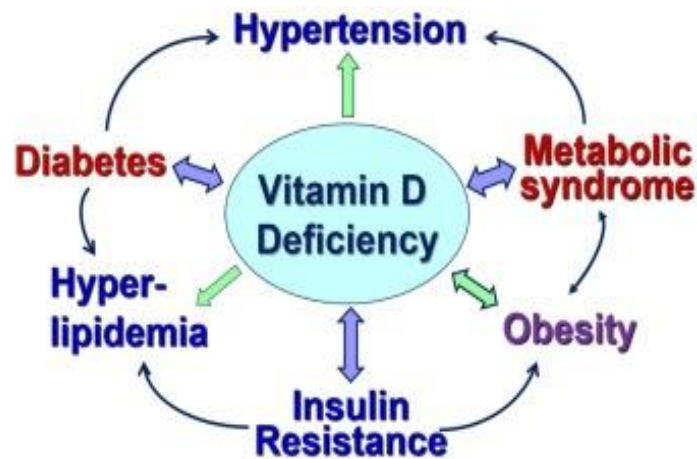


Figure 2: Associations of vitamin D with insulin resistance, obesity, type 2 diabetes, and metabolic syndrome

Therapeutic Potential of Vitamin D in Diabetes Management

Vitamin D has garnered attention for its potential role in the management and prevention of diabetes through its immunomodulatory and anti-inflammatory properties. Research has explored its effects on both type 1 and type 2 diabetes, as well as its influence on various metabolic and immune system functions. Vitamin D supplementation prevents the development of autoimmune diabetes in animal models and may correct defective suppressor function[1]. High doses of vitamin D can improve arterial properties in type 2 diabetic patients without significantly affecting glucose homeostasis parameters[20]. Vitamin D supplementation has been shown to decrease fasting plasma glucose, ketoacidosis, pro-inflammatory cytokines, and HbA1c, while increasing insulin secretion and sensitivity in diabetic rats[21]. Vitamin D's role extends beyond calcium metabolism, potentially serving as a biological inhibitor of inflammatory hyperactivity and offering therapeutic benefits for Th1-mediated autoimmune disorders, including type 1 diabetes[22]. Systematic reviews and meta-analyses indicate that vitamin D supplementation may reduce chronic low-grade inflammation in patients with type 2 diabetes[23]. Dietary vitamin D supplementation is associated with a reduced risk of type 1 diabetes in humans, suggesting a preventive role[16]. Observational studies and clinical trials suggest that vitamin D and calcium supplementation may improve glucose metabolism and have a role in preventing type 2 diabetes, especially in high-risk populations[24]. Clinical trials and molecular studies highlight vitamin D's potential in treating autoimmune diseases due to its immunomodulatory effects[25-26]. The therapeutic potential of vitamin D in diabetes management is supported by evidence of its immunomodulatory effects, ability to improve arterial properties, and potential to reduce inflammation and enhance glucose metabolism. While the benefits of vitamin D supplementation in preventing type 1 diabetes and managing type 2 diabetes are promising, further research is needed to fully understand its role and optimize its use in clinical settings.

Vitamin D Supplementation as a Preventative Strategy for Diabetes

Vitamin D supplementation reduced the incidence of diabetes in NOD mice, an animal model for human autoimmune diabetes, suggesting a potential for preventing type 1 diabetes[1]. Dietary vitamin D supplementation in infancy is associated with a reduced risk of type 1 diabetes, indicating a possible preventive effect[24]. Observational studies suggest that higher vitamin D intake and status are associated with a lower risk of developing type 2 diabetes[15-16]. Vitamin D and calcium supplementation may benefit glucose metabolism and could be preventive in populations at high risk for type 2 diabetes, such as those with glucose intolerance[8]. Vitamin D supplementation improved insulin resistance in patients with baseline glucose intolerance and may lower the risk of type 2 diabetes in prediabetic individuals or those with a certain body mass index (BMI)[27]. Supplementation significantly reduced levels of glycosylated hemoglobin (HbA1c), fasting plasma glucose, and insulin resistance in prediabetics, with the effects influenced by various factors such as age, calcium coadministration, and baseline vitamin D status[18]. The effectiveness of vitamin D supplementation may not be universal and could depend on individual baseline characteristics and the supplementation strategy[27].

Outcomes of Vitamin D Intervention in Diabetic Populations

Vitamin D supplementation has been associated with various beneficial outcomes in diabetic and prediabetic populations. These include improvements in arterial stiffness, pregnancy outcomes, insulin resistance, glycemic measures, antioxidant enzyme levels, and wound healing in diabetic foot ulcers. However, the impact on glucose homeostasis parameters is not consistently observed across all studies. Overall, vitamin D appears to play a supportive role in managing diabetes-related health issues, with certain factors influencing the degree of benefit. High doses of vitamin D supplementation were associated with significant decreases in

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arterial stiffness, as measured by the central aortic augmentation index, in type 2 diabetic patients, although no improvement in glucose homeostasis parameters was observed[20]. Calcium plus vitamin D supplementation in women with gestational diabetes mellitus resulted in decreased rates of caesarean section, maternal hospitalization, and improved newborn outcomes such as reduced cases of macrosomia and hyperbilirubinemia[28]. Observational studies suggest that higher vitamin D intake and status are associated with a reduced risk of developing type 2 diabetes, while vitamin D supplementation may improve insulin resistance in those with glucose intolerance[2]. Vitamin D supplementation in prediabetic overweight/obese women led to significant reductions in fasting blood glucose, post-oral glucose tolerance test glucose levels, hemoglobin A1c, and truncal subcutaneous fat, with some participants reverting to normoglycemia[29]. In Arab adults with prediabetes, vitamin D supplementation increased glutathione peroxidase-1 levels, an antioxidant enzyme, with the effect being more pronounced in males[27]. Vitamin D supplementation may improve endothelial dysfunction in type 2 diabetic patients on metformin therapy by reducing inflammation and reactive oxygen species production[30]. Diabetic foot ulcer patients receiving vitamin D supplementation showed improved wound healing and metabolic status, including reductions in ulcer dimensions, serum insulin, insulin resistance, and inflammatory markers[31]. Meta-analyses indicate that vitamin D supplementation does not significantly change HbA1c levels in a heterogeneous diabetic population but may reduce fasting glucose in those with poorly controlled diabetes[32]. A meta-analysis of prediabetics showed that vitamin D supplementation significantly reduced levels of HbA1c, fasting plasma glucose, and insulin resistance, with the effects influenced by factors such as age, calcium coadministration, and baseline vitamin D status[1].

Table 1. Clinical trials investigating the association between vitamin D supplementation and risk of diabetes.

Authors, year	Study types	country	Main results	N	Outcomes
Alloubani, et al, 2019[33]	A descriptive, cross-sectional, and correlational design	Saudi Arabia	The likelihood of having a deficiency in vitamin D was greater among the following groups: females (OR= 2.06, p > .05); those with higher incomes (OR= 1.44, p .05); smokers (OR= 0.08, p > .05); and those who did not have sun exposure (OR= 8.50; p > .05). Moreover, physical activity serves as a prognostic indicator for Vitamin D deficiency (OR = 3.8; p > 0.05). Additionally, a reduced consumption of Vitamin D (OR 9.7; p > .05) and Calcium (OR= 12.2; p > .05) was associated with a greater likelihood of having a Vitamin D deficiency liability by 3.2, 1.9, 1.8, 1.0, and 2.4, respectively, when the BMI, cholesterol, LDL, HDL, and FBS were increased by one unit.	350	Vitamin D Deficiency was widespread among Saudi citizens of all ages, including both males and females. Due to the correlation between vitamin D deficiency and major chronic diseases, it is critical to emphasize the importance of identifying risk factors for vitamin D deficiency screening.
Barbarawi et al, 2020[34]	a meta-analysis of RCTs	USA	The average age (6.7 years) was 63.5 years (SD = 6.7). In comparison to placebo, the RR for vitamin D was 0.96 (95% CI: 0.90-1.03); P = 0.30. The risk ratio for vitamin D supplementation (≥ 1000 IU/day) in clinical trials involving participants with prediabetes was 0.88 (95% CI: 0.79-0.99) when compared to placebo. On the contrary, the trials that examined lower concentrations using samples from the general population failed to demonstrate any reduction in	46,559	In comparison to a placebo, moderate to high concentrations (1000 IU/day) of vitamin D supplementation significantly decreased the incidence risk of T2DM.

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			risk (RR, 1.02; 95% CI, 0.94-1.10; P, interaction by dose = 0.04).		
Yammine et al, 2020[35]	Meta analysis	Lebanon	The average differences after weighting were -9.93 (95% CI = -1.684 to -0.174, I ² = 97.8%, p = 0.01). The foot group had a significantly higher likelihood of having severe vitamin D insufficiency (3.6, 95% CI = 2.940 to 4.415, I ² = 40.9%, p < 0.0001). All of the studies that were considered were high quality. Significantly reduced vitamin D levels are linked to diabetic foot problems	1,644	. Severe vitamin D insufficiency is more common in patients who have diabetes infections or ulcers.
Lu et al, 2018[36]	Observational & meta analysis	China	61% were female, the average (SD) age was 51.4 (10.6) years, and the average (SD) body mass index (BMI) was 23.7 (3.4) kg/m ² . With the exception of a previous CVD history, which was a criterion for exclusion in the biochemistry investigation, the initial characteristics of the genotyped participants were comparable to those of the subset with plasma 25(OH)D concentrations. The average plasma concentration of 25(OH)D was found to be 62.1 (20.2) nmol/l, which is in line with previously documented values in populations from China and Europe. Recruited participants had a mean plasma concentration of 25(OH)D that was 57.4 versus 68.4 nmol/l lower in the winter than in the summer; this difference was independent of age, sex, physical activity, and percent body fat.	512,891	The congruent risks of diabetes associated with genetically instrumented and biochemically measured differences in 25(OH)D via synthesis single nucleotide polymorphisms provide evidence that increased 25(OH)D has a preventative effect on diabetes.
Amraei et al, 2018[37]	Meta analysis	Iran	The results of eighteen studies, each examining 26 cases, were presented as means and averages. Among these studies, vitamin D deficiency was linked in twelve of the eighteen cases that examined GDM. The purpose of the present meta-analysis was to ascertain whether a significant disparity exists in the mean vitamin D levels between women who have gestational diabetes and those who do not. The average standard equation difference (SMD) was -2.26 (CI at 95% = -0.39 to -0.14), as predicted by the random effects model. This value suggests that heterogeneity was substantial, as evidenced by the I ² value of 68.8% (p < 0.001).	268	Low levels of 25(OH)D may be regarded as a risk factor during pregnancy, according to this finding. In addition, the results indicated a weak positive correlation between maternal vitamin D deficiency and GDM and suggested that the conclusion reached in a previous meta-analysis be tempered. Our findings indicate that a deficiency in vitamin D may ultimately elevate the risk of developing gestational diabetes. In

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					light of the diversity of studies and the heterogeneity of numerous research initiatives.
Ehrampoush et al ,2021 [38]	cross-sectional study	Iran	The participants' mean age was 39.8 ± 10.8 , while their mean vitamin D level was 23.1 ± 9.1 . 1103 (51.1%) of the participants were male, while 1057 (48.9%) were female. As a collective, each subject exhibited insufficient levels of vitamin D. In contrast, 260 participants had severe vitamin D deficiency, while 845 participants had mild deficiency and 1055 participants had moderate deficiency. Out of all the variables that were examined, only a lack of correlation was observed between smoking and vitamin D deficiency ($P \pm 0.34$). To illustrate, the mean body mass index (BMI) for mild, moderate, and severe deficiencies was a respective 23.77 ± 3.41 , 28.98 ± 3.77 , and 32.22 ± 3.42 ($P < 0.001$).	2160	As glycemic indices and insulin resistance, vitamin D level was significantly inversely related to fasting blood glucose, fasting insulin, 2-hour postprandial sugar level, 2-hour postprandial insulin, and HOMA2-IR. Furthermore, it was determined that the examined community exhibits a significant prevalence of vitamin D deficiency, with an outbreak rate of 100%.
Kaya et al ,2018[39]	Cross sectional study	Turkey	It was discovered that patients with vitamin D deficiency had a higher erythrocyte sedimentation rate than those with vitamin D sufficiency ($P < 0.001$). Furthermore, there was a negative correlation between erythrocyte sedimentation rate and 25-hydroxyvitamin D level ($r = -0.265$, $P < 0.001$). Patients who were deficient in vitamin D had higher levels of HbA1c and postprandial glucose than those who were adequate in vitamin D ($P = 0.005$ and $P = 0.019$, respectively). An erythrocyte sedimentation rate of 14.5 mm/h had a sensitivity of 70.1% and a specificity of 50.3% in receiver operating curve analysis when used to predict vitamin D deficiency.	294	Vitamin D deficient T2DM patients have a greater erythrocyte sedimentation rate than those with adequate vitamin D. An inverse correlation was observed between the rate of erythrocyte sedimentation and levels of vitamin D.
Bhatt et al, 2018[40]	Cross-sectional population-based study	India	the prevalence of vitamin D deficiency, insufficiency, and sufficiency was 68.6%, 25.9%, and 5.5. Subjects with vitamin D deficiency had substantially higher mean ages ($p=0.004$), systolic ($p=0.05$), diastolic ($p=0.04$) blood pressure, weight ($p=0.03$), BMI ($p=0.04$), and FBG ($p=0.02$) in comparison to those with vitamin D sufficiency or insufficiency. In	797	Asian Indian women who have pre-diabetes exhibit elevated blood glucose levels in correlation with reduced vitamin D levels.

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			comparison to the second quintile, the unadjusted mean values of FBG were considerably lower in the fourth (p=0.02) and fifth (p=0.030) quintiles of 25(OH)D levels. In addition, after controlling for age and family income, FBG levels in the first quintile (p=0.012) and second quintile (p=0.003) of 25(OH)D levels, respectively, were significantly higher than in the fourth (p=0.012) and fifth (p=0.018) quintiles.		
Mahmood et al,2018[41]	Comparison	Pakistan	While the majority of participants exhibited decreased VD levels, a mere 9.8% of diabetic patients maintained normal VD levels. Significant differences (p<0.05) were observed in blood glucose and HbA1c levels between groups deficient and adequate in vitamin D, as well as between VD deficient and normal VD. However, no such difference was observed between VD insufficient and normal VD. VD, Ca, and Ph levels did not differ markedly between the good glycemic control group (n=46) and the poor glycemic control group (n=146), as determined by a comparison of biochemical parameters. VD was significantly (p0.05) associated with RBS and HbA1c levels in the group of diabetic patients with good glycemic control and VD deficiency, but not in the group of diabetic patients with poor glycemic control and VD insufficiency.	192	The majority of diabetic patients exhibited inadequate glycemic control. A significant correlation was observed between hypovitamin D and blood glucose and HbA1c levels in patients with glycemic control issues and VD deficiency. Consequently, it might be correlated with the advancement of additional complications.

Challenges and Considerations in Treating Diabetes with Vitamin D

Effectively treating diabetes with vitamin D requires careful attention to dosage, monitoring vitamin D levels, understanding potential interactions, accounting for individual variations, and promoting adherence to the treatment plan. By addressing these challenges and considerations, healthcare professionals can optimize the use of vitamin D in the management of diabetes.

Future Directions in Research on Vitamin D and Diabetes Management

Future research on vitamin D and diabetes management should focus on understanding the underlying mechanisms, establishing optimal dosage and duration, evaluating long-term outcomes, exploring personalized approaches, and investigating combination therapies. By addressing these areas of research, we can advance our knowledge and ultimately improve the effectiveness of vitamin D in the management of diabetes.

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Effectiveness of Legal Protection of Traditional Cultural Expressions in Indonesia: A Case Study of Pendet Dance



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ABSTRACT: The Traditional Cultural Expression of Pendet Dance from Bali is one of the Communal Intellectual Properties, where the use and exploitation of traditional cultural expressions is often carried out without clear permission, thus leading to unauthorized exploitation and use. The purpose of this study is to analyze the legal protection status of the Pendet Dance as a traditional cultural expression in Indonesia. This legal research is an empirical legal research with a descriptive analytical approach method. The research results show that the effectiveness of legal protection for the traditional cultural expression of the Pendet Dance is influenced by several factors, namely legal factors, law enforcement factors, facilities and infrastructure factors, community factors, and cultural factors that grow in the community. Legal protection for the Pendet Dance can be through preventive protection through inventory and recording carried out by the state through the minister or local government, or through repressive protection.

KEYWORDS: Legal Protection, Effectiveness of Law, Traditional Cultural Expressions

I. INTRODUCTION

Communal intellectual property is intellectual property whose ownership is communal, It's means that ownership of the intellectual property is held jointly so that responsibility and efforts to utilize the intellectual property become a shared orientation. So there is a difference between communal intellectual property and other intellectual property such as Copyright, Trademark Rights, Patent Rights, Industrial Design Rights, Trade Secret Rights, Plant Variety Protection Rights, and Circuit Layout Design Rights, where the nature of the intellectual property is exclusive. (Ayu Taufitra & Gede Agus Kurniawan, 2023).

One type of communal intellectual property is traditional cultural expression, which all forms of cultural expression of creative works, whether in the form of objects or non-objects or a combination of both, show the existence of a traditional culture that is held communally and across generations. Traditional cultural expressions are an integral part of the identity of the Indonesian nation, which is rich in cultural diversity. One of the famous forms of traditional cultural expression is the Pendet Dance from Bali. This dance has high historical, artistic and social value and functions as a cultural symbol of the Balinese people. However, in the era of globalization, traditional cultural expressions face many significant challenges related to their protection and preservation. The common phenomenon is the commercialization and use of traditional cultural expressions without clear permission, which can lead to unauthorized use and misuse. This raises concerns about the loss of cultural rights of indigenous peoples and local communities who create and maintain these traditional cultural expressions. In addition, there is concern that modernization and urbanization will erode the authentic values contained in traditional cultural expressions. Law No. 28 of 2014 concerning Copyright in Indonesia has regulated the protection of Traditional Cultural Expressions, but the implementation of laws and regulations governing Traditional Cultural Expressions is still ineffective, so it is still necessary to study further the factors that influence its ineffectiveness. Traditional cultural expressions include all forms of expression rooted in tradition, such as dance, music, and fine arts. According to WIPO (World Intellectual Property Organization), traditional cultural expressions are "forms of expression that reflect the cultural heritage that has developed from one generation to the next." (WIPO, 2017).

According to Soerjono Soekanto, legal protection for legal subjects is in the form of law enforcement through legal instruments. Effectiveness in law enforcement is influenced by several factors, namely:

The legal factor, namely the applicable written laws or regulations, has provided justice, certainty and benefits.

The law enforcement factor, namely law enforcement officers who are able to implement and enforce the rules so that legal certainty, justice, and legal mandate are created proportionally.

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Factors of facilities or infrastructure that support statehood, namely including skilled human resources, good organization, adequate equipment, so that factors of facilities or infrastructure can assist in law enforcement that is just, provides benefits, and provides legal certainty.

Community factors, which the community are educated and already aware of the law.

Cultural factors, where society cannot be separated from culture which contains values that underlie the prevailing values. (Siregar, 2018).

The theory of legal protection of intellectual property can be applied to protect traditional cultural expressions. Copyright theory (Copyright Law) provides protection to creators of artistic or literary works. However, the main challenge in the context of traditional cultural expressions is that these works are often communal and anonymous, and have existed for a long time. (Geismar, 2013). The Communal Intellectual Property Rights theory emphasizes that rights to traditional cultural expressions should be recognized as communal rights belonging to communities or indigenous peoples, not individual rights. This is important to ensure that the economic and social benefits of these cultural expressions return to the communities that own them. (Tobing, 2019). Meanwhile, Cultural Heritage Theory views traditional cultural expressions as part of the cultural heritage that needs to be protected and preserved. Cultural heritage protection includes legal, social and economic aspects, which work together to maintain the integrity of traditional culture. (Blake, 2001). The legal framework for the protection of traditional cultural expressions in Indonesia includes several important regulations. Law Number 28 of 2014 concerning Copyright regulates protection of works of art, including traditional cultural works. However, the implementation of protection of traditional cultural expressions still faces many challenges.

Law Number 5 of 2017 concerning the Advancement of Culture states that traditional cultural expressions must be protected as part of national culture. This law also regulates the inventory, protection and utilization of traditional culture. Several regions in Indonesia have local regulations governing the protection of traditional culture. The case study of Pendet Dance in Bali can provide insight into how local policies play a role in protecting cultural expressions (Bali Provincial Regulation Number 2 of 2012 concerning the Protection and Development of Balinese Culture). Pendet Dance is a traditional Balinese dance that is usually performed as part of religious ceremonies. This dance has deep cultural and spiritual value for the Balinese people. However, challenges in protecting the Pendet Dance include claims of ownership by outside parties, commercialization without permission, and lack of legal awareness among indigenous communities. Various efforts have been made by the government and local communities to protect the Pendet Dance including registration as an intangible cultural heritage and legal awareness campaigns. (Suadnyana, 2018)

Several previous studies found by researchers, namely Legal Protection of Traditional Knowledge and Culture to Improve Community Welfare Reviewed from Law No. 5 of 2017 Concerning Cultural Advancement and Law No. 28 of 2018 Concerning Copyright, which was studied by Abdul Atsar with research results that legal protection for traditional cultural expressions is held by the state, so the state is obliged to conduct an inventory and data collection of traditional culture to maintain and preserve these cultural expressions. (Atsar, 2017).

In addition, other previous research regarding the Certainty of Legal Protection of Traditional Arts as Traditional Cultural Expressions in Supporting Indonesian Tourism. The research was conducted by Liza Marina and Dessy Sunarsi, where the results of the research stated that the regulations governing Traditional Indonesian Cultural Expressions are still regulated in Law No. 28 of 2014 concerning Copyright and still cannot provide legal certainty. There is a difference between individual and communal ownership, and unique communal ownership can be commercialized and has economic value. (Marina & Sunarsi, 2019).

Previous research conducted by Yenny Eta Widyanti with the title Protection of Traditional Indonesian Cultural Expressions in a Sui Generis System, where the results of the study concluded that the regulation of traditional cultural expressions in Law Number 28 of 2018 concerning Copyright still cannot provide legal protection for traditional cultural expressions due to differences in characteristics between copyright and traditional cultural expressions. (Widyanti, 2020).

Several previous studies have shown that even though regulations already exist, legal protection for Traditional Cultural Expressions is still not optimal and has not fully answered the existing challenges. The role of the government and traditional institutions in legal protection of Traditional Cultural Expressions is still very weak, resulting in many cases of copyright infringement of Traditional Cultural Expressions that are not properly resolved. Meanwhile, legal policies in Indonesia still focus more on individual copyright than collective rights, which results in inadequate protection for Traditional Cultural Expressions.

Normatively, Indonesia has created various laws and regulations aimed at protecting traditional cultural expressions, such as Law Number 28 of 2014 concerning Copyright and Law Number 5 of 2017 concerning the Advancement of Culture. This law explicitly recognizes the importance of protecting traditional culture as part of the national cultural heritage. However, in reality, the implementation of this legal protection often does not meet expectations. Indigenous peoples and communities that own traditional cultures such as the Pendet Dance often do not receive adequate protection from exploitation and commercialization

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without permission. For example, the Pendet Dance is used in tourism advertisements by outsiders without permission from the community of origin or is used as a tourist attraction in hotels and restaurants without providing fair compensation to the dancers and indigenous people. Lack of legal knowledge and awareness among indigenous communities, coupled with limited resources to enforce their rights, exacerbates this situation (Suadnyana, 2018).

In Saraswati's research entitled "Legal Protection of Traditional Artworks in Indonesia" published in the Journal of Law and Development, the focus is on the protection of traditional art works in general without delving into specific cases such as the Pendet Dance. Saraswati highlighted the legal aspects of protection and suggested improving regulations, but provided few concrete case examples. (Saraswati, 2019). Another study by Nugroho in "Communal Intellectual Property Rights: Protection of Local Culture" published in the Journal of International Law discusses legal protection from the perspective of communal intellectual property rights but does not link it to concrete case studies. Nugroho examines how communal intellectual property rights can be implemented in Indonesia, but this research remains theoretical without practical application (Nugroho, 2018). Rahmawati in "Commercialization of Traditional Culture: Challenges and Solutions" published in the Jurnal Kebudayaan Nusantara highlights aspects of the commercialization of traditional culture and its challenges, but focuses more on general problems and solutions without specific legal-based analysis (Rahmawati, 2020). At the international level, Geismar's article in the "International Journal of Cultural Property" entitled "Copyright in the Museum: Balancing the Rights of Indigenous Communities and Museums" analyzes the conflict between the rights of indigenous communities and cultural institutions in a global context, providing insight into how copyright can be applied in protecting traditional culture but does not provide a specific analysis of the case in Indonesia. (Geismar, 2013). Blake in the "UNESCO Journal of Cultural Heritage" with an article entitled "Developing a New Standard-Setting Instrument for the Safeguarding of Intangible Cultural Heritage" provides normative guidance for the protection of intangible cultural heritage, but focuses more on international standards without highlighting implementation in developing countries such as Indonesia. (Blake, 2001).

This research is different from previous research, where the focus of this research is related to the Effectiveness of Legal Protection for Traditional Cultural Expressions in Indonesia: A Case Study of the Pendet Dance. Therefore, it is necessary to conduct research to identify and analyze the effectiveness of legal protection for the Pendet Dance as a representation of traditional cultural expression. In addition, it identifies factors that hinder effective protection, and provides policy recommendations to improve legal protection. This study also aims to examine the status of legal protection for the Pendet Dance as a traditional cultural expression in Indonesia today and what steps should be taken so that legal regulations in Indonesia can provide adequate protection for the Pendet Dance?

Thus, this research is expected to contribute to the development of more inclusive and effective policies in protecting Indonesia's traditional cultural heritage, ensuring that the economic and social benefits of these cultural expressions can be enjoyed by the communities that own them and future generations (WIPO, 2017; Geismar, 2013).

II. RESEARCH METHOD

This legal research is an empirical legal research by researching and identifying the application of laws that are currently in force in society. This study looks at how the laws governing communal intellectual property, especially Traditional Cultural Expressions, are related by looking at the reality in society. (Sulasno et al., 2021). The types of data used are primary data sources through interviews and secondary data sources in the form of laws and regulations, literature studies, both theories and concepts related to Traditional Cultural Expressions. In addition, it is supported by research in the form of journals related to Traditional Cultural Expressions. The approach method used is an analytical descriptive approach, by drawing or describing the research data obtained to then carry out qualitative analysis by examining all available data and writing it down in a systematic manner.

III. RESULT AND DISCUSSION

Efforts to Protect Traditional Cultural Expressions in Indonesia. Protection of traditional cultural expressions, especially from claims or recognition by other nations, has become a focus in Indonesia through efforts to create a Bill on Traditional Knowledge and Traditional Cultural Expressions. The draft law defines traditional cultural expressions as intellectual products of art that include literary expressions with elements of traditional characteristics that are inherited, developed and maintained by indigenous communities. Traditional cultural expressions are not only about art, but also about economic, spiritual and communal values that are part of the cultural life of a society. It represents the identity of indigenous peoples in various regions. Traditional cultural expressions are associated with collective entities such as communities, small groups, or indigenous people. It is not the property of an individual but is an important part of the cultural heritage of a society. The importance of protecting traditional cultural knowledge and expressions to prevent extinction is also linked to intellectual property rights. If not protected, these cultural expressions may fall into the public domain. In Indonesia, the protection of traditional cultural expressions is regulated in

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various regulations, including Law Number 28 of 2014 concerning Copyright, international agreements such as the Berne Convention, and industrial property law regulations.

Law No. 28 of 2014 regulates the protection of traditional cultural expressions by firmly stipulating that copyright for traditional cultural expressions is held by the state, while in the use of cultural expressions, attention must be paid to the values that exist in the community that develops them. The protection of traditional cultural expressions also involves aspects of neighbouring rights, where international agreements such as the WPPT (WIPO Performances and Phonograms Treaty) provide protection for performances or shows that are part of traditional cultural expressions. In addition, industrial property laws, such as the Paris Convention, also provide avenues of protection for traditional cultural expressions through trademarks, geographical indications, patents and industrial designs.

The legal protection status of the Pendet Dance as a traditional cultural expression in Indonesia is currently based on the principle of intellectual property rights, especially in the context of Traditional Cultural Expressions, the Pendet Dance, as one of Bali's intangible cultural heritages which has deep cultural and spiritual value for the Balinese indigenous people, so it must be carefully protected so that it is not misused or claimed by outside parties.

Law Number 28 of 2014 concerning Copyright is the main legal basis that regulates the protection of works of art, including traditional cultural works such as the Pendet Dance. Article 38 paragraph (1) of the Copyright Law emphasizes that copyright for traditional cultural expressions is held by the state, which is then further regulated by Government Regulation Number 56 of 2022 concerning Communal Intellectual Property as the implementing regulation of the Copyright Law. The implementation of these laws and regulations still faces challenges in practice, especially regarding understanding and legal awareness among indigenous communities.

According to Philipus Hadjon, legal protection is divided into two, namely preventive legal protection, the nature of which is to prevent disputes from occurring, and repressive legal protection, the nature of which is to resolve problems or disputes that have already arisen. (Prayoga et al., 2023). If it is associated with legal protection for traditional cultural expressions, the form of preventive legal protection efforts is by conducting an inventory, maintaining, and preserving traditional cultural expressions which are mandatory for the state, as regulated in Article 38 of Law No. 28 of 2014 concerning Copyright. This is done with the aim of preventing disputes that may arise in the future. In addition, in the use of cultural expressions, it must be in accordance with the values of life in the community of the bearer, while legal protection of a repressive nature is through dispute resolution carried out through alternative dispute resolution, arbitration or courts as regulated in Article 95 of Copyright Law Number 28 of 2014.

Although in this case the State is the holder of the rights to communal intellectual property, the implementation of the obligation to inventory, maintain and preserve communal intellectual property can be carried out by the Minister, Head of a non-Ministerial Government Institution and/or Regional Government, Community of Origin as part of a country, as regulated in Government Regulation Number 56 of 2022 concerning Communal Intellectual Property.

Every intellectual property right has moral rights and economic rights that deserve legal protection. However, communal intellectual property rights are inclusive and are held by the community of origin without time limits.

In addition, the form of legal protection efforts that can be carried out is by safeguarding communal intellectual property through preventing exploitation of communal intellectual property that is not in accordance with the values, meaning, and identity of Communal Intellectual Property or social institutions that apply in the community of origin, mediation or legal issues related to Communal Intellectual Property, and diplomacy with other countries. Meanwhile, maintenance activities or Communal Intellectual Property can be carried out through education, literacy, socialization and promotion, utilization of Communal Intellectual Property that provides benefits to the Community of Origin.

Any use of Communal Intellectual Property must include information on the Community of Origin of the Communal Intellectual Property, as well as permission from the Community of Origin, especially for Communal Intellectual Property which has a sacred, confidential nature and is firmly held in the use of Communal Intellectual Property. In addition, the utilization of Communal Intellectual Property for commercial interests is carried out by paying attention to the sharing of benefits agreed upon in the provisions of the legislation, as regulated in the implementing regulations.

In addition to the Copyright Law, Law Number 5 of 2017 concerning the Advancement of Culture also has an important role in protecting traditional cultural expressions. Article 19 of the Cultural Advancement Law emphasizes that traditional cultural expressions must be protected as part of national culture. This law also regulates the inventory, protection and utilization of traditional culture, which can be an important instrument in maintaining the authenticity and integrity of the Pendet Dance. At the local level, Bali Provincial Regulation Number 2 of 2012 concerning the Protection and Development of Balinese Culture provides a more specific legal basis regarding the protection of the Pendet Dance. This regulation establishes concrete steps in protecting and developing Balinese culture, including the Pendet Dance as an integral part of Balinese cultural heritage.

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In the international context, Indonesia has become a member of various agreements and conventions relevant to the protection of traditional cultural expressions. For example, the UNESCO Convention on the Protection and Promotion of the Diversity of Traditional and Contemporary Cultural Expressions recognizes the importance of protecting and promoting cultural diversity throughout the world. However, even though there is a legal framework that regulates the protection of Traditional Cultural Expressions, one of which is the Pendet Dance.

In practice, commercialization without permission still occurs frequently. One concrete case is where the Pendet Dance is used for commercial purposes without permission from the Community of Origin or the Institution that holds the Communal Intellectual Property rights. Thus, this violates the rights of the Balinese community as holders of Communal Intellectual Property rights over their traditional cultural expressions.

In addition, there are claims to property rights made by parties outside the Balinese community. Where the party claims ownership rights or commercializes the Pendet Dance without permission or knowledge of the community of origin, this is a form of violation of communal intellectual property rights.

The use of Pendet Dance is often used in contexts that are inappropriate or not in accordance with the cultural and spiritual values attached to it. So that it can reduce the integrity and value of traditional cultural expression. Beside that, Pendet Dance is also vulnerable to piracy and illegal use, both in the form of video recordings and live performances without permission. This is detrimental to indigenous communities and reduces the economic potential and social impact that can be derived from these traditional cultural expressions.

Disputes arising in matters of traditional cultural expression or communal intellectual property are due to the lack of legal effectiveness in dealing with problems that exist in society. The effectiveness of the law is influenced by:

- 1) Legal factors,
- 2) Law enforcement factors,
- 3) Facilities or means that support enforcement,
- 4) Community factors,
- 5) Cultural factors, where the community cannot be separated from the culture that contains values that underlie the applicable values. (Siregar, 2018)

If it is related to disputes over traditional cultural expressions, the legal factor is that the Copyright Law still cannot provide legal protection because every violation that occurs can only be processed if there is a lawsuit or complaint (complaint offense) from the injured party so that without legal standing, law enforcement officers cannot carry out the law enforcement process.

In addition, the lack of public understanding of communal Intellectual Property Rights is a fundamental problem, especially among Balinese indigenous communities. So that it can lead to exploitation or unauthorized use of the Pendet Dance. Therefore, there needs to be extra effort from all sectors, not only relying on the law, but also on mechanistic cooperation in order to improve these weaknesses.

Efforts that can be taken include through legal education and awareness for indigenous communities about their rights, as well as providing adequate legal assistance and law enforcement mechanisms to support the protection of their traditional cultural expressions, stricter legal protection arrangements at the local level, as well as through legal awareness campaigns for indigenous communities and tourism industry players, establishing a legal approach that recognizes communal rights to traditional cultural expressions, and through legal measures to counter unfounded claims, developing a legal approach that regulates the use and presentation of the Pendet Dance, and through educational and awareness campaigns for the general public about the importance of respecting and preserving cultural heritage and most crucially taking stricter law enforcement measures against copyright infringement, and through cooperation between governments, legal institutions, and indigenous communities to protect and strengthen their rights. Designing legal regulations in Indonesia to provide adequate protection for the Pendet Dance.

In other words, to measure whether a law is running effectively or not, it can be influenced by five factors, namely the legal factor, the law enforcement factor, the means or facilities that support law enforcement, the community factor, and the cultural factor, where the community is located. Failure to fulfill one of these factors is one of the causes of the ineffectiveness of the law enforcement process (cumulative in nature).

Recommended Steps for Regulation to Provide Legal Protection for Pendet Dance.

Legal regulations in Indonesia must be designed in such a way as to provide adequate protection for the Pendet Dance, as a representation of a valuable traditional cultural expression rich in cultural and spiritual values for the Balinese people. To create effective protection, the legal framework must cover several important aspects covered in the theoretical framework mentioned earlier.

First of all, legal regulations must recognize the Pendet Dance as an integral part of traditional Balinese cultural expression. This is in line with the concept of traditional cultural expression which reflects the cultural heritage that develops from one

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generation to the next (WIPO, 2017). This recognition will provide a strong legal basis to protect and preserve this dance as an inseparable part of Indonesian national culture.

Second, legal regulations must take into account communal rights over the Pendet Dance, in accordance with the concept of Communal Intellectual Property Rights. In the context of the Pendet Dance, these rights should be recognized as the common property of the Balinese community or indigenous society, not individual rights (Tobing, 2019). It is important to ensure that the economic and social benefits of the Pendet Dance return to the communities that own it.

Third, legal regulations must also adopt a Cultural Heritage *Theory* in the protection and preservation of the Pendet Dance. Cultural heritage protection includes legal, social and economic aspects, which work together to maintain the integrity of traditional culture. (Blake, 2001). Thus, legal regulations must provide a comprehensive framework to maintain the authenticity, integrity and cultural values of the Pendet Dance.

Fourth, in the implementation of legal regulations, it is important to pay attention to the concrete challenges faced in protecting the Pendet Dance, such as claims of ownership by external parties, commercialization without permission, and lack of legal awareness among indigenous communities (Suadnyana, 2018). Therefore, legal regulations must include clear provisions and effective enforcement mechanisms to address these issues.

Fifth, legal regulations must take into account the existence of local regulations governing the protection of traditional culture, as occurred in the case study of the Pendet Dance in Bali with the existence of Bali Provincial Regulation Number 2 of 2012 concerning the Protection and Development of Balinese Culture. This shows the important role of local policies in providing more concrete and relevant protection for traditional cultural expressions at the regional level.

Within the overall legal regulatory framework, it is important to ensure that the communal rights, cultural values, and interests of the Balinese indigenous people in maintaining the sustainability and authenticity of the Pendet Dance are recognized and prioritized. Thus, legal regulations must be designed by taking into account a theoretical framework that includes aspects of communal intellectual property rights, cultural heritage, and local arrangements, to provide comprehensive and sustainable protection for the Pendet Dance as a traditional cultural expression of high value to the Balinese people.

IV. CONCLUSION

Legal protection for the Pendet dance as a traditional cultural expression originating from Bali is still not effective. Although there is a legal framework that regulates the protection of traditional cultural expressions, such as copyright laws and their implementing regulations, as well as laws on the advancement of culture, their implementation still faces obstacles, especially related to unauthorized commercialization, claims of ownership by external parties, and a lack of understanding of intellectual property rights among Balinese indigenous communities. So it is necessary to have extra efforts from various sectors, not only relying on legal regulations alone, but also on cross-sectoral mechanical cooperation. So it is hoped that protection of the Pendet dance can be strengthened and maintained sustainably.

In order to provide adequate protection for the Pendet dance as a traditional cultural expression of high value for Balinese society, legal regulations in Indonesia need to be drafted by considering several important aspects. First of all, the recognition of the Pendet dance as an integral part of traditional Balinese cultural expression provides a legal basis for protecting cultural heritage. Second, recognition of communal rights over the Pendet dance. Furthermore, the adoption of a cultural heritage approach in protecting the Pendet dance will ensure a comprehensive framework to maintain the authenticity, integrity and cultural values of the dance, and finally the implementation of legal regulations by taking into account the concrete challenges faced in protecting the Pendet dance.

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The Cultivation of “Cotton under Corn”: Peasant Logic in Question in the Plateaux Region of Togo



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ABSTRACT: Togo's cotton growers have integrated “cotton under maize” into their production system in their quest for innovative solutions. This practice is of heuristic interest insofar as agricultural policies are constantly being improved. The aim of this paper is to analyze the social logics underlying this innovative cultivation practice. Analysis of qualitative data collected from 254 randomly selected cotton growers in the Plateaux region reveals that farmers prioritize the security and social prestige of their households over the financial enrichment provided by cotton. This strategy, although detrimental to the overall performance of the sector, enables them to guarantee the viability of their farms despite their technical and organizational constraints.

KEYWORDS: peasant strategy, maize-cotton, social logics, Togo.

INTRODUCTION

Intercropping has been widely adopted in developing countries to improve agricultural productivity (Singh et al. 2017, Chi et al., 2019). This farming strategy involves growing two or more crops simultaneously in a single field to efficiently utilize light, water, nutrients, heat, land, and other natural resources (Andrews and Kassam, 1976). It improves resource use efficiency, increases soil fertility, and crop yields (Shah et al., 2016; Singh et al., 2017; Kumar et al., 2017; Chi et al., 2019). As a result, it enhances food security through production diversification (Hu et al., 2016; Zhang et al., 2016, Chapagain et al., 2018), reduces dependence on a single crop and the risks of crop losses caused by climatic hazards and crop pests (Smith et al., 2013; Singh et al., 2017).

A strategic crop for Togolese farms and the economy, cotton contributes 20 to 40% to export revenues and between 1% and 4.3% to GDP depending on the year (NSCT, 2012; World Bank, 2022). Seed cotton production in Togo increased from 10,736 tonnes in 1974 to 174,000 tonnes in 2004, after reaching 187,703 tonnes in 1998. However, this performance has not been sustained over time. Yields have fallen from 1,146.4 kg/ha of cotton in 1998 to 662 kg/ha in 2020, or more than 42% in two decades. This situation, which is detrimental to the sustainability of the cotton industry, does not allow producers to obtain maximum profit (NSCT and FNGPC, 2013, NSCT, 2022).

To maximize their profits and ensure food security for their households, cotton farmers in the Maritime and Plateaux regions practice cotton cultivation in relay under corn, a production method that allows them to optimize the use of their land, save on fertilizers, take full advantage of the rainy season, obtain two harvest products (cotton and corn) during the same agricultural campaign and thus increase their income. Schwartz (1985) indicates that the enormous success of cotton cultivation in the years 1981/82 in the Haho and Tohou area is to be credited solely to this possibility of a perfectly harmonious combination of corn and cotton. Indeed, during this period, the production of the area represented 37.5% of national production on less than 10% of cotton sown with the highest yields per hectare in the country. Analysis of data from the ten-day sowing status sheets from 1999 to 2020 collected from the Nouvelle société cotonnière du Togo (NSCT) reveals that the areas of cotton under maize represent respectively 7 and 12 times those of pure cotton in the Southern and Maritime Plateaux. On the other hand, in the Northern Plateaux, this ratio represents only a third. However, production data for the period 2010 to 2021 reveal low yield levels in these regions. In view of the current results of the sector in this area with a high practice of cotton under maize cultivation, it is important to understand the factors determining the practice of cotton-maize cultivation and the socio-economic advantage of this practice among farmers. Although there are studies analyzing the effects of cotton-wheat and cotton-peanut association on crop yield and economic benefits (Shah et al., 2016; Chi et al., 2019), research on the socio-cultural determinants and socio-economic benefits of cotton-

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maize cultivation remains limited. The objective of this work is to contribute to the literature on the practice of cotton cultivation under maize. To provide empirical evidence, this research uses on the one hand the analysis of producers' social representations to identify the determining factors of cotton-maize cultivation in Togo, and on the other hand, the linear regression model to assess the effect of this endogenous know-how on the viability of farms. This article is structured around three sections: the methodology, the analysis and discussion of the results and the conclusion containing economic policy recommendations.

1. Materials and methods

This section is devoted to (i) the definition of some key concepts, (ii) the literature review on the economic and agronomic determinants and effects of peasant practices of crop association in cotton systems, and (iii) the theoretical framework of the study.

1.1. Definition of key concepts

1.1.1. Peasant practices

Also known as endogenous know-how or traditional know-how, peasant practices refer to traditional agricultural methods and techniques developed and transmitted over time within rural communities. They are often based on an intimate understanding of the local ecosystem and aim to ensure food security and long-term sustainability (Andrews and Kassam, 1976). These practices are therefore often specific to a particular region or culture, and are adapted to local conditions, available resources and environmental constraints. They encompass a variety of knowledge related to land cultivation, livestock breeding, resource management, conservation, etc.

1.1.2. Farming concept

A farm can be defined as a group of people who live, eat and carry out agricultural activities together (Gafsi et al., 2007). According to Kleene et al. (1989), a farm can be understood as a family team of workers cultivating together, at least one common main field to which are linked, or not, one or more secondary fields as the case may be and having their respective decision-making centers. For the FAO (1995), a farm is an economic unit of agricultural production subject to a single management that can be exercised by an individual, by a household, jointly by two or more individuals or households, by a clan or a tribe or by a legal entity such as a company, collective enterprise, cooperative or state body. In southern countries, the farm is of the family type and is characterized by a high level of employment of the workforce of its members and a low level of equipment (Penot et al., 2010). Chombart de Lauwe proposes the following definition taken up by the Memento de l'Agronome: "the agricultural exploitation is an economic unit in which the farmer practices a production system with a view to increasing his profit¹."

1.1.3. Concept of rationality

According to Laramée (2014), this term is used to refer to the coherent systems of thought and action characteristic of given human groups. The definition of this concept is twofold, since it encompasses both means of action and the reflection that underlies them. Indeed, it is, on the one hand, the set of means (actions, practices, strategies) used by an actor, because subjectively judged optimal, to achieve predefined objectives. However, to the extent that these objectives are not given, but rather constructed by each actor according to the contextual possibilities and constraints to which he is subject, we also understand by "rationality" the process of constructing each of the objectives that he wishes to pursue. In the context of this study, we have chosen to focus more particularly on the "social" dimension of rationality, that is to say as it applies to the definition of the relationships that individuals have with each other as well as with the various institutions (economic, political, cultural, etc.) of their universe of reference.

1.2. Brief literature review

1.2.1. DETERMINANTS of adoption of agricultural practices

The literature on technology adoption in agriculture reveals that several factors are likely to influence the use of these technologies. Among the determinants, membership in an organization (Abebaw and Haile, 2013) and the level of education of the head of household (Aslan et al., 2013; Khonje et al., 2015) are common. Aversion to hazards, especially climatic, and therefore the management of climatic risks have also been found to be determinants of adoption (Dercon and Christiaensen, 2011; Arslan et al., 2013; Glenk et al., 2014). Moreover, farmer access to information is a very important factor that has been raised in the literature as one of the most important causes of agricultural technology adoption (Diagne and Demont, 2007; Asuming et al., 2011; Fisher and Quaim, 2012; Khonje et al., 2015). Furthermore, many articles have shown that a farmer adopts an agricultural technology in light of the expectation of profitability (Arslan et al., 2013; Lambrecht et al., 2014; Wollni and Anderson, 2014; Kleemann et al., 2014). The farmer's entourage (Wollni and Anderson, 2014), household size (Adeoti et al., 2002; Noltze et al., 2012), age of the head of household (Adeoti et al., 2002; Arslan et al., 2013; Karim et al., 2014), access to financing, access to extension services (Adéoti et al., 2002) are also adoption factors raised in the literature. Other obstacles include financial

¹ Ministry of Cooperation, *Agronomist's Handbook*, collection "Rural techniques in Africa", 4th edition: 1993, p.1345.

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constraints and work intensity (Kijima et al., 2011; Pypers et al., 2011), as well as difficulty in accessing markets (Adéoti et al., 2002). Judging from the results of the literature, the influence of the gender variable on adoption is mixed (Doss and Moris, 2001; Ndiritu et al. 2014, Fisher and Kandiwa, 2014; Hay and Pearce, 2014, Kondylis et al., 2016). For Hay and Pearce (2014), women adopt agricultural technologies three times more than men in order to increase their agricultural productivity. The results of Fisher and Kandiwa, (2014) for example have accentuated this contrast in the influence of the gender variable. Indeed, these results show that the probability of adopting an agricultural technology was 12% lower among women living in households headed by men, and 11% lower among female heads of household, than among male farmers.

1.2.2. Economic and agronomic effects of peasant practices of crop association in cotton systems

Cotton-based intercropping or association cropping is considered as a promising strategy for sustainable cotton production (Tariq et al., 2018). Cotton is suitable for association cropping because of its wide row spacing, slow growth at the initial stage and relatively long cycle (Surendran et al., 2016). Several studies have evaluated the economic and agronomic benefits of farmer-based practice of association cropping in cotton systems. The study by Khan and Khaliq (2005) indicated that wheat and barley sown as intercrops in cotton recorded higher yields of 69% and 23%, respectively, compared to monocropping, although cotton yield was not affected by the intercropping. Wheat sown as a follow-up to cotton recorded a yield of 2964 kg/ha, compared to 1750 kg/ha for wheat sown after cotton. Depending on the cotton planting period, intercropping increased land use efficiency by 81–213% (Hussein, 2005).

Compared with cotton monoculture, intercropping cotton and halophytes increases root mass and density at soil depth of 0–20 cm, and intercropping cotton and mung bean increases total land yield by 16.6%–19.8%, total nitrogen uptake by 27.9%–45.3%, water use efficiency by 17.0%–36.3%, and economic benefits by 31.7%–51.9% (Liang et al., 2020). Intercropping helps reduce insect pest populations (Suman et al., 2020). Intercropping cotton with trap crops such as maize, alfalfa, mung bean, and cowpea can effectively trap and reduce the abundance of pests on cotton (Cook et al., 2007; Luo et al., 2014; Wang, 2015; Suman et al., 2020).

In sum, the total productivity and net income of intercropping systems are much higher than that of monocropping (Feng et al., 2017; Saeed et al., 1999). In cotton-based cropping systems of Maharashtra, India, intercropping with pigeon pea and mixed cropping with green gram, maize, sesame and pearl millet yielded higher net income than cotton as a single crop (Gahukar, 2017).

1.3. Theoretical framework of the study

To understand the factors determining the adoption of cultural practices, two analysis models were used: (i) the structuring analysis of the social representation of producers through the central core theory developed by Abric (2003), and (ii) the linear regression model inspired by the work of Yegbemey et al. (2014).

1.3.1. Structuring analysis of the social representation of cotton producers

The structuring analysis of social representation first proceeds by validating the corpora of words/themes based on Zipf's law highlighted by the American linguist George K. Zipf. This law describes a general property applicable to the distribution of large sets subject to an enlarged group of diverse causal elements, regardless of the nature of the elements involved (Zipf, 1949). In practice, Zipf's law is valid for the 5000 most frequent words (Kucera et al, 1967). According to this law, the frequencies of appearance of words classified in decreasing order of their frequency of appearance are organized according to a power law. Zipf's law stipulates that the distribution of the frequency of words resulting from free associations around an inductive term, as is the case in our study, can be considered random if at least 5 to 10% of the most frequently cited words represent between 40 and 60% of all evocations.

As part of this analysis, the words obtained at the end of a free evocation process based on an inductor were distributed according to their frequency of citation and then hierarchized according to the decreasing order of these frequencies. The validation of the frequency distribution was done with Zipf's law. This validation consists of ensuring that the corpora that we obtained follow a statistical law and can therefore be subjected to statistical processing. Subsequently, the double analysis of word associations, proposed by Verges (1992), seemed to us the most appropriate to compare the two populations. The data processing was carried out according to two criteria retained by Verges: the frequency of the associated words and their average rank of appearance in the enumeration. According to these two criteria, these words were then distributed in a table with four boxes that have different statuses. The frequency from which a word can be part of the prototype is equivalent to $\ln a$. In other words, for a word to be retained for analysis, its frequency of evocation must be greater than or equal to $\ln a$. According to the structural theory of social representations, the intersection of the frequency of appearance and the average rank of evocation of words gives rise to a four-window table allowing the identification of the central and peripheral elements (prototype) of the social representation:

- the central core area, at the top and left, where the most frequent and most accessible words are found due to their low average rank of appearance. These elements are assumed to belong to the central core;

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- the area of the first periphery elements, at the top right, where the elements of frequent appearance are located, but identified as less important;
- the area of contrasting elements, bottom left, which includes elements considered important, but cited by very few individuals;
- the second periphery area, bottom right, which includes elements identified as unimportant and very little cited by individuals.

To identify the content of social representations of cotton cultivation, we used the quantitative approach, which consists of a prototypical analysis. Developed by Vergès (1992), it is used in the study of social representations (Bonnet *et al.*, 2002; Mariotti, 2001). It consists of processing the corpus obtained using the free association method and is based on the frequencies and ranks of appearance of each evocation. Thus, from the words evoked, we seek the "prototype of the social representation or the identification of the organization of the content by crossing these two indicators: the frequency of appearance of the words within the population questioned with their rank of appearance, defined as the average rank calculated over the entire population (Vergès, 1992; 1994). When these two criteria are congruent for the same item (high frequency and low rank of appearance), the latter is likely to be a central element of social representation.

1.3.2. Analysis of the effect of peasant practices on the viability of farms

The regression model in this section is inspired by recent work by Yegbemey *et al.*, (2014) who used Logit and Probit models of general form:

$$A_i = f(Z_i) \quad (1)$$

Where A_i and Z_i represent respectively the performance and a set of demographic and socio-economic characteristics of the same producer i . Considering the hypothesis of the link between performance and adoption of endogenous practices, the simplest way to integrate the practice of endogenous know-how of producers (P) into the previous model is to express it in the form:

$$A_i = f(Z_i, P_i) \quad (2)$$

However, the practice of endogenous know-how itself appears as an endogenous variable (function of a certain number of characteristics specific to the individual). Therefore, the estimation of equation [2] presents endogeneity biases. According to Maddison (2007), the practice of endogenous know-how is a prerequisite for performance. In other words, endogenous know-how must be practiced before recording performance on the viability of the farm and its sustainability. There is therefore no longer a problem of endogeneity, but rather of selection: performance if there is practice of endogenous know-how. Thus, as proposed by Maddison (2007) and Gbetibouo (2009), a selection model such as the Heckman Probit model makes it possible to better explore the performance of producers in relation to their practice of endogenous know-how. The general model becomes:

$$V_i = f(Z_i) \quad \text{If and only if} \quad P_i = f(Y_i) \quad (3)$$

The form thus defined is based on two sub-models: the output model or performance model on viability whose dependent variable is viability (V) and the selection model whose dependent variable is the practice of endogenous know-how (P). Considering j demographic and socio-economic characteristics linked to producer i and capable of determining his adaptation decision (characteristics noted z_{ij}) on the one hand, then j demographic and socio-economic characteristics linked to the same producer i and likely to determine his perception (characteristics noted y_{ij}) on the other hand, the econometric model which emerges is:

$$v_i = \alpha_0 + \sum_j \alpha_j z_{ij} + u_i \quad \text{If and only if:}$$

$$p_i = \beta_0 + \sum_j \beta_j y_{ij} + \vartheta_i > 0 \quad (4)$$

In this model, v_i is the viability performance (1 = viable; 0 = not viable) of producer i and p_i is its endogenous know-how practice defined as a dummy dichotomous variable; α and β are the parameters to be estimated; u and ϑ are the error terms. Equation [4] amounts to:

$$\left\{ \begin{array}{l} V = \alpha Z + U \\ P = \beta Y + \vartheta \end{array} \right. \quad (5)$$

where Z is a j vector of demographic, socio-economic characteristics and the characteristics of the farm that can influence its viability, Y is a j vector of demographic and socio-economic characteristics that can determine the practice of endogenous know-how, U and ϑ the error terms jointly following a normal distribution, independently of Z and Y , and A and P being linked by the selectivity link A if $P > 0$. Thus, the dependent variable A is defined as:

$$A \text{ is observed if } P > 0. \quad A \text{ is missing data if } P \leq 0. \quad (6)$$

The estimation of the parameters (α and β) was done using the Heckman Probit model. The determinants of the practice of endogenous know-how and the viability of the farm were therefore identified from the signs of the estimated values and the probabilities given by the model. The basic hypothesis of the model being the practice of endogenous know-how as a prerequisite for viability (V if and only if $P > 0$), a globally significant model (probability < 0.01 or 0.05) reflects not only the adequacy of the

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theoretical specifications, but also the existence of a relationship (A if P > 0) between the practice of endogenous know-how and the viability of farms.

2. Presentation of the study area, sampling and data collection

2.1. Study area

The empirical phase of the research took place in four (04) prefectures of the Plateaux region, namely Anié, Est-Mono, Moyen-Mono and Haho (figure 1 below).

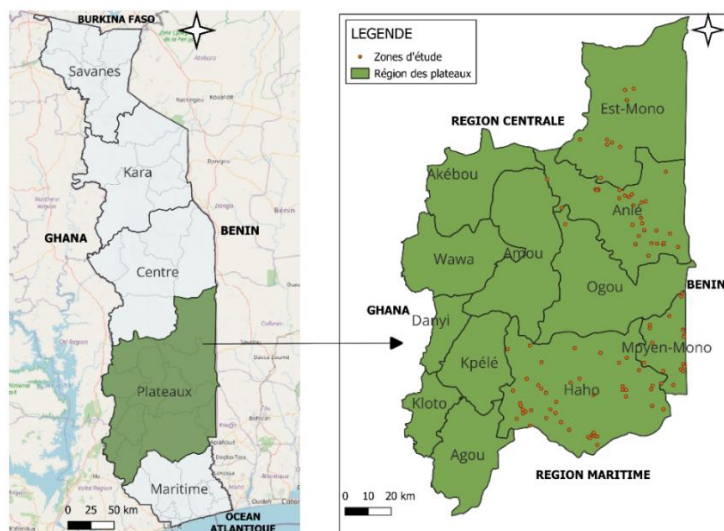


Figure 1: Map of Togo with the location of the study area

The choice of the Plateaux region is justified by the fact that it is part of the areas of high cotton production under corn. Then presents a dichotomy because while the Northern zone of the region is among the regions which obtain the best average yields in seed cotton (Central, Northern Plateaux and Kara), that of the South displays the lowest average yield in the country. At the same time, the data on the areas sown in cotton under corn in the Northern and Southern Plateaux zones represent respectively 3 and 12 times the areas in pure cotton from 1999 to 2022.

2.2. Sampling

Sampling was done using the so-called "multi-stage" method or consecutive stages developed to arrive at the selection of basic observation units (here, producers) where the imperatives of representativeness are respected. The sample size (n) in the region is determined using the formula developed by Yamane (1967) with a confidence of 95% and a maximum variability of 50%. This formula widely used by previous studies depends on the size of the population (N) and the level of precision (e) sought.

$$n_i = \frac{N_i}{(1 + N_i \times e^2)}$$

Due to the high degree of homogeneity of the cotton growers in the region according to their common characteristics, the level of precision retained for the calculation of the sample is equal to +/- 7%. For this level of precision retained of +/- 7% with a population estimated at 37,961 cotton producers, the sample size (n) is:

$$n = \frac{37\,961}{(1 + 37\,961 \times 0,07^2)} = 203 \text{ producers}$$

By adding 25% margin to absorb losses related to field surveys, we obtain a sample of 254 cotton producers to be surveyed. The sample size per stratum is defined on the basis of the weight of each zone in terms of the number of existing cotton producers. Thus, the sample size of each stratum (cotton production zone) is the product of the overall sample size by the weight of the stratum (Table 6 in the appendix).

The individual survey of 254 producers from four prefectures with a high cotton-on-corn practice (Haho, Anié, Moyen Mono and Est-Mono) was preceded by interviews with Cotton Producer Groups (GPC), Technical-Commercial Agents (ATC) of the NSCT, researchers from the Human Savannah Agronomic Research Center (CRASH) and leading producers to identify the technologies popularized, the difficulties encountered and the commonly used endogenous practices. The information from these interviews was used to develop a structured questionnaire that is submitted to producers individually. Data collection was carried out using the kobocollect mobile application. At the end of data collection, a brief review of the cultivation practices adopted by the producers surveyed and their effectiveness was carried out, followed by an analysis of the reasons for their adoption.

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3. Results and discussions

3.1. Technical and economic efficiency of the adopted cultivation practices

The analysis of the cultivation practices adopted by the producers surveyed mainly focused on soil preparation, sowing and spreading fertilizers. The soil preparation operation consists of prior manual cleaning of the plots to remove harvest residues or clear plots left fallow. As soon as the rains start, it is followed by plowing carried out at more than 82% by manual hoeing in the context of pure cotton cultivation. It generally requires about ten days of work per hectare. Producers practicing cotton cultivation as a catch crop under corn proceed with direct sowing.

As for sowing, for better emergence and better development of crops, the sowing dates recommended by the Togolese Institute for Agronomic Research (ITRA) are between June 10 and July 10 in the Northern Plateaux and from June 20 to July 20 in the Southern Plateaux. However, records of sowing dates for the 2022/2023 cotton campaign from producers during the survey show that overall, around 70% of sowing in the area is carried out during the recommended period (62% among producers practicing cotton cultivation under corn compared to 75% among non-practitioners), a quarter of sowing (26.35%) on average is done in the last ten days of July. This reflects a real drift in terms of compliance with the cotton sowing schedule. We note more than 37% of cotton sowings in catch crops under corn after July 20 compared to 23% of cotton sowings in pure. This rate reaches 42% and 37%, respectively in the prefectures of Anié and Est-Mono. This situation is inherent to the late onset of rains and the water deficit during the favorable sowing period. Of all the producers who observed a corn-cotton cohabitation period of less than 30 days, only 18.18% obtained a yield per hectare lower than 800 kg/ha. Beyond 30 days of cohabitation, the proportions of producers with a yield below 800 kg/ha exceed 40%. The highest rates of low yield are thus observed among producers carrying out long-term cohabitation.

With regard to fertilization, particularly with regard to compliance with the doses of NPKSB 12-20-18-5-1 and Urea 46%N fertilizers, it appears that 42.86% of cotton producers in pure cultivation apply a dose of NPKSB 12-20-18-5-1 and Urea 46%N between 200 and 250 kg/ha under the cotton, compared with a proportion of 39.58% observed among cotton producers under corn between doses of 150 to 200 kg/ha. Fertilizer doses greater than 200 kg/ha are applied by 53.06% of cotton producers in pure cultivation, compared with only 35.42% of cotton producers under corn. Thus, the highest doses are applied in pure cultivation.

The analysis of the cultivation practices encountered in the study area shows that constraints inherent in land management, compliance with optimal cotton sowing periods and fertilization doses for better improvement of cotton yields hinder the emergence of the cotton sector in Togo. It is important to understand the determinants of these practices which persist despite the constraints encountered by producers.

3.2. Determinants of the adoption of cotton cultivation under corn

3.2.1. Characterization of social representations of cotton cultivation

3.2.1.1. Validation of word frequency distribution

The method of free word associations around the inductive term "cotton growing" allowed the creation of a corpus of themes for each category of actors involved in the study, in particular producers adopting and non-adopting the practice of growing cotton as a catch crop under corn. Each corpus thus obtained underwent a cleaning which allowed on the one hand to group together synonymous words (for example words such as good, well, beneficial, etc. were considered to be identical) and on the other hand to retain only one word in cases where the same respondent mentioned the same word twice. This work made it possible to have a definitive corpus. The words were then distributed and ranked according to the decreasing order of their frequency of citation. Table 1 below presents the summary of the results of the word association method.

Table 1: Situation of word evocations by respondents

Items	Producers adopting cotton under corn	Producers adopting under corn not cotton
Sample size	193	59
Total number of words mentioned	650	190
Number of different words	23	15
Number of different words per individual	3.4	3.2
Average frequency of evocations	28.3	12.7
Percentage of most cited words representing at least 40% of all evocations	9%	7%

Source: Results of our surveys, 2023

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Table 1 shows that the word frequency distribution resulting from free association is random and can be subjected to a prototypical analysis since it meets the condition that at least 5 to 10% of the most frequently cited words represent between 40 and 60% of the evocations (9% for adopters and 7% for non-adopters). Furthermore, in accordance with the curves in Figure 2, the trend curves present slopes of values close to -1 (-1.302 for adopters and -1.097) for non-adopters. The word corpora obtained for each category of actors can therefore be subjected to prototypical analysis.

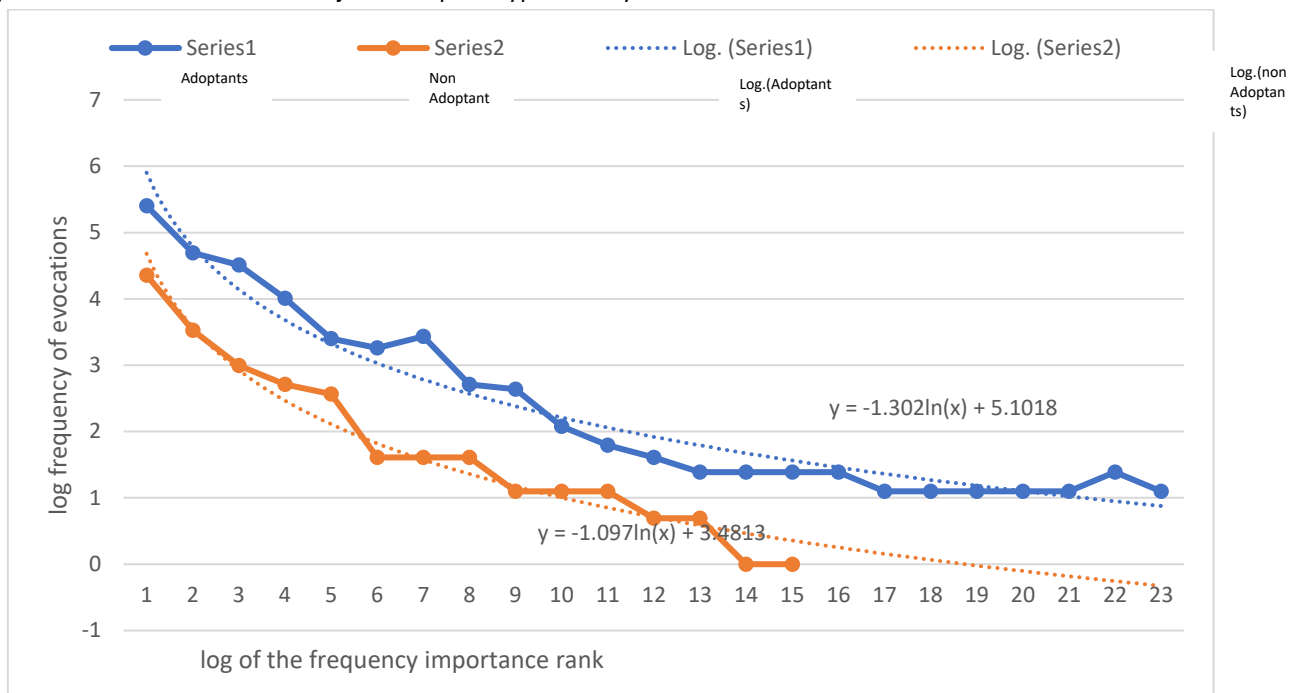


Figure 2: Zipf curves of the frequency distribution of evoked words

3.2.1.2. Identification and analysis of social representations

The prototypical analysis of associations consisting of crossing the rank and frequency of appearance of the words mentioned during the interviews makes it possible to produce a double-entry table containing in rows the frequency of citation of the evocations and, in columns, their average rank. The prototype of the social representations of cotton cultivation is presented as follows:

Table 2: Average frequencies and ranks of evocations by category of actors

Items	Cotton growers under corn	Non-cotton practitioners under corn
Sample size	193	59
Total number of words mentioned	650	190
Number of different words	23	15
Number of different words per individual	3.4	3.2
Medium Frequency (FM)	28.3	12.7
Minimum frequency (Fm)	5	3
Average Rank Mean (MRM)	2.36	2.26
Number of words included in the prototype (frequencies below average frequency)	12	8
Percentage of words included in the prototype	94%	92%
Percentage of retained words compared to all different words	52%	53%

Source: Survey results, 2023

Notes: $FM = \frac{1}{n} \sum_{i=1}^n f_i$ and $MRM = \frac{1}{n} \sum_{i=1}^n r_i$

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For each category of actors, f_i represents the absolute frequency of each different word i , n the total number of different words and rm the average citation rank of each word across all individuals.

The minimum frequencies obtained from the equations of the trend lines of the Zipf curves in Figure 2 above correspond to the lower limit from which the words were retained for the production of the prototype. In other words, for each category of actors, the words retained for the prototypical analysis are those that were mentioned at least f_m times, i.e. at least 5 times by producers adopting cotton growing under corn and at least 3 times by non-adopters. The 193 producers practicing cotton growing under corn mentioned a total of 650 words, i.e. an average of 3.4 words per person with 23 different words.

The 59 producers who did not adopt this practice mentioned 190 words (3.2 words per person on average) from a universe of 15 different words. As indicated in the methodological analysis framework, the analysis table presents four zones that constitute the prototype of social representations: the central zone, peripheral zones I, II and III. The prototypical analysis of the evocations by producers adopting cotton cultivation under corn is summarized in Table 3 below.

Table 3: Prototypical analysis of word evocations among producers practicing cotton cultivation under corn

Freq ≥ 28.3	Average rank < 2.36			Average rank ≥ 2.36		
	Words evoked	Frqce	Rg avg	Words evoked	Frqce	Rg avg
	PROFIT	109	2.28	MONEY	222	2.43
	SAFETY/FOOD	91	2.30	PRIORITY	30	2.37
	CLOTHES	55	2.15	HARD	31	2.58
				INPUTS	26	2.73
Freq < 28.3	REALIZATION	14	2.14	WEALTH	15	2.47
	FIBER	6	2.17	PRIVILEGE	8	2.50
				LOAN GUARANTEE	5	3.00

Source: Survey results, 2023

The observation of the first box on the left of Table 3 above clearly reveals that the elements likely to structure the representation of all the subjects are: the benefit provided by cotton, security and clothing. These three (3) items would therefore be generators and organizers of their representation. They are characterized by the highest frequencies of evocation with lower average ranks of appearance. The peripheral elements are essentially: money, the arduousness of the work, the priority nature of the culture, the facilities granted for inputs, achievements and fiber production. The reference to pecuniary gain and privilege is only very rarely mentioned and this by few respondents.

Table 4: Prototypical analysis of word evocations among producers not practicing cotton cultivation under corn

Freq ≥ 12.7	Average rank < 2.26			Average rank ≥ 2.26		
	Words evoked	Frqce	Rg avg	Words evoked	Frqce	Rg avg
	CLOTHES	20	2.20	MONEY	78	2.51
	SAFETY / FOOD	15	2.07	PROFIT	34	2.38
Freq < 12.7	PASSION	5	1.80	PRIORITY	13	1.69
	HARD	5	1.80			
	INPUTS	5	2.40			
	DEVELOPMENT	3	2.00			
	GUARANTEE FOR LOAN	3	2.00			
	LEGACY	3	2.00			

Source: Survey results, 2023

Reading this table 4 reveals the elements of the representational field of non-adopter producers in relation to the inductive term "cotton cultivation". Indeed, the central core of the representational field of the following elements: clothing and security. We

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could add the benefit that non-adopter producers derive from cotton cultivation. The peripheral elements include money, passion for cultivation, the arduousness of the work, the guarantee for loans (trust), and its contribution to the development of the country and production areas, its obligatory nature inherited from parents.

3.2.1.3. Analysis of the semantic content of the core of social representations of cotton producers

The words and/or expressions stated by the producers during the interviews, far from being isolated, are integrated into a coherent whole, revealing their conception or vision of cotton cultivation. Indeed, the representations, although constituting a reference and a determinant of the behaviors and actions of individuals of the same social group, only exist through the structuring discourses that both give them substance and re-elaborate them (Serra, 2000). Consequently, the different words and expressions (benefit, security, clothing) that emerge from the social representations of the producers must be understood and analyzed in light of the sociocultural characteristics of these communities in order to better understand the way in which these representations affect their behavior in the face of alternative cotton production systems. Hence the need to better explain the meaning of the semantic content of the cores of the social representations of these producers and to highlight the way in which they provide information on the meaning that these communities give to cotton cultivation.

The observation of these results shows that the two sub-populations have almost identical representations of cotton. The social representation that producers have of cotton is centered around three main referents, which refer to the common experiences of the latter concerning the culture: its production function, its inherent link with nature, and its production context. These three aspects recall the three dimensions of professional representation, as defined by Blin (1997), namely the functional dimension, the contextual dimension, and the identity dimension. The functional dimension refers to the function of production of raw materials, in particular for the textile industry and for human and animal food. The contextual dimension mainly refers to the arduousness of the work and the deterioration of the economic context of the sector. The identity dimension is actualized within what founds the attraction and the choice of the culture, namely the obligatory (inevitable) nature of the culture in the life of the farmer and inherent in its contribution to the fight against precariousness. These dimensions would act as generating principles of professional representation, thus giving farmers common points of reference in their strategy towards the sector.

This emergency strategy, based on the imperatives of survival, then limits their capacities for future prevention. The structural weakness of cotton yields, if it refers to the errors of extension (poor control of information and agrometeorological forecasting in particular), cannot in fact be understood without a detour through the crop calendars, and through the counter-random choices that punctuate them. Thus, the technical itinerary advocated by extension workers is only rarely applied by farmers; we note in particular the rarity of early sowing, however presented as a *sine qua non* condition for good yields. This "obstinacy in doing badly" does not arise from the usual and convenient explanation in terms of "farmer archaism", but finds its explanation in the existence of peaks that put cotton, food crops, and non-agricultural activities in competition (Yung, 1989). These calendar shocks are thus met by "peasant" choices, which put the objective of food self-sufficiency before that of cotton income. Thus, at the start of the rainy season, the importance of clearing work delays food sowing, which in turn delays cotton sowing. In addition, sowing cotton as a catch crop under corn obviously reduces cotton yields, but certainly not the overall productivity of the plot, nor therefore the hope of having enough to eat (Lallau, 2005).

This ultimately leads to the notion of opportunity cost developed by Dufumier (2006). Poor farmers faced with the choice of crops will not think of genetic potential, price ratio, but first of all of opportunity cost, proven or possible: what risk do we take by giving up the variety or the "rustic" pattern, and are we able to face this risk? Thus, the obstinacy in practicing cotton cultivation under corn can then be interpreted as a trade-off in terms of risk management: favoring social capital (guarantee of survival, physical, but also social) to the detriment of the productive type opportunity, "social" investment rather than technical innovation in order to best guarantee their survival. Indeed, if investing means increasing the stock of capital, we must consider the capital of small producers in its different forms: human, social and political capital, natural capital, material capital and monetary capital. The decisions and behaviors of these producers in adopting an innovation, as is the case with the choice of a production system, cannot therefore be understood without effectively taking into account their objectives. The farmers' adherence to cotton-corn cultivation alternatives is part of a strategy of avoiding or minimizing risk through crop diversification in order to achieve their maintenance, growth and reproduction objectives.

3.2.2. respondents ' operating systems

As before, the objective here is to analyze the viability of the farms. Thus, after explaining the determinants of this viability, we will analyze the effect of the adoption of cotton cultivation under corn on viability.

3.2.2.1. Effect of endogenous know-how and viability of cotton farms

The results presented in the table reveal a significant dependence between the practice of crop association and the viability of cotton farms. The Wald test being significant and positive, expresses that the adoption of crop association positively explains the

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viability of farms. Thus, farms on which cotton-corn association is practiced were more viable than those that did not experience association (Kih²).

Furthermore, it also appears that male gender, agricultural advice in the group and the amount of urea used (100 to 150 kg per hectare) significantly explain the viability of cotton farms. Agricultural advice in the group plays an important role in the viability of cotton farms. The positive effect of agricultural advice can be explained by the advantages and opportunities it offers to cotton producers. Indeed, agricultural advice allows producers to master the best agricultural practices, management techniques, use of agricultural inputs, etc. By adopting these improved practices, producers increase their productivity, optimize the use of resources (land, financial, inputs, labor, etc.) and reduce losses, which contributes to the viability of their farms. The amount of urea used (100 to 150 kg per hectare) also plays a determining role in the viability of cotton farms. Urea is a nitrogen fertilizer commonly used to stimulate crop growth. When adequate amount of urea is applied appropriately, plants can benefit from an additional source of nitrogen, which promotes their growth and development. Better crop growth can lead to increased agricultural productivity, which is essential to ensure the economic viability of farms. Objective capital such as male gender has been identified as a factor that negatively influences the viability of cotton farms at the 10% threshold. This result can be explained by the fact that women have better economic performance in cotton farms.

Table 5: Heckman selection model estimating the determinants of the viability of cotton farms

<i>EXPLANATORY VARIABLES</i>	(1) Viability	(2) Adoption	(3) /mills
Male	-0.450** (0.207)	2.625* (1.595)	
Non-schooled	-0.394 (0.431)	2.778* (1.525)	
TailedumC)nage	0.006 (0.005)	0.058** (0.028)	
agricultural_advice_inourgroup	0.283*** (0.075)	-0.243 (0.322)	
training_agriculture	0.007 (0.066)	-0.628** (0.318)	
medium exploitation	-0.078 (0.074)	-0.655** (0.305)	
ModedaccC(sC terrere_HC)ritage	-0.098 (0.102)	-1.028*** (0.335)	
ModedaccC(sC laterre_Purchase	0.116 (0.095)	-0.157 (0.470)	
ModedaccC(sC laterre_Don	-0.013 (0.089)	-1.377*** (0.344)	
ModedaccC(sC laterre_Location	-0.080 (0.090)		
Quantity ofNPKC per hectareBetween 150 and	-0.036 (0.073)		
QuantityofurC)eBetween 100and150KGha	0.273** (0.108)		
Use of the main work(salariC)	0.037 (0.093)		
ChefdevotremC)nage_MeC*me		-1.831 (1.377)	
AnnC)esdexpC)rience		-0.016 (0.024)	
Motivation_choice_cotton_MarchC)dis		1.341***	

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		(0.512)	
motivation_choice_cotton_finance_		-6.355	
		(0.000)	
		(0.000)	
The climate is favorable		2.912***	
		(0.550)	
lambda			-0.093
			(0.112)
Constant	1,938**	-4.714*	
	(0.774)	(2,640)	
Forest test	54.21***		
Observations	255	255	255

*Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

Source: Survey results, 2023

3.2.2.2. Determinants of the viability of cotton farms

The results obtained showed that male gender, uneducated, household size, agricultural training and average farm size are the factors that significantly determine the adoption of endogenous know-how by cotton producers. The gender of the head of household plays a role in the decision to adopt endogenous know-how. Indeed, the results show that men are more likely to adopt endogenous know-how compared to women. This may be due to socio-cultural factors, gender inequalities or different opportunities and incentives for the adoption of these practices. Similarly, producers without formal education are more likely to adopt endogenous know-how than educated producers, explaining their increased dependence on local knowledge and traditional practices in their agricultural activities. Conversely, trained farmers are more exposed to modern methods that may encourage them to favor more conventional agricultural practices and less linked to traditional know-how. In addition, larger households are more likely to adopt endogenous know-how because they have more labor available to implement these practices. The larger the farm size, the more producers favor modern technologies and practices that require large capital investments, rather than turning to local know-how that is considered less productive or less efficient for large farms.

Land is another factor that influences the decision to adopt endogenous know-how. The negative effect of inheritance and the gift of land indicate that producers who inherit or receive land favor modern and intensive practices in agricultural inputs to the detriment of more traditional practices in order to maximize the profitability of their farms. However, producers with uncertainty about property rights, that is, those using purchase or rental, are less motivated to make investments and will be less willing to adopt a modern practice that requires additional investments (Udry, 2010; Lambrecht et al. 2014; Hailu et al, 2014). Favorable climatic conditions determine the adoption of endogenous know-how by producers because they would encourage them to use these proven practices adapted to their environment. Finally, producers adopt crop association for market guarantee reasons.

3.3. Discussions

Farms, like all businesses, pursue very specific production objectives. More specifically, African family farms, in order to achieve their production and social reproduction objectives, are called upon to perform certain functions that Gastellu (1980) groups into production, consumption and accumulation functions. The decisions and behaviors of producers in rural Africa in adopting an innovation, as is the case with the choice of a cotton production system, cannot therefore be understood without effectively taking into account their objectives.

Theoretically, the adoption of cotton cultivation under corn implies a renunciation of the pure cotton production system and can be perceived as a risk-taking by the farmer with regard to his farm. It is therefore important to highlight the advantages and disadvantages linked to the production of pure cotton, to compare them with the advantages and disadvantages of the new systems of cotton production in relay under corn. This will allow on the one hand to appreciate under which conditions these alternatives to pure cotton can validly replace the latter and on the other hand to better understand the logic and strategies that producers develop in the adoption of this production system and the achievement of their capital formation objectives within the framework of this commercial crop. As Benoit-Cattin (2012) indicated in "Investments by small agricultural producers in developing countries", these objectives correspond to *livelihood* strategies for "a good life" including more food security, better and more stable income, less vulnerability to shocks, better well-being with assets transferable to descendants. If investing means increasing the capital stock, we must consider the capital of cotton farmers in its different forms: human, social and political capital, natural capital, material capital and monetary capital. However, human capital and social capital remain priorities. It

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appears that farmers' adherence to alternatives to conventional cotton seems to be part of a strategy of avoiding or minimizing risk through crop diversification in order to achieve their objectives of maintenance, growth and reproduction. These elements of human or social capital therefore determine the social representation that cotton farmers have of the cotton sector and which justifies their decision and shapes their production strategy. It is a strategy oriented towards the survival of their household (priority given to the nutritional and health status of the members) and the maintenance of social capital characterized on the one hand by a professional dimension developed within cotton producer groups (giving cotton cultivation its obligatory character among producers), and a non-professional dimension through kinship groups and neighborhood relations within religious organizations.

Thus, the old question of the rationality of the peasants of the "Third World" hardly arises any more, and as Landy (1998) said, the peasants of the Third World are neither fatalistic or bigoted brutes nor entrepreneurs necessarily maximizing income - except in individual cases - but must be situated in an in-between that makes them comparable to the forms of logic of an average Parisian or New Yorker. Similarly, the quarrels between Marxists and idealists are almost futile, to know which of the economy or ideological representations founds tropical societies, since the answer is undoubtedly: "Neither one nor the other, and both at the same time". Godelier (1984) is probably the one who best explained this alliance between "the ideal and the material": skillfully merging, in order to better surpass them, the theories of Marx and the idea of Polanyi (1957) according to which the rural economy is "embedded" in traditional societies, he suggests that religion, or ideology, or kinship relations, can very well be the true "infrastructures" of a society if they function at the same time as relations of production, if they serve as economic vectors. We can see an illustration of this theory in the maintenance of the caste system that subsists in contemporary Africa: has this system based on the Hindu religion not survived because it also functions as an economic structure? Each caste, to which a certain degree of religious purity is attached, traditionally corresponds to an economic (or politico-religious) activity: the caste system, however hierarchical it may be, is therefore also an economic system based on a certain unequal complementarity.

This leaves room for cultural factors, while explaining that peasant logic cannot go in a fundamentally anti-economic direction. Peasants in tropical countries are now truly hybrid: cultural beings, they are also economic beings, in other words, human beings. Their objectives, if they do not necessarily correspond to "rationality" as it is too quickly defined in the West, are always pursued in a way that is entirely rational. This is what Elster (1986) calls "formal rationality", that is to say the adaptation of means to the desired end, the only rationality that can be defined without too much subjectivity. *Homo economicus* can therefore coexist with *Homo hierarchicus*, and conversely Western entrepreneurs, subject to the imperfection of their knowledge, to the pressures of fashion, advertising, and the need for leisure, are much less economically rational beings than has been said. The limits of "utilitarian" models are therefore real.

CONCLUSION

The major concern of this study was to analyze the socio-cultural factors of adoption of the practice of cotton in relay under corn in Togo. It emerges fundamentally that the adoption of peasant practices in the case of the present study is mainly determined by socio-cultural elements such as cultural practices, social considerations, and even the social identity of the community. Furthermore, the rational nature of the peasants studied is revealed. The logic pursued is not the maximization of profit as evoked by classical economics, the peasants react in an environment specific to them with well-defined purposes. This is what can be called adjusted rationality. This is focused on risk minimization and household survival.

Indeed, it appears that the social representation that producers have of cotton is centered around three main referents, which refer to the common experiences of the latter concerning the culture: its production function, its inherent link with nature, and its production context, in accordance with the three dimensions of professional representation defined by Blin (1997), namely: the functional dimension, the contextual dimension, and the identity dimension. These dimensions would act as generating principles of professional representation, thus giving farmers common points of reference in their strategy with regard to the sector. However, this emergency strategy, based on the imperatives of survival, limits their capacities for future prevention. The structural weakness of cotton yields cannot in fact be understood without a detour through the crop calendars, and by the counter-random choices that punctuate them due to the lack of control of agrometeorological information and forecasting by both producers and public technical support services. Thus, the practice of cotton under corn negatively influences cotton productivity and positively corn production. Farmers who adopt it lose 569 kg of cotton per hectare to gain 958 kg of corn and ensure the viability of their farms.

The observed underperformance can however be corrected if measures are taken to promote peasant know-how in terms of crop association. This will involve providing producers with better weather forecasting and better technical supervision in order to facilitate their compliance with technical itineraries to guarantee an optimum cotton-maize cohabitation time (less than three

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weeks) and encourage them to reduce or avoid late sowing, underuse and misuse of inputs (fertilizers and phytosanitary products), then facilitate access to food inputs for cotton growers.

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Annexes

Table 6: Complete sampling plan

Prefecture	No.	Production area	Number of producers in the area	Area weight (%)	Number of producers to be surveyed
Is Mono	1	Badin	10	0.03	0
	2	Elavagnon	865	2.28	6
	3	Gbadjahe	413	1.09	3
	4	Kamina	35	0.09	0
	5	Kpessi	64	0.17	0
	6	Moretan	920	2.42	6
	7	Nyamasila	434	1.14	3
Anie	1	Adogbenou	1431	3.77	10
	2	Anie	542	1.43	4
	3	Atchinedji	2363	6.22	16
	4	Djama	63	0.17	0
	5	Glitto	2796	7.37	19
	6	Kolo-cope	902	2.38	6
	7	Ountivou	22	0.06	0

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Prefecture	No.	Production area	Number of producers in the area	Area weight (%)	Number of producers to be surveyed
	8	Palakoko	514	1.35	3
Medium Mono	1	Ahassomé	1,300	3.42	9
	2	Katahoe	108	0.28	1
	3	Katome	450	1.19	3
	4	Kpekpleme	776	2.04	5
	5	Kpodoudji	59	0.16	0
	6	Saligbe	1,406	3.70	9
	7	Tado	909	2.39	6
	8	Tohoun	1,521	4.01	10
Haho	1	Agbavé	42	0.11	0
	2	Akpakpakpe	538	1.42	4
	3	Alati Market	45	0.12	0
	4	Amakpape	50	0.13	0
	5	Asrama	4,885	12.87	33
	6	Attached	1,452	3.82	10
	7	Ayito	587	1.55	4
	8	Bako	11	0.03	0
	9	Dalia	1,623	4.28	11
	10	Djemeni	97	0.26	1
	11	Haho	42	0.11	0
	12	Hahomegbe	3 121	8.22	21
	13	Koukpe copé	38	0.10	0
	14	Kpedje	56	0.15	0
	15	Kpedome	3,397	8.95	23
	16	Kpove	15	0.04	0
	17	Notse	1,525	4.02	10
	18	Wahala	2,534	6.68	17
Total			37,961	100	254

Source: Survey results, 2022

Table 7: Main descriptive statistics

ANOVA	Yield		Adoption	
	F	Sig.	F	Sig.
Variables				
Male	,382	1,000	2,160	,143
Female	,382	1,000	2,160	,143
Age	,827	,848	,354	,552
Married polygamously	,947	,621	3,690	,056
Married monogamous	,904	,710	1,732	,189
Single/never married	3,219***	,000	5,915**	,016
Not in school	,868	,779	6,154**	,014
Primary	1,009	,491	,012	,914
Secondary	1,019	,470	3,669**	,057
Higher (University)	1,390**	,048	6,525***	,011
Household size	1,446**	,031	12,370***	,001
Religion_Christianity	,975	,561	14,965***	,000
Traditional_Religion (animism)	,990	,530	8,461***	,004

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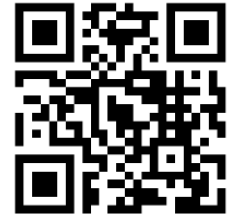
ANOVA	Yield		Adoption	
Main activity_Agriculture	,832	,840	,005	,942
Secondary activity_Agriculture	,832	,840	,005	,942
Years of experience	,754	,937	,002	,960
Motivation for choosing cotton cultivation _Having access to inputs	1,191	,188	,023	,880
Motivation for choosing cotton cultivation_Available market	1,058	,394	2,224	,137
Agricultural advice_From the ATCs	1,385	,050	13,198***	,000
Agricultural advice _In our group (GPC)	1,165	,221	4,058**	,045
Agricultural advice_For parents	1,636***	,007	,134	,715
Training in agriculture	1,133	,265	,004	,951
Land access mode_Purchase	1,274	,110	3,807**	,052
Land access mode_Location	,964	,586	11,001***	,001
Type of plowing_Manual hoeing using dabas	,726	,958	,141	,707
Type of plowing_Ploughing with animal traction	,295	1,000	1,274	,260
Type of plowing_Ploughing carried out with a tractor	,703	,972	,297	,586
Fertilizer Saving Perception_Pure Cotton	,751	,939	12,919***	,000
Perception of fertilizer savings_No difference	,962	,590	21,014***	,000
Number of ATC visits	,870	,777	52,855***	,000
The climate is favourable for the success of this system	1,203	,175	104,232***	,000

Source: Survey result, 2023



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Coordination and Collaboration between Secret Intelligence Agencies and Government Institutions: Challenges, Opportunities, and Dynamics



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ABSTRACT: Effective coordination and collaboration between secret intelligence agencies and government institutions are crucial for national security in the face of complex and evolving threats. Despite technological advancements in artificial intelligence (AI) and machine learning, which have enhanced intelligence capabilities, achieving seamless collaboration remains a persistent challenge, owing to differences in organizational culture, communication barriers, and the need for secrecy. This study explores the interplay between technological advancements, organizational dynamics, and legal frameworks to foster coordination between intelligence agencies and government institutions. Through a comprehensive literature analysis, this study examines the historical evolution of intelligence agencies, their functions and responsibilities, and the legal and regulatory frameworks governing their operations. The dynamics of coordination and collaboration were investigated, including various models (centralized, decentralized, and hybrid), factors influencing effectiveness (communication, trust, and leadership), and the role of technology in facilitating information-sharing. The study also identifies key challenges, such as bureaucratic barriers, legal and ethical concerns, resource constraints, political interference, and cybersecurity risks. Opportunities for enhancing collaboration are discussed, including policy reforms, strengthening interagency trust, adopting technological innovations, international cooperation, and capacity-building programs. Case studies on success and failure in intelligence collaboration provide valuable insights into the best practices and lessons learned. The study concludes with recommendations for improving intelligence collaboration, emphasizing the importance of strong legal frameworks, ethical AI integration, effective communication, and sustained investment in capacity building and international cooperation.

KEYWORDS: Intelligence Agencies, Coordination, Collaboration, National Security, Legal Frameworks

I. INTRODUCTION

Effective coordination and collaboration between secret intelligence agencies and government institutions are essential for national security, particularly today's complex and evolving threats. Secret intelligence agencies play a fundamental role in safeguarding national interests and are responsible for gathering, analyzing, and disseminating information to detect and preempt threats, ranging from terrorism to cyber-attacks (Berman et al., 2024). Despite technological advancements, particularly in AI, effective collaboration between intelligence agencies and government institutions is often hindered by differences in organizational culture and communication barriers (Chong et al., 2021). These factors create challenges in realizing efficient cooperation, especially when considering the dynamics of agency and influence within organizations (Naidoo, 2023).

These challenges are exemplified by the intelligence-sharing difficulties observed within the European Union, where varied national interests, legal frameworks, and differing levels of trust have made seamless cooperation challenging (Bilgi, 2016). This situation underscores a broader global issue regarding the obstacles that impede effective interagency collaboration. Although previous research has addressed certain aspects of intelligence collaboration (Bilgi, 2016; Carter, 2015), a noticeable gap remains in the comprehensive understanding of the interplay between technological advancements, organizational culture, and legal frameworks to foster coordination between intelligence agencies and government institutions. This study aims to address this gap by exploring how emerging technologies such as AI can enhance collaboration mechanisms and, in doing so, contribute a more in-depth perspective to the existing body of literature on intelligence coordination.

This study was guided by the following research question: what are the primary challenges and barriers to effective collaboration between secret intelligence agencies and government institutions? In what ways can emerging technologies, such

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as AI, enhance coordination between these entities? How do historical and contemporary dynamics influence the relationship between intelligence agencies and government institutions? By investigating these questions, this study offers a comprehensive analysis that provides valuable insights for policymakers, intelligence practitioners, and researchers, thereby enhancing interagency collaboration.

The significance of this study lies in its potential to offer practical solutions and recommendations for improving intelligence collaboration, which is crucial for effectively responding to the rapidly changing security landscape. Incorporating recent cybersecurity breaches, such as those that occur in 2023, underscores the urgency of enhancing collaboration mechanisms, particularly when addressing vulnerabilities in intelligence-sharing networks. These contemporary examples emphasize the necessity for adaptable, technology-driven strategies that can improve the efficiency and effectiveness of intelligence cooperation. Therefore, this review not only identifies the key challenges and opportunities, but also highlights the transformative potential of advanced technologies, such as AI and machine learning, in revolutionizing information-sharing processes and supporting more informed decision-making (Alam et al., 2024; Ayodeji et al., 2024). By focusing on these aspects, this study contributes to ongoing efforts to strengthen intelligence collaboration, thereby bolstering national security in the face of modern and emerging threats.

II. RESEARCH METHODS

This review utilizes a comprehensive literature analysis to examine the coordination and collaboration between secret intelligence agencies and government institutions, focusing on challenges, opportunities, and dynamics. Scholarly articles, government reports, and case studies from 2013 to 2024 were sourced from databases like Scopus and Google Scholar, using keywords such as "Intelligence Agencies," "Interagency Collaboration," "Cybersecurity," "AI and Intelligence," and "Coordination Models." The selection emphasized peer-reviewed publications addressing interagency collaboration, technological integration, and case studies of successful and unsuccessful collabore seen (Figure 1).

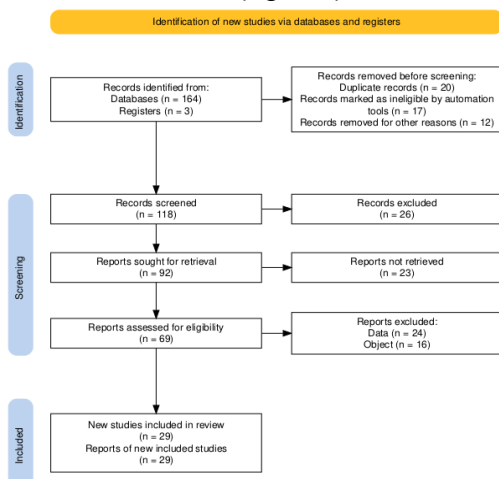


Figure 1. Data Collection Process

Thematic analysis categorizes the findings into key areas: the evolution of intelligence agencies, legal and regulatory frameworks, coordination models (centralized, decentralized, and hybrid), factors influencing collaboration (communication, trust, and leadership), and challenges (bureaucratic, legal, ethical, and technological). This structured approach facilitated in-depth synthesis, ensuring a comprehensive understanding of how intelligence agencies adapt to evolving security landscapes, technological advancements, and the balance between secrecy and transparency. This methodology provides insights into effective practices for enhancing interagency coordination.

III. RESULT AND DISCUSSION

A. The Role of Secret Intelligence Agencies in National Security

1. Historical Evolution of Intelligence Agencies

The evolution of intelligence agencies has profoundly influenced their role in national security, particularly with technological advancements. Historically, intelligence agencies such as the CIA and KGB played pivotal roles during the Cold War (Fedor, 2019) by adapting to geopolitical challenges. In recent decades, the integration of AI and machine learning has enhanced data analysis capabilities in intelligence operations, providing quicker and more accurate insights into security threats. This

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approach underscores the importance of reinforcement learning and the concept of artificial agency in strengthening modern intelligence functions (Butlin, 2024).

Modern practices have incorporated artificial intelligence (AI) and machine learning to efficiently analyze vast datasets, thereby improving threat detection and decision-making (Albinali et al., 2024). AI-driven predictive analytics now complements traditional intelligence methods, providing enhanced capabilities in counter-terrorism and cyber threat detection. Despite this progress, maintaining a balance between technological integration and ethical considerations remains a crucial challenge.

2. Functions and Responsibilities

Intelligence agencies operate across domestic and foreign domains, addressing threats such as terrorism, espionage, organized crime, and cyber threats (Akintayo, 2024). Intelligence agencies now utilize various data sources, including digital and signal data, to identify emerging security threats. However, the role of AI in this data analysis is often constrained by limitations in artificial intelligence capabilities and broader cognitive understanding (Roli et al., 2022).

However, increased reliance on digital tools has introduced vulnerabilities, including susceptibility to cyber-attacks and AI biases. Intelligence agencies must establish robust cybersecurity measures and ethical guidelines to effectively navigate these challenges (Albinali et al., 2024).

3. Legal and Regulatory Framework

Legal and regulatory frameworks play a vital role in maintaining a balance between the need for secrecy and public transparency. Challenges related to human autonomy and the influence of AI have become increasingly relevant, particularly in frameworks designed to uphold accountability (Prunkl, 2024). Different countries adopt varying approaches: the UK's Investigatory Powers Act (2016) permits extensive data collection with strict oversight, whereas Germany's BND Act requires judicial approval for certain operations (Bilgi, 2016). In the U.S., the Foreign Intelligence Surveillance Act (FISA) Court ensures judicial oversight of surveillance activities (Estevens, 2020).

Recent legislative changes, such as the EU's General Data Protection Regulation (GDPR), have emphasized data protection and influenced how agencies handle personal information (Zajko, 2018). These frameworks highlight the need to balance national security and democratic accountability.

4. Intelligence Agencies in Relation to Other Government Institutions

Intelligence agencies work within a broader government network, requiring effective collaboration with law enforcement and military and executive authorities (Kapucu & Demirhan, 2019). Clear communication channels, mutual trust, and unified strategies are crucial for effective collaboration. However, bureaucratic obstacles and different operational priorities often hinder efficiency.

5. Adapting to Technological Advancements and Ethical Considerations

AI, machine learning, and data analytics have enhanced intelligence analysis, but concerns regarding algorithmic biases and transparency have emerged (Albinali et al., 2024). Addressing these issues requires rigorous training in ethical AI use and the development of guidelines to maintain transparency and public trust.

Emerging technologies such as blockchain and quantum computing offer new opportunities for secure data-sharing and encryption but also present challenges that require adaptation and investment (Calzada, 2023). Robust cybersecurity measures and ethical considerations must be integrated into intelligence practices to maintain operational integrity.

B. The Dynamics of Coordination and Collaboration

1. Definition and Importance of Coordination and Collaboration

In intelligence operations, coordination refers to organizing activities systematically to achieve unified outcomes, while collaboration involves multiple agencies working together toward a common goal through resources, expertise, and information sharing (Akintayo, 2024). Effective coordination and collaboration are vital for timely intelligence sharing, reducing duplication, and enhancing threat response efficiency (Bilgi, 2016). The post-9/11 intelligence failures in the U.S. highlighted the necessity of interagency collaboration, as the lack of information-sharing was a key factor in the success of the attacks (Carter, 2015). Therefore, developing coordinated frameworks enables agencies to respond to complex threats, such as terrorism and cyber warfare, more effectively.

Collaboration is crucial for addressing transnational threats. Estevens (2020) emphasizes that despite legal and cultural barriers, intelligence cooperation within the European Union has significantly improved overall security, underscoring the importance of coordination beyond national borders.

2. Models of Collaboration Between Intelligence Agencies and Government Institutions

Various models facilitate interactions between intelligence agencies and government institutions.

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- a. **Centralized Model:** A single agency serves as the main hub for gathering, analyzing, and disseminating intelligence. While this model promotes efficiency and uniformity, it can introduce bureaucratic delays and limit flexibility (Bilgi, 2016). For example, the creation of the U.S. The Department of Homeland Security post-9/11 aimed to enhance coordination through a centralized approach.
- b. **Decentralized Model:** Agencies operate independently, collecting and analyzing intelligence within their domains. This model allows specialization, but risks fragmentation and inefficient information sharing (Bilgi, 2016). The U.S. intelligence landscape before 9/11 serves as an example, where independent operations led to critical intelligence gaps (Carter, 2015).
- c. **Hybrid Model:** Combines centralized and decentralized elements, allowing individual agency autonomy while facilitating information sharing through a coordinated framework. The UK's intelligence-sharing mechanisms, which maintain agency independence within a structured coordination framework, exemplify this model (Akintayo, 2024). The European Union's use of centralized platforms like Europol also represents a hybrid approach.

3. Factors Influencing Effective Coordination

Several factors impact the effectiveness of coordination between intelligence agencies and government institutions.

- a. **Communication Channels:** Established and clear communication is essential for timely and accurate information sharing. Improved communication channels among U.S. law enforcement agencies post-9/11 significantly enhanced intelligence-sharing capabilities (Carter, 2015).
- b. **Trust-Building:** Trust is foundational for successful coordination, as agencies are more likely to share sensitive information when there is mutual confidence (Lewandowski & Carter, 2017). Without trust, critical intelligence may be withheld, hindering collaboration.
- c. **Organizational Culture:** An open and collaborative organizational culture promotes information sharing, while siloed environments hinder coordination (Maras, 2017). Differing organizational cultures in the European Union often impede intelligence-sharing across member states (Estevens, 2020).
- d. **Leadership and Political Support:** Strong leadership and political backing establish and maintain coordination efforts. Leaders provide resources, strategic directions, and support for interagency collaboration (Kapucu & Demirhan, 2019).

4. Technology and Information Sharing

Technological advancements have significantly transformed how intelligence agencies gather, analyze, and share information.

a. The Role of Technology in Facilitating Coordination

Technological advancements have significantly transformed how intelligence agencies gather, analyze, and share information.

- 1) **Advanced Data Sharing:** AI and machine learning enable agencies to analyze vast datasets efficiently, enhancing real-time decision-making (Abdou et al., 2017). These technologies support predictive analysis, allowing agencies to respond proactively to security threats.
 - 2) **Secure Information Platforms:** Blockchain technology and advanced data-sharing platforms provide secure environments for sharing sensitive information, minimizing the risks of unauthorized access (Calzada, 2023). This enhances the efficiency and reliability of intelligence-sharing processes.
- b. **Challenges in Sharing Classified Information Across Agencies.**
Despite technological advances, challenges persist in sharing classified information.
- 1) **Cybersecurity Threats:** Cyber attacks pose significant risks to intelligence networks, potentially compromising classified data (Ayodeji et al., 2024).
 - 2) **Data Privacy and Ethical Concerns:** Ensuring the ethical use of AI and data analytics remains challenging due to potential biases and privacy issues (Berman et al., 2024). Establishing standardized protocols and ethical guidelines is crucial for safeguarding classified information and maintaining trust among agencies.

C. Challenges in Intelligence-Government Collaboration

1. Bureaucratic and Organizational Barriers

A major challenge in intelligence-government collaboration is bureaucratic and organizational barriers, often resulting from interagency rivalry and territorialism. Intelligence agencies may be reluctant to share information because of competition

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for funding, recognition, or influence within governmental structures (Akintayo, 2024). This reluctance often leads to inefficiencies, with agencies prioritizing their interests over national security objectives (Bilgi, 2016).

Hierarchical structures further exacerbate communication challenges, causing delays in decision-making and hindering the flow of information (Estevens, 2020). The inflexibility of these structures can be detrimental during urgent security situations, as evidenced by the intelligence failures preceding the 9/11 attacks (Carter, 2015). Addressing these barriers requires fostering an environment of trust, open communication, and streamlined decision-making.

2. Legal and Ethical Challenges

Balancing secrecy with transparency and accountability presents significant legal and ethical challenges for intelligence agencies (Akrap & Buřhak, 2022). The need to maintain secrecy to protect sources and methods often conflicts with democratic values, resulting in dilemmas regarding privacy rights and civil liberty (Bilgi, 2016).

The use of intrusive surveillance technologies has intensified concerns regarding privacy violations, leading to demands for more stringent oversight (Iliadis & Acker, 2022). Ethical issues also arise when intelligence operations involve morally ambiguous actions, such as covert interventions or disinformation campaigns. These actions undermine democratic institutions and public trust. Clear legal frameworks and oversight mechanisms are necessary to ensure that intelligence activities adhere to ethical standards while safeguarding national security.

3. Resource Constraints and Funding Issues

Resource limitations frequently hinder intelligence-government collaboration, impacting the ability to acquire advanced technologies, hire skilled personnel, and conduct comprehensive operations (Abdou et al., 2017). Competition for limited funding among government departments often leads to inefficient resource allocation and duplicated efforts, with agencies sometimes withholding information to protect their financial interests (Bilgi, 2016).

Additionally, funding constraints impede the integration of technologies such as AI and machine learning, which are essential for modern intelligence operations (Alam et al., 2024). Addressing these challenges requires a strategic approach to funding, emphasizing shared resources and infrastructure to enhance interagency cooperation.

4. Political Interference and Influence

Political interference poses another considerable challenge, potentially compromising the integrity and objectivity of intelligence assessments. Intelligence agencies are expected to operate independently, yet political leaders may exert undue influence, seeking to manipulate or suppress information to align with their agendas (Akintayo, 2024).

The Iraq War serves as a notable example in which political pressure led to misinterpretations of intelligence, resulting in flawed policy decisions (Akrap & Buřhak, 2022). Robust oversight mechanisms and legal safeguards are essential for protecting intelligence agencies' independence and ensuring objective and credible assessments.

5. Technological and Cybersecurity Challenges

While technological advancements have facilitated intelligence operations, they have also introduced cybersecurity risks. The increasing reliance of intelligence agencies on digital platforms exposes them to cyber-attacks, potentially compromising classified information (Ayodeji et al., 2024).

Moreover, integrating AI and machine learning presents challenges related to ethical use, bias, transparency, and accountability (Berman et al., 2024). Addressing these concerns requires substantial investment in cybersecurity infrastructure, personnel training, and collaboration with technology experts to effectively mitigate associated risks.

D. Opportunities for Enhancing Coordination and Collaboration

1. Policy and Legislative Reforms

Implementing comprehensive policy and legislative reforms is crucial for fostering effective intelligence collaboration. Clear legal structures can facilitate interagency operations and reduce ambiguities, ensuring accountability and minimizing conflicts of interest (Bilgi, 2016). Establishing robust oversight mechanisms enhances transparency, builds public trust, and prevents the misuse of intelligence powers (Berman et al., 2024). Additionally, adaptable legal frameworks enable intelligence agencies to respond swiftly to evolving threats, ensuring a more agile and responsive approach to national security (Carter, 2015).

2. Strengthening Interagency Communication and Trust

Effective communication and trust are fundamental to successful collaboration. Joint training programs help establish standardized communication protocols, ensuring efficient information sharing across agencies (Bailao Goncalves et al., 2022). These programs also foster mutual understanding and build rapport among personnel, which are essential for developing trust (Maras, 2017). Regular meetings and the appointment of liaison officers can further enhance communication, enabling smoother collaboration and reducing bureaucratic barriers (Akrap & Buřhak, 2022).

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3. Adopting Technological Innovations

Technological advancements such as AI, big data analytics, and secure information-sharing platforms offer significant opportunities to enhance intelligence collaboration.

- a. AI and Machine Learning: AI and machine learning can improve data analysis and threat prediction, allowing agencies to make informed decisions (Abdou et al., 2017; Alam et al., 2024).
- b. Big Data Analytics: Big data analytics enables the processing of vast amounts of information quickly, facilitating accurate threat assessments (Amzile et al., 2023).
- c. Blockchain Technology and Secure Platforms: Blockchain provides secure data-sharing environments that ensure data integrity and confidentiality (Albinali et al., 2024).

However, integrating these technologies requires training and ethical considerations to maximize benefits while avoiding potential misuse (Contini, 2020).

4. International Cooperation and Learning from Best Practices

International cooperation offers valuable opportunities to enhance intelligence collaboration. By learning from successful models, such as the European Union's intelligence-sharing mechanisms (Bilgi, 2016), agencies can develop regional networks to address transnational threats more effectively. Engaging in international forums and joint operations facilitates knowledge exchange and capacity building, enabling agencies to adopt innovative tools and strategies (Carter, 2015). Partnerships with organizations such as the United Nations or Interpol play a crucial role in addressing global security threats by fostering information-sharing and joint response strategies (Akintayo, 2024).

5. Capacity Building and Training Programs

Investing in capacity-building and training programs is vital for equipping intelligence personnel with the necessary skills to adapt to emerging security threats. Continuous training ensures that officers remain updated regarding technological developments, methodologies, and operational strategies (Bacon et al., 2017). Programs should focus on both technical skills (e.g., data analysis and cybersecurity) and soft skills (e.g., critical thinking and communication) to create a well-rounded intelligence workforce (Belvederesi et al., 2020). Cross-agency training enhances collaboration and efficiency, while specialized modules prepare personnel for evolving threats such as cyber-attacks or hybrid warfare (Akintayo, 2024).

E. Case Studies: Successes and Failures in Coordination and Collaboration

1. Successful Examples of Intelligence Collaboration

Successful intelligence collaboration often relies on robust information-sharing frameworks, a culture of trust, and technological integration.

- a. United States Post-9/11 Reforms: The establishment of the Department of Homeland Security (DHS) and the National Counterterrorism Center (NCTC) significantly improved interagency collaboration by dismantling information silos and promoting joint decision-making (Carter, 2015). This centralized coordination model has been instrumental in preventing terrorist attacks, demonstrating the effectiveness of unified intelligence sharing (Estevens, 2020).
- b. United Kingdom's Joint Terrorism Analysis Center (JTAC): The JTAC serves as a successful interagency body that coordinates terrorism-related intelligence across government institutions. It relies on diverse intelligence sources, including police, military, and security agencies, to comprehensively assess threats (Akintayo, 2024). The emphasis on real-time intelligence sharing and collective decision-making has been pivotal to its success.
- c. Australian Security Intelligence Organization (ASIO): ASIO effectively leverages advanced data analytics and machine learning to monitor potential threats, significantly enhancing response times and predictive capabilities (Alam et al., 2024). This integration of AI underscores how technological advancements can improve intelligence operations.

Key success factors across these cases include the following:

- a. Clear Legal Frameworks: Establishing well-defined roles and responsibilities.
- b. Technological Integration: Leveraging advanced technologies, such as AI and machine learning, for threat prediction and response (Abebe & Endalie, 2023).
- c. Interagency Communication: Maintaining strong channels for real-time information sharing.

These examples demonstrate that the alignment of legal structures, technology, and communication channels fosters successful intelligence collaboration.

2. Failures and Lessons Learned

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Despite these successes, notable failures have occurred because of breakdowns in communication, political interference, and inadequate information-sharing mechanisms.

- a. 9/11 Intelligence Failure: The lack of effective communication and siloed operations between the CIA and FBI has prevented the timely detection and prevention of terrorist plots (Maras, 2017). This failure highlighted the critical need for interagency collaboration, as rivalry and reluctance to share information impede the integration of crucial intelligence (Bilgi, 2016).
- b. Intelligence Misjudgment on Iraq's Weapons of Mass Destruction (WMDs): Intelligence agencies failed to rigorously validate information about Iraq's WMD capabilities, influenced by political pressure and a lack of critical analysis (Kapucu & Demirhan, 2019). This led to flawed policy decisions and underscored how political interference could compromise the objectivity of intelligence assessments.

Key lessons from these failures include the following:

- a. The Importance of Trust: Establishing trust is crucial for collaboration, as interagency competition and suspicion undermine effective intelligence sharing (Lewandowski & Carter, 2017).
- b. Effective Oversight Mechanisms: Strengthening oversight can prevent political interference and ensure objective intelligence analysis.
- c. Technological Integration: The lack of advanced data analytics and machine learning limits agencies' ability to analyze complex datasets, underscoring the need for such technologies to enhance decision-making accuracy (Berman et al., 2024).

These cases illustrate that successful collaboration requires accurate, critically evaluated information that is free from political distortion.

3. Comparison of Different Models of Collaboration

Intelligence collaboration typically follows two primary models, centralized and decentralized, each with its advantages and disadvantages.

- a. Centralized Model: This model offers clear accountability, streamlined communication, and efficient decision-making, but can be rigid and less adaptable to dynamic threats (Cordell, 2017). The DHS in the U.S. exemplifies a centralized approach, enabling rapid response, but facing occasional challenges in adaptability due to bureaucratic inertia.
- b. Decentralized Model: Agencies maintain autonomy while sharing intelligence through a network of communication channels, fostering flexibility and adaptability. However, this can result in communication breakdowns and inconsistent data sharing (Bilgi, 2016). The European Union's intelligence cooperation exemplifies this model, often facing obstacles due to varying national interests and legal frameworks (Estevens, 2020).

Pros and Cons of Each Model:

- a. Centralized Model:
 - 1) Pros: Clear leadership, standardized procedures, reduced duplication of efforts.
 - 2) Cons: Bureaucratic delays, potential lack of flexibility, vulnerability to single points of failure (Lewandowski et al., 2018).
- b. Decentralized Model:
 - 1) Pros: Greater adaptability, wider range of expertise, and increased innovation.
 - 2) Cons: Potential communication breakdowns, inconsistencies in data sharing, difficulty in maintaining a unified response (Bilgi, 2016).

The success or failure of these models depends on factors such as the willingness of agencies to cooperate, access to technological tools, and the presence of a unifying legal framework. Integrating AI and advanced analytics can help bridge gaps, enhancing real-time data sharing and threat prediction (Akintayo, 2024).

CONCLUSION

This study highlights the complexities, challenges, and opportunities for coordinating and collaborating between secret intelligence agencies and government institutions. Effective intelligence collaboration is critical for national security and requires a balanced approach that integrates efficiency, autonomy, and trust. Challenges such as bureaucratic, political, and technological barriers, alongside organizational culture differences, often impede collaboration and lead to inefficiency.

The integration of advanced technologies, such as AI and machine learning, has emerged as a pivotal factor in enhancing intelligence analysis and threat forecasting. However, ethical concerns including bias, transparency, and cybersecurity risks

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necessitate the development of robust ethical guidelines. Successful collaboration models, particularly centralized and hybrid approaches, rely on structured communication, strong leadership, and clearly defined roles. Nevertheless, issues such as political interference and funding constraints continue to present significant challenges.

To enhance intelligence collaboration, the following recommendations are proposed:

1. **Strengthening Legal and Regulatory Frameworks:** Develop comprehensive legal guidelines that define the roles and responsibilities of intelligence agencies, ensuring data privacy and minimizing political interference.
2. **Adopting Advanced Technologies:** Implement AI and machine learning tools to improve analysis and decision-making, while ensuring the use of secure platforms for real-time intelligence exchange and mitigating cybersecurity risks.
3. **Enhancing Communication and Trust:** Foster a culture of collaboration through regular training sessions, workshops, and centralized communication hubs to strengthen trust and cooperation.
4. **Investing in Capacity Building:** Provide ongoing training in data analysis, cybersecurity, and AI to keep intelligence personnel adaptable to evolving threats.
5. **Promoting International Collaboration:** Engage in global intelligence-sharing initiatives and learn from successful models to build a strong international collaboration network.
6. **Ensuring Adequate Funding:** Secure consistent funding for technological advancements, training programs, and operational efficiency, insulated from political influence.

In conclusion, effective coordination and collaboration are indispensable for addressing modern security challenges. Integrating AI and machine learning, combined with commitment to ethical practices and strong legal frameworks, offers a promising path. Achieving success in intelligence collaboration hinges on cultivating a culture of trust, transparency, and mutual respect among stakeholders.

As security threats become increasingly complex, intelligence agencies must adopt a multifaceted approach that includes policy reforms, technological adoption, capacity building, and international cooperation. By addressing these factors, agencies can establish a resilient and adaptive framework that enables them to navigate the evolving security landscape and respond to emerging threats with agility and precision. Sustained efforts to enhance collaboration are vital for safeguarding national security and fostering a more secure global environment.

FURTHER RESEARCH

Future research should focus on enhancing collaboration among intelligence agencies, particularly integrating AI ethically and effectively, to improve decision-making and predictive analysis. The development of advanced cybersecurity strategies is crucial for protecting shared intelligence, while maintaining data accessibility. Examining the influence of political dynamics on collaboration can help create frameworks that minimize interference. Detailed case studies on successful and failed collaborations, as well as exploring technologies such as blockchain and quantum computing, will provide insights for strengthening agency coordination.

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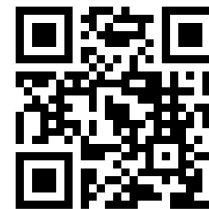
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Monitoring Estradiol and Progesterone Content of Saanen Goats During Pregnancy



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ABSTRACT: Saanen is a specialized dairy goat breed originating from Switzerland, imported and encouraged to be raised in Vietnam. This article presents the results of a survey of estradiol and progesterone levels during pregnancy in Saanen goats at the Binh Duong Large Livestock Research and Development Center. After monitoring mating, goats were sampled for blood every 7 days until birth, at 6-8 am. Hormone levels were determined by electrochemiluminescence assay, with the Cobas E601 immunoassay system. The results showed that after 14 days of conception, progesterone levels gradually increased (3.21 ± 0.36 ng/ml) and shifted to higher levels, peaking on day 70 of pregnancy (12.28 ± 0.52 ng/ml) (in the 1-2 years old group); corresponding values were 3.18 ± 0.75 - 11.88 ± 0.92 ng/ml (in the 3-4 years old group). The high value range was maintained throughout pregnancy and decreased rapidly in the 14-21 days before birth in both age groups. Estradiol, maintained at low concentrations from 0.73 ± 0.35 to 2.65 ± 1.25 pg/ml (in the 1-2 years old group); from 0.98 ± 0.48 to 3.27 ± 1.95 pg/ml (in the 3-4 years old group) in the first 21 days of pregnancy and then gradually increased to above 10 pg/ml (in both age groups) on day 28. Estradiol continued to increase and reached a maximum level (205.48 ± 32.81 pg/ml) in group 1 on day 126 and had an average value below 10 pg/ml within 1-2 days after giving birth. The results of this study help diagnose pregnancy, predict gestational age for effective reproductive management, and serve as a reliable reference when using assisted reproductive tools and strategies to improve reproductive performance in goats.

KEYWORDS: Estradiol, goat, pregnancy, progesterone, Saanen.

I. INTRODUCTION

Goat farming plays an important role in the economy. In recent years, goat farming has developed strongly, especially in the Southeast provinces of Vietnam, many large-scale goat farms have been established and developed. Reproduction is a major factor contributing to the increase in meat and milk production efficiency of female goats. Determining the levels of estradiol and progesterone hormones indicates the reproductive physiological status of livestock and is important in selecting, mating, and supporting effective reproduction. On the other hand, many variables such as nutrition, stress, temperature, climate conditions, disease, and age can affect the levels of reproductive hormones. Therefore, determining the reference values of these parameters for goat breeds being raised is very important. Due to this fact, many studies have examined reproductive hormone parameters for many goat breeds raised in different locations around the world. However, in Vietnam, there has been no research on these parameters for domestic and imported goat breeds currently being raised.

To accurately characterize the different phases and determine the normal progesterone profiles of the estrous cycle in goats, several studies have been conducted using radiometric methods or modified enzyme immunoassays (EIAs) to measure serum progesterone in female goats. Plasma progesterone, estrogen, LH, FSH and PRL variations were measured by RIA (Zamfirescu et al., 2009). Several studies have reported plasma progesterone concentrations during the estrous cycle in goats for different breeds (Kanuya et al., 2000; Marcin et al., 2004; Khanum et al., 2019). Khadiga et al., (2005) studied the changes in plasma progesterone concentrations during different phases of the estrous cycle in Damascus goats. Early pregnancy was determined through plasma progesterone concentrations, under semi-intensive rearing conditions. Blood samples were collected after the 21st day of mating to measure progesterone concentration by ELISA. Increased progesterone concentration (post-mating) in goats is considered one of the best indicators of pregnancy. This study suggests that the ELISA kit can be used to determine early pregnancy in goats (Yasin et al., 2019).

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However, there is currently little information on changes in plasma estradiol and progesterone during pregnancy in goats compared to other farm animals, especially imported goat breeds. In this study, we monitored plasma estradiol and progesterone levels by electrochemiluminescence assay (ECLIA) to provide data on these two hormones in Saanen goats, as a reference for determining pregnancy and predicting gestational age. This study suggests that the hormone levels determined by ECLIA can be used to determine early pregnancy as well as determine gestational age and predict due date in goats. In reproductive management and breeding, the need for early pregnancy detection is increasing, so that the herd can be managed more effectively. On the other hand, decisions can be made in case of unsuccessful mating to minimize economic losses in livestock production.

II. MATERIALS AND METHODS

A. Animals, breeding, care and housing

Thirty-four female Saanen goats (n=18, 1-2 years old; n=16, 3-4 years old), selected on the basis of known history, healthy based on clinical monitoring, and successful mating. The goats were raised under semi-intensive conditions at the Center for Research and Development of Large Livestock, Lai Hung Commune, Bau Bang District, Binh Duong Province. All goats were identified by ear tag numbers. Vaccination and deworming of the goats were carried out according to the center's schedule.

Goats are raised semi-intensively, with a density of 2 m²/head. The barn is designed in the style of a stilt house, with a wooden floor 1m above the cement floor and a roof made of corrugated iron. The goats are grazed during the day and fed in the barn when they return to the barn. The goats are fed 2 meals/day and night, including 1 breakfast (around 7-8am) and 1 dinner (around 4-5pm), including green elephant grass, mixed bran (De Heus), leaves (binh linh, or jackfruit leaves, soapberry). On average, each goat gets 2-4 kg of grass, 0.5-0.8 kg of bran, 0.5 kg of leaves/day. Dry straw is rolled up and placed on a trough for the goats to eat at night. Drinking water is clean water, put in a clean trough placed in the barn for the goats to drink freely. The water trough is cleaned daily and the water is changed once a day. The barn is washed with a water sprayer daily. Sanitation and disinfection are carried out every 2 weeks. The disinfectant solution used is BESTAQUAM-SR with ingredients: didecyl dimethyl ammonium bromide, mixed at a ratio of 1/400.

B. Sample collection and analysis

- After monitoring for mating, goats are sampled once every 7 days until birth, at 6-8 am. The day of mating is considered day 1 of pregnancy.

- Collect 2 ml of venous blood properly, the sample is quickly put into an anticoagulant tube (EDTA-K2), label the sample tube, shake gently, preserve and transfer to the laboratory, centrifuge the blood sample. Centrifuge the sample for 15 minutes at 1,000 x g at 4°C within 60 minutes after collection. After centrifugation, collect 1 mL of extracted plasma into a 1.5 mL eppendorf vial and store the sample at -20°C. Do not repeat the freeze/thaw cycles.

- Analysis: Thaw once, leave the specimen, standard, control at room temperature (20-25°C) and shake well before testing. To avoid any influence on the results, the specimens, standards and controls are analyzed within 2 hours. The amount of P4 and E2 is determined by electrochemiluminescence testing, with the Cobas E601 immunoassay system - Roche Diagnostics (Switzerland). The testing procedure follows the manufacturer's KIT instructions.

C. Data Analysis: Data was expressed as mean (Mean ± SD). Analysis of ANOVA and Post hoc test with Tukey-Kramer test to evaluate the difference between groups (P<0.05). Statistical parameters were processed by MS-Excel 2020 software.

III. RESULTS AND DISCUSSION

The results of monitoring the estradiol and progesterone levels of Saanen goats during pregnancy according to 2 age groups are presented in Table 1 and Table 2. Figure 1 and Figure 2 show the change charts of the 2 hormones estradiol (E2) and progesterone (P4) of 2 individuals F8SA (16-month-old Saanen female goat, group 1: 1-2 years old) and F20SA (32-month-old Saanen female goat, group 2: 3-4 years old).

Tables 1 and 2 show that, after 14 days of conception, the progesterone level gradually increased (3.21±0.36 ng/ml) and moved to a higher level, peaking on day 70 of pregnancy (12.28±0.52 ng/ml) (in the 1-2 years old group); The corresponding values were 3.18±0.75-11.88±0.92 ng/ml (in the 3-4 years old group). The high value range was maintained throughout pregnancy and decreased rapidly during the 14-21 days before delivery, reaching a minimum of 0.94 ng/ml (in group 1) and 1.05 ng/ml (in group 2) at the end of pregnancy (Tables 1, 2, Figures 1, 2, 3). The maximum progesterone levels during pregnancy were 12.83 ng/ml (in group 1) and 13.93 ng/ml (in group 1).

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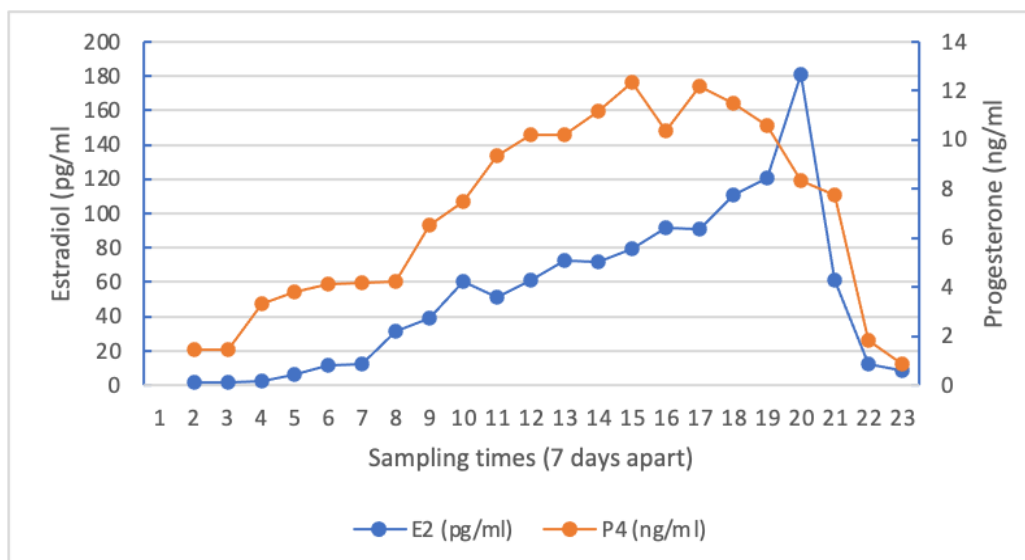


Figure 1. Changes in hormone levels of F8SA goat (16 months old) during pregnancy

Regarding the estradiol profile, after conception, it remained at low concentrations from 0.73 ± 0.35 to 2.65 ± 1.25 pg/ml (in the 1-2 years old group); from 0.98 ± 0.48 to 3.27 ± 1.95 pg/ml (in the 3-4 years old group) in the first 21 days and then gradually increased to levels above 10 pg/ml (in both age groups) on day 28. Estradiol continued to increase and reached a maximum level (205.48 ± 32.81 pg/ml) in group 1 on day 126 and decreased again to a baseline value below 10 pg/ml within 1-2 days after birth. Similarly, the change in estradiol hormone in group 2, after reaching the peak on day 126 (175.84 ± 24.74 pg/ml) also gradually decreased, reaching a minimum of 16.68 ± 7.43 pg/ml at the end of pregnancy.

This result is also consistent with studies in other goat breeds. As observed in other studies, progesterone concentration remained at the basal level throughout the estrus period. In Damascus goats, progesterone levels in the luteal phase ranged from 2.6 to 5.4 ng/ml, which was similar to that in dwarf goats (Khadiga et al., 2005). In studies on native East African goats, the mean plasma progesterone concentration ranged from 2.6 to 10.8 ng/ml from conception to mid-pregnancy (Kanuya et al., 2000). The overall increase in progesterone levels during pregnancy and the decline towards the pre-partum and parturition period, observed in Dwarf goats, is similar to other breeds (Khanum et al., 2008).

The pre-partum decline in progesterone levels correlates with the onset of parturition. Gaafar et al. (2005) reported that in Damascus goats, estradiol and estrone sulphate concentrations were inversely correlated with progesterone ($r = -0.902$; $p < 0.01$) during the last 9 days of gestation. In the case of Saanen goats in this study, progesterone showed a decreasing trend from day 126 of gestation, while estradiol levels gradually increased and peaked at day 133 of gestation.

Table 1. Hormone index of Saanen goats aged 1-2 years (n=18) during pregnancy

Day	ESTRADIOL (pg/ml)			PROGESTERONE (ng/ml)		
	Mean \pm SD	MIN	MAX	Mean \pm SD	MIN	MAX
1	0.73 \pm 0.35	0.25	1.58	1.02 \pm 0.49	0.16	1.27
7	1.25 \pm 0.66	0.42	1.95	1.47 \pm 0.54	1.25	2.25
14	1.47 \pm 0.73	0.57	2.78	3.21 \pm 0.36	2.56	3.36
21	2.65 \pm 1.25	1.26	4.69	3.66 \pm 0.38	3.53	3.67
28	10.47 \pm 0.91	8.95	11.34	3.16 \pm 0.46	2.38	3.54
35	14.85 \pm 2.04	12.36	17.58	3.65 \pm 0.54	2.87	4.52
42	34.13 \pm 5.32	26.24	45.39	4.74 \pm 1.32	3.72	6.86
49	47.27 \pm 5.46	36.95	63.71	6.22 \pm 1.56	3.28	7.32
56	55.83 \pm 3.66	45.28	72.84	9.51 \pm 2.32	5.82	11.81
63	58.94 \pm 5.57	41.22	83.91	11.42 \pm 1.36	8.36	12.65
70	61.05 \pm 4.42	51.56	85.29	12.28 \pm 0.52	11.35	12.66
77	67.56 \pm 4.14	53.72	91.58	11.53 \pm 0.38	10.47	12.72
84	73.17 \pm 5.65	60.81	94.93	11.46 \pm 0.69	10.26	12.56
91	81.67 \pm 6.15	68.58	102.57	11.52 \pm 0.86	10.28	12.54

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98	90.85±7.18	79.56	112.68	11.94±1.57	9.65	12.83
105	92.43±8.62	82.53	131.52	10.73±1.27	10.37	11.72
112	99.83±9.73	87.35	126.53	11.26±0.95	9.36	11.56
119	125.75±18.86	99.18	136.67	8.97±0.72	7.56	9.27
126	205.48±32.81	150.81	240.58	8.68±0.36	7.76	9.25
133	145.82±33.65	87.56	181.29	4.65±3.26	2.45	8.73
140	86.45±26.34	56.54	167.43	1.24±0.35	0.87	1.69
147	19.83±6.65	8.13	21.85	0.94±0.41	0.84	1.25

It is not possible to determine with certainty whether the increase in estrogens preceded the decrease in progesterone levels. When compared with many studies it can be concluded that Bach Thao goats exhibit progesterone and estradiol profiles comparable to other breeds and have a short gestation period with multiple parturition being common. Reproductive management, using reproductive aids and improved nutritional strategies can further improve reproductive efficiency in goat.

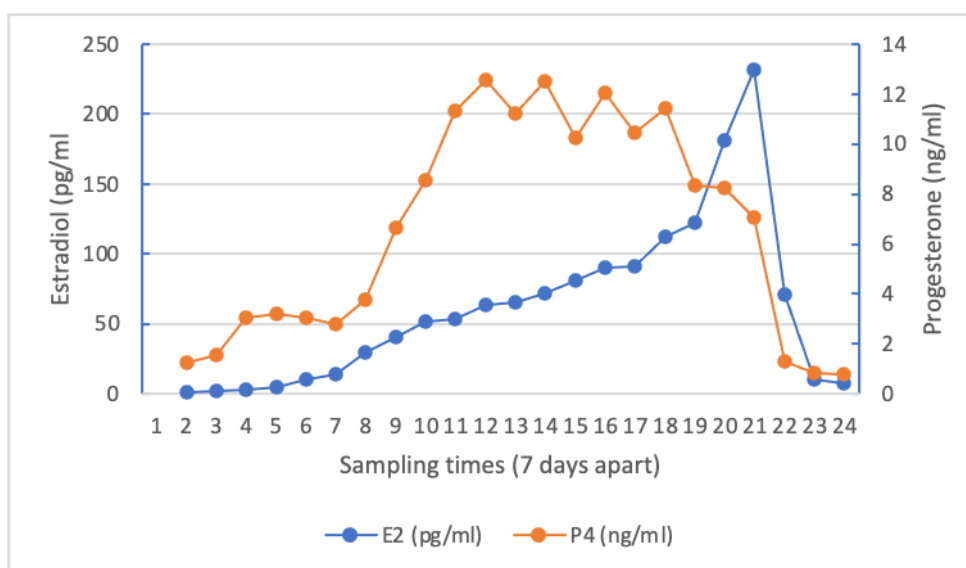


Figure 2. Changes in hormone levels of F18SA goat (32 months old) during pregnancy

In the study by Yasin et al. (2019) on Kamori goats (Pakistan), the progesterone concentration level on the 21st day after parturition was measured and recorded as 2.42 ± 1.37 , 2.57 ± 1.21 , 2.71 ± 1.06 ng/ml in the pregnant goat group, while a low concentration of 1.27 ± 0.98 ng/ml was recorded in the non-pregnant goats. The results recorded from the present study are in agreement with the results reported by Duggal et al., (2001), M Islam et al., (2014). It was reported that the plasma progesterone concentration was more than 2.2 ng/ml, when the samples were collected after the 3rd week after parturition and was considered as a good indication of pregnancy. From day 21 post-mating an increase in progesterone levels of 2.3 ng/ml has been reported in pregnant goats (Alwan et al., 2010; Aly et al., 2002). These reports are consistent with our findings in Boer and Boer goats. When a female becomes pregnant, progesterone becomes the dominant hormone and remains dominant until the onset of parturition (Matsas, 2007). Increased levels of progesterone in the blood have been reported as a useful technique for diagnosing pregnancy by hormonal analysis (Gonzalez et al., 2004). In contrast, non-pregnant goats can be reliably identified by their low progesterone levels (Gaafar et al., 2005; Duggal et al., 2001). Progesterone may be a key factor for systemic hormonal signaling of maternal or fetal origin (Duggal et al., 2001; Aly et al., 2002). Furthermore, the results reported by Alwan et al. (2010) are also consistent with those reported in the present study. Progesterone concentrations reached up to 2.9 ± 2.5 and 3.34 ± 2.3 ng/ml in pregnant individuals, respectively. Progesterone concentrations during the early days of pregnancy were not different from those reported in the present study in Saanen goats.

Thus, an increase in progesterone concentration is a sign of pregnancy and is better predictive of pregnancy. On the other hand, non-pregnancy can be diagnosed when progesterone levels are low (less than 1 ng/ml) around day 21 after mating. The results of the study on non-pregnant goats were based on the progesterone concentrations reported in Black Bengal goats (M Islam et al., 2014). During this period, progesterone levels were very low (1.1 ng/ml) and the goats were considered non-pregnant. Low progesterone concentrations in maternal blood after mating can predict that the goat is not pregnant. Measuring progesterone at a specific time after breeding is a useful management tool to determine pregnancy at an early stage. It is

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evident that during pregnancy, progesterone levels in the blood increase to a certain level (Aly et al., 2002; Gonazelz et al., 2004).

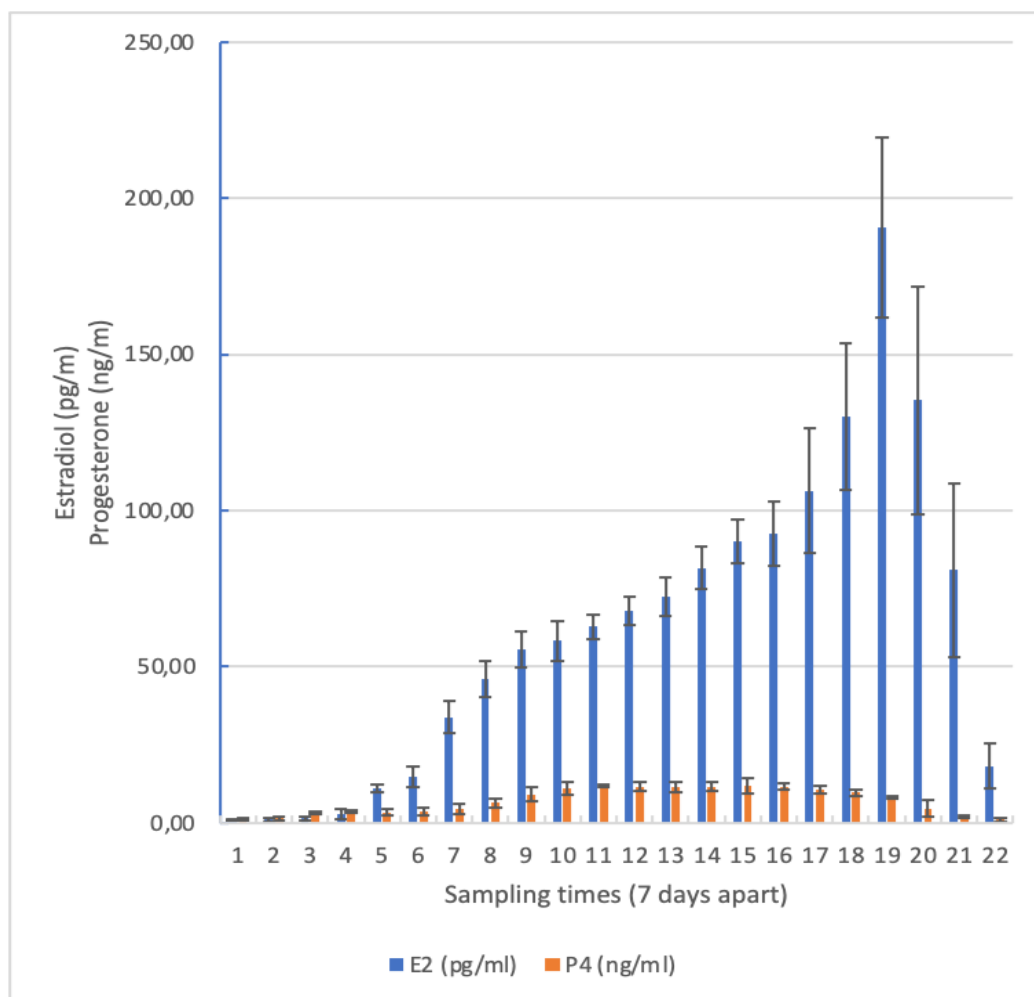


Figure 3. Changes in E2 and P4 hormone levels (average of both age groups) of Saanen goats during pregnancy

The results of this study are also similar to a recent publication on plasma hormone levels of two breeds of goats Bach Thao and Boer (Nguyen and Nguyen, 2022). The results of this study showed that, after conception, progesterone levels were high ($3.02 \pm 0.34 - 12.20 \pm 0.50$ ng/ml in Boer goats; $3.26 \pm 0.47 - 11.88 \pm 0.92$ ng/ml in Bach Thao goats); the high value range was maintained throughout the gestation period and decreased rapidly in the 19 days before parturition, reaching 0.87-0.94 ng/ml on the day of parturition. The average maximum progesterone levels during pregnancy were 12.20 ± 0.50 ng/ml in Boer goats and 11.88 ± 0.92 ng/ml in Bach Thao goats. Estradiol remained at lower concentrations ranging from 0.96 ± 0.44 to 1.42 ± 0.68 pg/ml (in Bach Thao goats) during the first 14 days; from 0.81 ± 0.46 to 2.62 ± 1.28 pg/ml (in Boer goats) during the first 21 days and then gradually increased to levels above 10 pg/ml (in both goat breeds) on day 28. Estradiol continued to increase and reached a maximum of 204.48 ± 36.68 pg/ml in Boer goats on day 126 and decreased below 10 pg/ml within 1-2 days after parturition (Nguyen and Nguyen, 2022).

Interestingly, we also observed that progesterone concentrations on days 7 and 14 after insemination showed significant differences between the goats that conceived and those that did not conceive. We can detect pregnancy as early as possible by using the ECLIA method to estimate progesterone on day 14, even on day 7-10 after insemination, while it can only be confirmed on day 20 by ultrasound (Hussein, 2010). From the study, it was found that progesterone levels that started to increase after 1 week of insemination and were higher on the day of insemination (day 0) may have a higher probability of conception. Currently, there is no report on the relationship between progesterone levels on the day of insemination and conception rate after synchronization procedure in goats. Therefore, further research is needed to confirm whether progesterone levels on the day of mating may be an important factor determining the success of insemination.

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Table 2. Hormone index of Saanen goats aged 3-4 years (n=16) during pregnancy

Day	ESTRADIOL (pg/ml)			PROGESTERONE (ng/ml)		
	Mean ±SD	MIN	MAX	Mean ±SD	MIN	MAX
1	0.98±0.48	0.77	1.46	1.22±0.46	0.24	1.87
7	1.15±0.34	0.56	2.18	1.28±0.56	0.77	2.49
14	1.46±0.69	0.67	2.66	3.18±0.75	1.76	3.96
21	3.27±1.95	1.38	5.97	3.71±0.72	2.92	4.87
28	11.72±1.76	7.36	11.46	3.46±1.63	2.31	4.88
35	14.35±4.56	10.61	25.54	3.54±1.71	2.44	3.89
42	33.68±4.68	27.52	41.83	3.86±1.95	2.41	6.35
49	44.84±6.25	38.66	51.78	6.43±1.32	4.29	7.86
56	55.35±8.02	41.25	61.45	8.78±2.51	6.45	11.58
63	57.53±7.15	40.93	60.87	10.56±2.63	7.25	12.84
70	64.54±3.32	52.75	64.45	11.61±3.65	9.26	13.18
77	68.28±5.09	63.26	72.44	11.72±2.18	9.21	14.11
84	71.78±6.95	62.43	81.16	11.71±2.49	9.35	12.82
91	81.56±7.43	70.96	83.99	11.63±2.24	10.22	13.93
98	89.26±6.84	84.28	91.32	11.64±3.32	9.88	13.59
105	92.65±11.82	81.57	134.81	12.37±0.92	10.52	12.18
112	112.91±30.47	81.12	171.58	9.96±1.23	8.36	11.56
119	134.55±27.83	98.67	183.88	10.36±1.24	8.87	11.65
126	175.84±24.74	146.46	215.66	7.68±1.60	8.53	9.56
133	124.76±38.96	60.28	198.73	4.49±2.17	2.65	7.75
140	75.34±29.35	43.68	235.28	2.61±0.65	0.74	2.24
147	16.68±7.43	5.92	22.26	1.05±0.73	0.85	1.35

IV. CONCLUSION

Saanen goats exhibited progesterone and estradiol profiles during pregnancy that were comparable to those observed in other goat breeds worldwide, with differences between the two age groups studied. ECLIA monitoring of progesterone and estradiol can be used to determine pregnancy, estimate gestational age and due date. Monitoring of hormone dynamics helps in effective reproductive management, and the results of this study serve as a reliable reference when using reproductive aids and improved nutritional strategies that can further improve reproductive efficiency in goats.

V. ACKNOWLEDGMENT

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Social Stratification on the Political Participation of Generation Z Women in Pantai Bahagia Village and Medalkrisna Village, Bekasi Regency



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ABSTRACT: This study aims to understand the relationship between social stratification and the political participation of Generation Z women in Pantai Bahagia Village and Medalkrisna Village, Bekasi Regency. The method used was a mixed-methods approach that combines both quantitative and qualitative approaches. The political participation of Generation Z women was measured based on the forms of conventional, non-conventional, cultural, and digital participation. The research results indicate that there is variation in political participation based on social stratification, with the lower strata tending to be more active in conventional political participation, the middle strata being more active in digital political participation, and the upper strata being more involved in election administration. This study highlights the importance of creating an inclusive political environment to enhance young women's political participation.

KEYWORDS: Digital Participation, Generation Z Women, Village, Social Stratification, Political Participation

I. INTRODUCTION

Political participation is a key indicator of a democratic political system that includes elections, accountable governance, majority decision-making, and principles such as civil liberties, legal equality, and the rule of law (Thakur, 2003; Zelič, 2022). In a democracy, the relationship between the government and citizens is the ability of the state to provide public services where the government serves its people. (Chan, 2001; Sjaf, 2014; Thakur, 2003). General elections (Pemilu) have become a platform for citizens to choose and evaluate their leaders and representatives (Kolopaking et al., 2020; Smyth, 2006).

In Indonesia, voter turnout in the 2019 elections reached 76.09%, with female participation at 50.1%, which was slightly higher than that of males (49.99%). Recent data show that, in the 2024 elections, the number of female voters (102,588,719 individuals) was also higher than that of males (102.218.503 individuals). A high level of participation reflects great enthusiasm; however, women's active participation in political forums, political education, and public policy formulation remains low (Lupien, 2021, 2022).

The low participation of women is influenced by various factors, such as education level, access to information, gender stereotypes, and traditional roles within the family and society. Regional inequality also affects women's political participation. Nevertheless, women's participation in elections can ensure that issues important to women are accommodated in public policy (Cronkleton et al., 2021) This research aims to understand the political participation of Generation Z women in Bekasi Regency, West Java. Generation Z, born between the mid-1997 and early 2012, is a age group of 13-33 years that has grown up in the digital era. They have easy access to political information through social media and the Internet as well as a high awareness of social and environmental issues (Djuyandi et al., 2020, 2023; Dodson & Papoutsaki, 2017). The political participation of Generation Z is influenced by their involvement in activism and the values of inclusivity and diversity (Deckman & McDonald, 2023a, 2023b; McDonald & Deckman, 2023).

In the political context, Generation Z demonstrates a higher level of education and broader access to information, which makes them more discernible in analyzing political information and participating based on a deep understanding (Djuyandi et al. 2023).

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However, challenges remain, such as gender barriers and socioeconomic inequalities, which can reduce the political participation of young women (Grasso & Smith, 2022; Holyoak, 2015).

This study highlights the importance of addressing specific gender challenges and creating an inclusive political environment to enhance the participation of young women from diverse social backgrounds. Based on previous research, factors such as age, gender, marital status, employment status, and financial resources influence young women's decisions to participate in the political process (Moraa, Lillian, & Josephine, 2021). Online activism and new media also play important roles in engaging young women in political discussions. (Schuster 2013). With a focus on the relationship between social strata and the political participation of Generation Z women in rural areas during the 2024 elections, this research is expected to provide a deeper understanding of the factors influencing the political participation of young women, as well as ways to overcome existing obstacles.

II. RESEARCH METHOD

A. Approach and Research Design

This study employed a mixed-methods approach that combines both quantitative and qualitative methods. Valeriani and Plano Clark (2021) emphasized that mixed methods are suitable for complex problems and are widely used in the social sciences. Aramo-Immonen (2013) stated that mixed methods can clearly articulate research design, including triangulation. Halcomb (2019) distinguished mixed methods from combined approaches and emphasized the explicit integration of qualitative and quantitative elements.

According to Vargas-Amezcuca (2015), this approach provides a way to understand the complexity of social reality by using various methodological tools to obtain and analyze information. The quantitative method is used to describe the participation issues of Generation Z in village head elections, whereas the qualitative method provides deeper and more objective information. (Neuman 2011). This study employs a sequential explanatory strategy that involves the collection and analysis of quantitative data on the relationship between social stratification and the forms of women's political participation in elections. Based on these initial results, the second stage collected and analyzed qualitative data to investigate the political participation preferences of Generation Z women in elections.

B. Sampling Techniques and Informants

In the survey activities, respondents were selected using a sampling method through cluster sampling based on the sampling framework of Precision Village Data (DDP). The number of female voters according to DDP in Medalkrisna Village is 1,294, and in Pantai Bahagia Village, there are 2,411 individuals. The sampling framework was constructed based on the female population of Generation Z in Pantai Bahagia Village, which amounts to 1,156 individuals in Muaragembong District, and in Medalkrisna Village, which has 463 individuals in Bojongmangu District, Bekasi Regency, West Java. Forty respondents from each village were selected. The selected respondents met the following criteria.

1. Generation Z: Females.
2. Generation Z, who has the right to vote.
3. Generation Z is aged 17-24 years or older on the day of voting, married, or married.
4. Generation Z was selected based on educational participation preferences (not in school, elementary school, middle school, high school, or higher education).
5. Generation Z had a general understanding of the topic being researched. However, their knowledge is limited.

They were selected using cluster sampling from the population, which was the subject of this research. The stages for determining the cluster sampling are shown in Figure 2.

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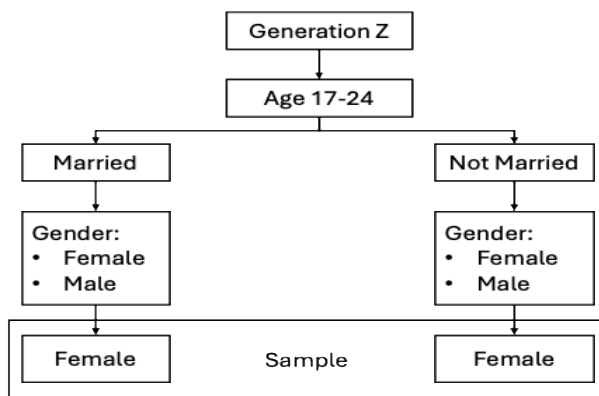


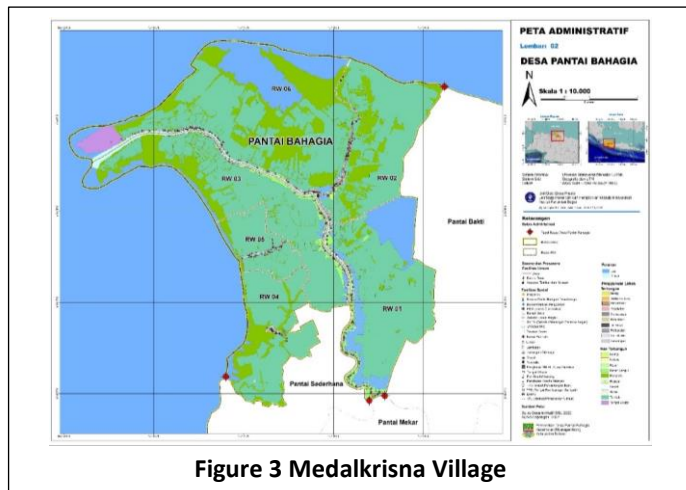
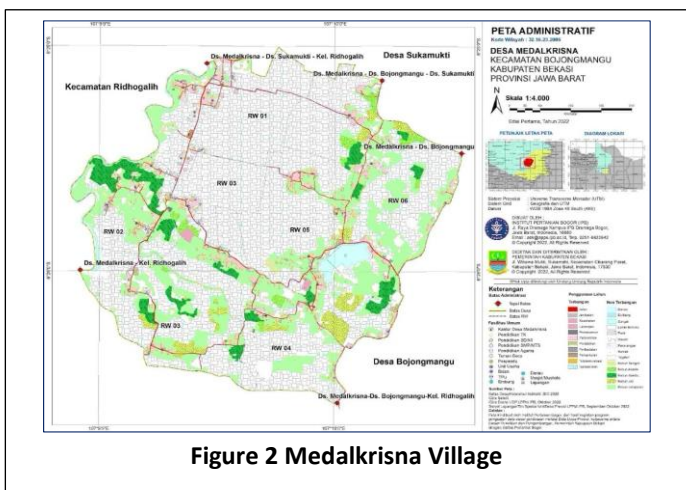
Figure 1: stages of sample determination

Figure 2 shows the stages of sample determination. Sample determination began by categorizing Generation Z and non-Generation Z in the Precision Village Data (DDP). Generations are categorized based on age and marital status, which are prerequisites for participation in elections. Subsequently, Generation Z is categorized by gender, distinguishing between males and females. In this study, the sample consists of female members of Generation Z who have voted in the 2024 elections.

In selecting informants, researchers often use selection criteria based on their knowledge and experience, while respondents can be randomly chosen from the population being studied. The selection of informants based on the criteria of female Generation Z voters in elections requires special consideration to ensure that the chosen informants adequately represent the demographic group in both villages.

C. Location and Time of Research

This research was conducted in Pantai Bahagia Village, Muara Gembong District, Bekasi Regency, West Java. Specifically, the research was conducted in two villages: Pantai Bahagia and Pantai Sederhana (figures 2 and 3). This village is a coastal area with fishermen as its livelihood, whereas Medalkrisna Village, located in Bojongmangu District, Bekasi Regency, represents an agrarian village with farmers as its livelihood. These two typologies are expected to illustrate the characteristics of political participation of Generation Z women in the 2024 elections.



This location was selected purposefully with several considerations: first, the representation of coastal and agrarian village typologies was chosen to illustrate the characteristics of social stratification and political participation of Generation Z women in two different environments; second, the diversity of livelihoods influences the social stratification and political participation of women.

D. Data Collection Techniques

This study used both primary and secondary data. Secondary data used in this study were obtained from literature searches and documents relevant to previous research topics. Primary data were collected through quantitative methods. The tools used for collecting primary data in this study included questionnaires for quantitative data collection and interview guidelines for qualitative data.

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E. Data Analysis

The unit of analysis in household-based research refers to the level of participation of Generation Z women in household groups. Social stratification refers to the calculation of Law Number 13 of 2011 concerning the Handling of the Poor (Law 13/2011), where households are placed into layers based on the attributes of clothing, food, shelter, education, and employment. The Social Layering Categories (KLS), which consist of lower, middle, and upper, were obtained from the average scores of food, clothing, shelter, education, and employment, using the following formula:

$$\text{Social stratification} = \frac{\text{food} + \text{Clothing} + \text{Shelter} + \text{Education} + \text{Work}}{5}$$

The KLS scores were classified based on the following table:

1. If the KLS score was less than 1.94, it was classified as a lower layer.
2. If $1.97 \leq \text{KLS score} \leq 2.55$, it can be classified as a middle layer.
3. If the KLS score was >2.55 , it was classified as an upper layer.

The categorization of social layers was determined using standard deviation with the following formula:

$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n}$$

\bar{x} is the average, x_i is the value of the i th data point, and n is the number of data points. Subsequently, it was calculated using the standard deviation as follows:

$$\sigma = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n}}$$

σ (sigma) is the standard deviation, x_i is the value of the i th data point, and \bar{x} is the mean. Subsequently, the limits of the standard deviation categories are determined as follows:

1. In the lower layer, the value below the geometric mean is subtracted from the standard deviation. This indicator is determined using the following formula:

$$x < \bar{x} - \sigma$$

2. The middle layer of values that lies between the geometric mean minus the standard deviation and the mean plus one standard deviation was calculated using the following formula:

$$x - \sigma \leq x \leq \bar{x} + \sigma$$

3. The upper layer, when the value is above the average, is added to one standard deviation using the following formula:

$$x < \bar{x} + \sigma$$

The next step is to conduct a Spearman correlation test for all respondents in each category of social strata based on the forms of participation of Generation Z women using the following formula:

$$r_s = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

Where:

r_s = Spearman correlation coefficient.

d_i = difference in ranks between two variables.

n = Number of data pairs.

The results of the correlation test were categorized based on the strength of the relationship between the variables. A value of r_s close to 1 indicates a strong positive correlation (the higher the social layer, the higher the political participation), whereas a value of r_s close to -1 indicates a strong negative correlation (the lower the social layer, the higher the political participation). If r_s is close to zero, the correlation is very weak.

III. RESULTS AND DISCUSSION

A. Characteristics of Generation Z Women in the 2024 Election

The respondents in this study are female Generation Z voters in the 2024 elections, characterized by age, education level, marital status, and occupation. The respondents in this study totaled 80, with 40 Generation Z females from Medalkrisna Village and 40 from Pantai Bahagia Village, as presented in Table 1.

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Table 1. Characteristics of Generation Z Female Voters in the 2024 Election

Description	Respondent Characteristics	Medakrisna Village		Pantai Bahagia Village		Total
		Total	Percentage (%)	Total	Percentage (%)	
Gender	Male	0	0	0	0	0
	Female	40	100	40	100	80
Age	24-27	10	25	13	33	23
	20-23	21	53	18	45	39
	17-19	9	23	9	23	18
	12-16	0	0	0	0	0
Education Level	No Certificate of Completion	2	5	2	5	4
Marital Status	Elementary School/Equivalent	2	5	0	0	2
	Junior High School/Equivalent	8	20	5	13	13
	Senior High School/Equivalent	26	65	27	68	53
	Bachelor's Degree/Diploma 4	2	5	6	15	8
Main Job	Merried	14	35	7	18	21
	Not Merried	16	40	32	80	48
	Divorce	0	0	1	3	1
Side Job	Working	8	20	3	8	11
	Not Working	32	80	37	93	69
	Having	2	5	0	0	2
	Does not Have	38	95	40	100	78

Table 12 shows that the characteristics of respondents in Medalkrisna Village with the highest number are in the age category of 20-23 years, accounting for 53% (21 individuals), while in Bahagia Beach, it is 45% (18 individuals). The second largest category is in the age group of 24-27, with Medalkrisna Village having 25% or 10 respondents and Bahagia Beach having 33% or 13 respondents. Furthermore, respondents in the age category of 17-19 years in Medalkrisna Village made up 23% or 9 individuals, while in Bahagia Beach, it was 23% or 18 individuals. This category represents female Gen Z voters as first-time voters in the 2024 elections. Meanwhile, the overall characteristics of female respondents are predominantly in the age category of 20-23, totaling 39 individuals, while first-time voters in the age group of 17-19 years account for 23% or 18 individuals. The data on first-time voters were reinforced by an interview with MN, who stated that:

"I feel nervous about voting this year because it's my first time participating." Actually, I have wanted to vote since 2019, but I wasn't old enough at that time. I wanted to vote for my idol candidate that year. "Finally, this year I was able to choose him, and I won." (WW, 29 Februari 2024)

The educational characteristics of female Generation Z respondents in the 2024 elections show that a dominant 65% or 26 respondents from Medalkrisna Village and 68% or 27 respondents from Pantai Bahagia Village hold a high school diploma, resulting in an overall 66% of respondents with a high school diploma. However, there are also Generation Z individuals who do not have a diploma or have dropped out, with two respondents (5 %) in both Medalkrisna and Pantai Bahagia Villages. Meanwhile, the percentage of female Generation Z voters with a bachelor's degree (S1/D4) in Medalkrisna Village is only 5% or two individuals, while in Pantai Bahagia, it is 15% or six individuals. Additionally, the percentage of respondents with a junior high school education in Medalkrisna Village was 20% or 8 individuals, and in Pantai Bahagia, it was 13% or 5 individuals.

The characteristics of female Generation Z respondents make them the youngest group of eligible voters for the 2024 election cycle. This generation is characterized by digital utilization, having grown up with the Internet and social media, which are significantly related to information consumption, political engagement, and decision-making processes. This characteristic provides an overview of the traits of Generation Z women in the formation of layers in Medalkrisna and Pantai Bahagia Villages.

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The social stratification system of Generation Z women has complex and diverse issues, where gender intersects with social layers, social hierarchy, and human generational development. This research examines how the position of women in society relates to various aspects determined by the Law on the Poor, including age, education, employment, clothing, food, and housing, as presented in Table 2.

Table 2 Percentage Based on Social Stratification of Generation Z Women in Medalkrisna Village and Pantai Bahagia Village

Social Stratification	Percentage of Social Stratification (%)		Total Percentage (%)
	Medalkrisna Village	Pantai Bahagia Village	
Lower Layer	5	38	21
Middle Layer	70	77,5	61
Upper Layer	25	17,5	18

Table 2 shows the social distribution of Generation Z women in Medalkrisna Village and Pantai Bahagia Village. In Medalkrisna Village, 5% of Generation Z women fall into the lower category, while in Pantai Bahagia Village, this figure is 38%. In the middle category, Medalkrisna Village has 70% and Pantai Bahagia has 77.5%. In the upper category, there were 25% and 17.5% Medalkrisna Village and Pantai Bahagia, respectively. The total number of Generation Z women surveyed in both villages was 80, with 40 individuals in each village.

The results of this study emphasize that the welfare level of Generation Z women in Medalkrisna Village is higher than that in Pantai Bahagia Village, indicating that Generation Z women in Medalkrisna Village may have better access to economic resources, education, and job opportunities. This can influence their position within the family, where they may play a more active role. The position of Generation Z women in the family is more dominantly characterized as family members, as identified in Table 14, which presents the employment status of women within the family.

Table 3 Employment Status of Generation Z Women in Families

Employment	Status in the Family (People)					
	Medalkrisna Village			Pantai Bahagia Village		
	Head of Family	Wife	Child	Head of Family	Wife	Child
Household Manager	0	12	0	0	7	0
Student/University student	0	0	10	0	0	18
Freelance workers	0	1	3	1	0	14
Not Working	0	1	9	0	0	0
Contract Employee	0	0	4	0	0	0
Amount	0	14	26	1	7	32

Table 3 shows that Generation Z women who are wives only work as housekeepers in Medalkrisna Village, with 12 women and 7 women in Pantai Bahagia Village, totaling 29 women. This indicates that the role of women in managing households remains dominant. On the other hand, in terms of education, there are 10 women in Medalkrisna Village and 18 women in Pantai Bahagia Village who are students or college students, totaling 28 women. This shows that many Generation Z women are preparing for the future through their education.

In the category of casual workers, there was one wife and three daughters in Medalkrisna Village, as well as one head of the household and 14 daughters in Pantai Bahagia Village, totaling 16 women. This indicates a significant difference in employment status between the two villages, with more women working as casual laborers in Pantai Bahagia. In the category of non-workers, there was one wife and nine daughters in Medalkrisna, with no data from Pantai Bahagia, totaling ten women. Meanwhile, in the category of contract employees, there were four daughters in Medalkrisna with no data from Pantai Bahagia, totaling four women.

The total number of respondents consisted of 40 women in Medalkrisna Village and 40 women in Pantai Bahagia Village, making a total of 80 women. Generation Z women in both villages play a larger role in the domestic sphere as household managers, especially wives. This status is more symbolic because, although they play an important role in the household, their contributions are more non-material or indirect to the family's economy. However, there is a significant difference in employment status between the two villages, where in Pantai Bahagia Village, more women work as daily laborers than in Medalkrisna Village. Most

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working women are young, indicating that the economic contributions of families are being increasingly taken up by the younger generation of women. A small number of Generation Z women are not working, with most of them located in Medalkrisna Village.

In addition, many Generation Z women who are students or college students indicate that they are preparing for the future. The number of Generation Z women who are students in Pantai Bahagia village is greater by 18 individuals compared in Medalkrisna village, which has only 10. In terms of educational attainment, Generation Z women in Pantai Bahagia are better off than those in Medalkrisna Village. However, the quality of education can be seen in Table 4, which shows the characteristics of education among women of different generations and their positions within the family, as illustrated in Table 4.

Table 4 Education Status of Generation Z Women in Families

Education	Status Dalam Keluarga (jiwa)						Amount
	Medalkrisna Village			Pantai Bahagia Village			
	Head of Family	Wife	Child	Head of Family	Wife	Child	
No Certificate of Completion	0	1	1	0	1	2	5
Elementary School/Equivalent	0	2	0	0	0	2	4
Junior High School/Equivalent	0	5	15	1	2	9	32
Senior High School/Equivalent	0	6	0	0	4	17	37
Bachelor's Degree/Diploma 4	0	0	0	0	0	1	1
No Certificate of Completion	0	0	4	0	0	1	1
Amount	0	14	26	1	7	32	80

Table 4 shows that the status of female Gen Z voters in both Medalkrisna Village and Pantai Bahagia Village is predominantly that of children, with 26 respondents in Medalkrisna and 32 in Pantai Bahagia. However, these data also indicate that many Gen Z women are already wives, with 14 in Medalkrisna and 7 in Pantai Bahagia. These data emphasize that Gen Z women play an important role in the family, both in the domestic sphere and in participation in elections. However, their roles are not materially recognized. Their roles are related to the status and symbolism within the family structure. This indicates the need to recognize and appreciate the contributions of women in various aspects of life, both at home and outside, as well as to support them in obtaining equal economic opportunities.

B. The Relationship Between Social Stratification and Forms of Political Participation in Elections

The social stratification system plays a crucial role in determining the level of political participation of Generation Z women. Social stratification, which includes aspects such as clothing, food, housing, education, and employment, often shapes young women's opportunities and obstacles in engaging in political activities. Generation Z women from higher social strata tended to have better access to political education. In contrast, those from the lower social strata may face greater obstacles. The relationship between social stratification and forms of social participation was tested using Spearman's rank correlation, as presented in Table 3.

Table 3 Relationship between social strata and forms of political participation.

Forms of Political Participation	Correlation Test Results		
	Lower Layer	Middle Layer	Upper Layer
Conventional Political Participation	0,246**	-0,010	-0,466*
Non-Conventional Political Participation	-0,122	-0,039	0,153
Cultural Political Participation	0,159	0,170	0,120
Digital Political Participation	-0,389*	0,285**	-0,635*
Participation in Political Forums	0,111	-0,005	0,006
Participation in Election Administration	0,109	-0,188*	0,199**

Description:

** a positive relationship that is quite significant

* a negative relationship that is quite significant

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Table 3 shows that the relationship between the lower layer and conventional participation had a correlation coefficient of 0.246, indicating a positive relationship. A positive correlation value suggests that the direction of the relationship is unidirectional. This means that the increase in the number of lower layers of political participation is high in conventional participation, but its influence has not yet been sufficiently significant in the 2024 elections. Meanwhile, Digital Political Participation and the relationship between social stratification and digital political participation have a correlation coefficient of -0.388, indicating a moderate relationship in a negative direction. This means that an increase in the lower strata leads to a decrease in digital political participation.

The different relationship at the middle layer with digital political participation, with a correlation coefficient of 0.285, indicates a moderately positive relationship. This suggests that the higher social strata within the middle layer are associated with increased digital political participation among Generation Z women. This significant correlation with digital political participation may reflect the growing importance of digital platforms as a means of political engagement for Generation Z women in the middle layer.

Different tendencies are also seen in the upper social strata regarding the forms of political participation of Generation Z women. The relationship of the upper social strata has a positive correlation with electoral participation (0.199). Meanwhile, the relationship between social stratification (upper strata) and digital political participation, with a correlation coefficient of -0.635, indicates a strong negative correlation between upper social stratification and digital political participation. This means that the higher the social position in the upper strata, the lower is the digital political participation among Generation Z women, indicating a statistically significant relationship.

This finding emphasizes that each social layer has a different tendency to participate in the 2024 elections. For instance, the lower layer among Generation Z women is more involved in conventional political activities such as providing tools, volunteering for campaigns, and voting in elections. Meanwhile, the middle layer tends to utilize social media to seek information about political issues and candidates. Different tendencies are also observed at the upper levels related to the organization of elections, particularly those who serve as organizers, such as the Voting Committee (PPS) and the Group of Voting Organizers. (KPPS).

IV. CONCLUSIONS

This research explores the relationship between social stratification and the political participation of Generation Z women in Pantai Bahagia Village and Medalkrisna Village in Bekasi Regency. The research findings indicate significant variation in political participation based on social strata. Women from lower social strata tend to be more active in conventional political activities such as voting and attending political meetings. In contrast, women from the middle social strata are more involved in digital political participation, using social media and online platforms to voice political opinions and engage in political discussions. Women from the upper social strata are more engaged in election administration and participate as organizers and election officials.

Social stratification, which is defined by factors such as education, occupation, and economic status, plays a crucial role in shaping political participation. Women from lower social strata often face greater obstacles to political participation due to their limited access to information about opportunities to engage in the political arena. By contrast, those from higher social strata have better access to resources that facilitate their involvement in political activities.

The distinction between conventional participation and other forms of participation is crucial for understanding the political behavior of Generation Z women. Conventional participation includes voting, attending political meetings, and partisan campaigning. Digital participation includes engagement in political discussions on social media and digital platforms to access political information. This research highlights that although conventional participation remains significant, digital participation is increasingly becoming an important aspect of political engagement, especially among the middle and upper social classes.

V. ACKNOWLEDGMENT

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Attachment Anxiety, Marital Adjustment and Psycho-Social Support of Love and Arranged Marriages Among Meranao Women



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ABSTRACT: This study aims to explore the level of attachment anxiety, marital adjustment, psycho-social support of love and arranged marriages among Meranao women specifically, it sought to answer the following questions: 1. What is the demographic profile of the respondents in love marriage and arranged marriages in terms of present age, age at the time of marriage, family monthly income, number of children and sibling rank? 2. What is the level of attachment related anxiety, the marital adjustment of the respondents in love and arranged marriages among the following aspects psychological, social, emotional and spiritual? 3. What are the marital adjustment of the respondents in love and arranged marriages when classified as social, physical, financial and spiritual? 4. What is the level of marital quality of the respondents in love and arranged marriages on the following aspects; commitment, trust and mutual interaction? 5. What are the forms of marital support of the respondents in love and arranged marriages receive in terms of psychological, confidant, affective and social support? 6. How do love marriages differ from arranged marriages along the following along the following aspects; level of attachment anxiety, marital adjustment, level of marital quality and marital support? 7. What marriage counseling program has been developed on the basis of the findings of the study. This study was conducted at Tuca, Pindolonan and Dawayan, Marawi City with the total number of 327 married Meranao women, with a breakdown of 132 for love marriage and 195 for arranged marriage.

The researcher utilized the descriptive–correlation design. Part of study was done through describing the demographic profile of the respondents and personal profile in terms of age, gender, socio economic status, educational attainment, monthly income and occupation. Their perceptions on their marriage particularly on attachment anxiety, marital adjustment, marital quality and marital support were also given descriptions. On the other hand, these two important variables were then correlated so as to establish a conclusion that a wife’s profile can affect her perception on her marriage life.

The findings of the study revealed that the respondents in the love marriage always noticed when their partners were angry with them, got frustrated when they cannot deal effectively with their partners; and avoiding situations of socializing with their partners and relatives; believe that they had the ability to handle social interaction with their partner’s relatives; wives felt sad when their partners did not show tender loving care when they got sick. They also have a very high level of commitment and satisfaction to their marriage as well as high mutual interaction with their partners. In the arranged marriage, the respondents strongly agreed that they always noticed when their partners were angry with them; had the fear that they would lose their partners love; and worry about their partners leaving them anytime; that they did not know how to deal effectively with their partner’s relatives; agreed being comfortable discussing romance and sex with their partners but having difficulty understanding their partner’s needs.

The findings show that both arranged and love marriage have the same marital quality of commitment and mutual interaction. Marital quality as an independent variable is observed from the different aspects of its influence on partners and marital family processes, satisfaction with life and marital partners’ Psychological, socio, emotional stability of marriage, marriage counseling session will be need both love and arranged marriages.

The researcher recommended that couples should know how to adjust with their partner to make their marriage long last. It is also recommended that couple should have a commitment to make their marriage work is always the top priority, it seems to be the primary reason for success of both marriages. 4. The level of marital quality of the respondents in love and arranged marriages findings suggest how both marriages appreciate and give high regard to their marriage and their partners’ effort to make the relationship work. The researcher believes that the foundation of marriage is trust your partner, being

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committed to, and being honest and open to one another. Partners should be aware of these foundations in order for their marriages to succeed. To spend more quality time with your partner the couple should try new things together, like go on weekend getaway, while it's a relationship goal to travel the world together, commitment and mutual interaction is very important. Having a happy marriage is usually among the most important, marital happiness and marital satisfaction are closely related. Marital quality is observed from the aspect of its influence on partners and marital and family processes satisfaction with life, health and stability of marriage and the emotional stability of the couple. 5. The findings shows clearly that love marriage respondents have a higher affective marital support system than arrange marriage, therefore the researcher strongly recommended especially to those who are having a hard time with marital support to their partner. Having an emotional, psychological and social support from partner may be the best things to sustain the relationship.6.Arranged marriages more common in Meranao culture the couples must the consent of their parents with looking into every aspect, like wealth, health conditions and more stable. On the other hand, love marriages may not be completely acceptable to family and relatives. The researcher recommended to have trust, commitment to your partner to make the relationship stronger and successful. 7. It is recommended for the future researchers to have an in-depth research on the problems that are not addressed or stated to this study. Hence, it is recommended to explore on cultural diversities, having a larger and more intensive research. The current study only has four variables. It is recommended for the future researchers to explore other variables that can be applied with the study.

KEYWORDS: Arrange and Love Marriage, Anxiety, Marital Adjustment, Meranao Women

INTRODUCTION

Based on the researcher's experience, getting married without preparation is like starting a business or any important venture without grounding. Half of all marriages end in divorce and half of those who endured are truly happy in the long run. Some of the people believe that having to live together or knowing each other for a long time will prepare them for marriage. Marriage preparation includes the study of the relationship in marriage so that couples end up having a harmonious and successful union.

Most people believe that marriage is sacred and most of them get married in the course of their lifetime. It is the union of two persons who makes an exclusive commitment to each other fulfilled by bearing and rearing children together and renewed by acts that establish the behavioral part of the process of reproduction (Corbett, 2010). However, the definition may vary on how every unique culture sees its perspective. One very interesting culture to study is that of Meranao residing in the province of Lanao del Sur in Mindanao, Philippines. The Meranao people are believers in Islam and have their own culture. One of the cultures that are still practiced by the tribe is arranging marriages (Milligan, 2005).

In the Philippines, both Civil Code and Family Code prohibit marriage before 18 and a contract entered into by minors is not considered valid. However, according to the Presidential Decree 1083 or the Code of Muslim Personal Laws, a male of 15 years of age and above and a female of 15 (or below 15 but not below 12 years old) may not contract marriage (Presidential Decree 1083, 1977).

Security and stability seem to be the most valued things looked for in an arranged marriage. The feeling of love to a person is not much of a factor because most believe that it can be learned (Chandrashekar, 2014). This is accepted by most individuals who are engaged or married to people they barely know. However, there are still some who tried to get out the situation but failed. So, once the wedding happens, there is a tremendous need for adjustment. Each partner will have to learn to understand and accommodate the other and begin to appreciate the good things in the relationship.

STATEMENT OF PROBLEM

This study aimed to measure the level of attachment anxiety, psychosocial support, marital adjustment and marital quality of arranged and love marriages among the Maranao Women in Barangay Tuca, Pindolonan, Dayawan, Lanao del Sur. Specifically, it sought answers to the following questions:

1. What is the demographic profile of the respondents in love marriage and arranged marriage in terms of:
 - 1.1. present Age;
 - 1.2. age at the time of marriage;
 - 1.3. family monthly income;
 - 1.4. number of children; and
 - 1.5. sibling rank
2. What is the level of attachment related anxiety of the respondents in love and arranged marriages among the following aspects:
 - 2.1 psychological aspects

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- 2.2 Social aspects
- 2.3 emotional; and
- 2.4 spiritual aspects?

3. What is the marital adjustment of the respondents in love and arranged marriages when classified as:

- 3.1 social;
- 3.2 physical;
- 3.3 financial ; and
- 3.4 spiritual?

4. What is the level of marital quality of the respondents in love and arranged marriages on the following aspects;

- 4.1. commitment;
- 4.2. trust; and
- 4.3. mutual interaction?

5. What are the forms of marital support of the respondents in love and arranged marriages receive in terms of:

- 5.1 psychological;
- 5.2 confidant;
- 5.3 affective; and
- 5.2 social support?

6. Is there a significant difference between love and arranged marriages among respondents in terms of attachment related anxiety?

7. Is there a significant difference between love and arranged marriages among respondents in terms of marital adjustment?

8. Is there a significant difference between love and arranged marriages among respondents in terms of marital quality?

9. What marriage counseling program has been developed on the basis of the findings of the study?

Null Hypotheses

The following null hypotheses below was tested at 0.05 level of significance

HO1. There is no significant differences between love and arranged marriages among respondents in their attachment -related anxiety.

HO2. There is no significant difference between love and arranged marriage among respondents in their marital adjustment.

HO3. There is no significance difference between love and arranged marriages on level of marital quality on commitment and mutual interaction while significance difference on trust

THEORETICAL FRAMEWORK

The theories that anchored this study consists of the following: the attachment anxiety theory by John Bowlby (1907-1990), B.F. Skinner’ operant conditioning used to explain the different variables of this study, such as attachment anxiety, psychosocial support, marital adjustment and marital quality. The study was anchored to John Bowlby (1907-1990) evolutionary theory of attachment anxiety, Cognitive Theory of Social Anxiety, and B.F. Skinner Operant Conditioning (1938) to provide theoretical background for this study.

Theories on Marital Adjustment, the Triangular Theory of Love, Social Learning Theory, and Equity Theory. Sternberg (1986, 1998) conceptualized love in terms of three basic components namely: The intimacy component is primarily emotional or affective in nature and involves feelings of warmth, closeness, connection, and bondness in the love relationship. The passion component is motivational and consists of the drives that are involved in romantic and physical attraction, sexual consummation, and related phenomena.

This section provides a glimpse of literature available regarding attachment anxiety and anxiety across different context. Attachment Anxiety. In the study “Attachment Anxiety, Relationship Context, and Sleep in Women with Recurrent Major Depression” by Troxel, Cyranowski, Frank, and Buysse, (2007), evidence suggests that attachment anxiety may be an important correlate of subjective sleep quality, and the effects may depend on the relationship status. The aims of this study were two-fold. First, it sought to extend the previous literature on attachment and subjective sleep by examining the relationship between attachment and sleep on subjective sleep quality and PSG sleep outcomes in a clinically depressed sample. Based on theory and the limited existing evidence, they hypothesized that depressed women characterized by high levels of attachment anxiety would have poorer subjective sleep quality and would exhibit more disturbances in PSG parameters.

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Related Studies

The study entitled “Comparative Study on the Marital Quality of Couple With and Without Pre-Marriage Education” by Francis (2012) asked about couples perceptions on the attachment style, sexual satisfaction, and marital satisfaction. The tools used in this research are the Marital Quality Scale (MQS) by Sha (1994). It is a multidimensional measure of marital quality that gives global and specific scores. Collected data was analyzed using statistical package for social sciences (SPSS). Descriptive statistics was mostly used for analyzing the data such as frequency, measures of central tendency and measures of dispersion

METHODOLOGY

This study employed the descriptive–correlation design. Part of study was done through describing the demographic profile of the respondents and personal profile in terms of age, gender, socio economic status, educational attainment, monthly income and occupation. Their perceptions on their marriage particularly on attachment anxiety, marital adjustment, marital quality and marital support were also given descriptions. On the other hand, these two important variables were then correlated so as to establish a conclusion that a wife’s profile can affect her perception on her marriage life.

Statistical Tools Used

The researcher used appropriate statistical tools to analyze the data gathered:

1. **Frequency and Percentage Distribution** - This tool was used to analyze the profile of the respondents and to group them according to the profile they belong.

$$n_1 + n_2 + n \dots = \sum N$$

$$\% = \text{number of responses/total respondent's} \times 100$$

2. The **sample mean \bar{X}** from a group of observations is an estimate of the population mean μ . Given a sample of size n , consider n independent random variables X_1, X_2, \dots, X_n , each corresponding to one randomly selected observation. Each of these variables has the distribution of the population, with mean μ and standard deviation σ . The sample mean is defined to be:

$$\bar{X} = \frac{1}{n} (X_1 + X_2 + \dots + X_n)$$

3. The **spearman correlation coefficient** is defined as the Pearson correlation coefficient between the ranked variables. For a sample of size n , then raw scores X_1, Y_2 are converted to ranks U_1, U_2 , and r_s is computed from these spearman correlation was used to see the significant of the relationship between respondents profile and their perception and their attachment on their attachment anxiety, marital adjustment, marital quality and marital support and love marriage with other variables of the study.

FINDINGS

Table 1: Frequency and Percentage Distribution of the Respondents According to Present Age

Present Age	LOVE MARRIAGE		ARRANGE MARRIAGE	
	Frequency	Percentage	Frequency	Percentage
Above 30	18	13.64	110	56.41
26-30	38	28.79	15	7.69
21-25	12	9.09	18	9.23
17-20	47	35.60	31	15.90
16 and below	17	12.88	21	10.77
TOTAL	132	100.00	195	100.00

Table 1 implies that the presence of older respondents in arranged marriage group point that Meranao society has been practicing arranged marriages as feature of the culture, and that love marriages are relatively new to the society as cited by Ronsing,(1980).

On the other hand, new study suggested that the perfect age to get married is between the ages of 28 and 32 if they don’t want to get divorced, at least in the first five years. Wofinger analyzed data from 2006-2010 and 2011-2013 National Survey of Family Growth. He found out a sort of upside down bell curve. “The odds of divorce decline as your age from your teenage years through your late twenties and early thirties Wofinger, (2015).

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Psychological Aspect: Attachment Anxiety

Table 2 reveals the psychological aspect in terms of attachment anxiety indicates the mean, standard deviation, descriptive ratings and rank of the psychological aspect in attachment-related anxiety as perceived by the respondents.

Table 2: The Mean Ratings of the Respondents’ attachment anxiety in term of psychological

Indicators	LOVE MARRIAGE (N=132)				ARRANGED MARRIAGE (N=195)			
	Mean	SD	Descriptive Rating	Rank	Mean	SD	Descriptive Rating	Rank
I always notice when my partner is angry at me.	4.73	0.6884	Strongly Agree	1	4.69	0.6794	Strongly Agree	1
I feel that my partner always abandon me.	2.95	1.7337	Neutral	2	1.88	1.3127	Disagree	7
I worry that my partner’s feelings for me is not as strong as mine.	2.38	1.4751	Disagree	3.5	3.49	1.3560	Agree	5
I am afraid that my partner would not want to stay with me.	2.38	1.4751	Disagree	3.5	1.68	1.1811	Strongly Disagree	10
I am not comfortable opening up and be romantic with my partner.	2.30	1.6380	Disagree	5	1.89	1.2451	Disagree	6
I rarely worry about my partner leaving me anytime.	1.69	1.0710	Strongly Disagree	6	3.53	1.0169	Agree	3
I am afraid that I will lose my partner’s love.	1.64	1.1805	Strongly Disagree	7	4.22	0.7017	Strongly Agree	2
I find that my partner does not want to get as close as I would like him to be.	1.58	1.2297	Strongly Disagree	8	1.74	0.9783	Strongly Disagree	9
I am determined about the relationship if it would not last long.	1.50	1.1492	Strongly Disagree	9	3.52	1.4514	Agree	4
I know that my partner is not everything to me and I can live my life without my partner.	1.34	0.9557	Strongly Disagree	10	1.78	1.0477	Strongly Disagree	8
AVERAGE	2.25	1.2595	Strongly Disagree		2.84	1.0970	Neutral	

Scaling:

- 4.21 – 5.00 = Strongly Agree
- 3.41 – 4.20 = Agree
- 2.61 – 3.40 = Neutral
- 1.81 – 2.60 = Disagree
- 1.00 – 1.80 = Strongly Disagree

As seen in the table, the statement “I always notice when my partner is angry with me” ranks first for both love marriage and arranged marriage with mean rating SD 0.6884 of 4.73 and 4.69 and a descriptive rating of strongly agree. Statement #10 “I feel that my partner always abandon me” ranks second for love marriage with a mean of 2.95 and a descriptive rating of neutral, while the statement #1, “I am afraid that I will lose my partner’s love” rank second for arranged marriage with a mean of 4.22 or strongly agree description. Statement #7, “I worry that my partner’s feelings for me is not as strong as mine” and statement # 8, “I am afraid that my partner would not want to stay with me” rank next for love marriage with a mean of 2.38 and descriptive rating of disagree. For arranged marriage, statement #2, “I worry about my partner leaving me anytime” ranks third with a mean

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of 3.53 and a descriptive rating of agree. Overall, love marriage has average mean of 2.24, standard deviation of 1.2595 and a descriptive rating of strongly disagree. Arranged marriage has 2.84 average mean, 1.0970 standards deviation and a description of neutral.

Social Aspect: Attachment Related Anxiety

Table 9 presents social aspect of attachment related anxiety the respondent’s in love marriages agreed that they become prostrated whenever they cannot deal effectively with their partner and avoiding such as socializing with their partner’s relative

Table 3: Mean Ratings of Social aspect of Attachment Related Anxiety of the Respondents

Indicators	LOVE MARRIAGE (N=132)				ARRANGED MARRIAGE (N=195)			
	Mean	SD	Descriptive Rating	Rank	Mean	SD	Descriptive Rating	Rank
I get frustrated whenever I cannot deal with my partner effectively.	3.73	1.6980	Agree	1	3.36	1.3183	Neutral	7
I hardly adapt the life of being married because there are many challenging obligations.	3.62	1.5945	Agree	2	3.57	1.3313	Agree	5
I avoid situations such as socializing with my partner relatives.	3.59	1.6483	Agree	3	3.59	1.1953	Agree	4
I do not know my inhibition in communicating with my partner especially when it comes to my in-laws relationship.	3.09	1.7494	Neutral	4	3.85	0.8455	Agree	2.5
I would not easily accept the opinions of my partner.	2.88	1.6579	Neutral	5	2.09	1.5504	Disagree	9
I do not know how to deal effectively especially in socializing with my partner’s relatives.	2.55	1.6267	Disagree	6	4.37	1.2751	Strongly Agree	1
I do not understand my partner’s need that is why we have conflict.	2.45	1.6222	Disagree	7	3.85	1.5806	Agree	2.5
I find it very hard to talk about my personal and professional life with my partner.	2.25	1.4162	Disagree	8	2.24	1.2542	Disagree	8
I am afraid whenever my partner is with my friends.	2.04	1.3782	Disagree	9	1.83	1.4492	Disagree	10
I feel useless when interact with my partner.	1.36	0.8301	Strongly Disagree	10	3.51	1.2199	Agree	6
AVERAGE	2.76	1.5222	Neutral		3.23	1.3020	Neutral	

Scaling:

- 4.21 – 5.00 = Strongly Agree
- 3.41 – 4.20 = Agree
- 2.61 – 3.40 = Neutral
- 1.81 – 2.60 = Disagree
- 1.00 – 1.80 = Strongly Disagree

The mean, standard deviation, descriptive ratings and rank of the indicators in social aspect of attachment-related anxiety. As seen in the table above, statement #5 “I get frustrated when I cannot deal effectively with my partner” ranks first for love marriage with a mean of 3.73 a descriptive rating of agree; while for arranged marriage, statement #3 “I don’t know how to deal effectively especially in socialization with my partner’s relatives” ranks first with a mean of 4.37 and a descriptive rating of

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strongly agree. Statement #9, “I find it very hard to talk about my personal and professional life with my partner” ranks 8 for both type of marriage with a mean of 2.25 and 2.24, respectively, and rating of disagree. The statements that rank the lowest are statement 4, “I feel useless when interacting with my partner,” for love marriage with a mean of 1.36 and a rating of strongly disagree; and statement #10, “I am afraid when my partner is with my friends,” with a mean of 1.83 and a rating of disagree. The average mean for love marriage is 2.76, standard deviation 1.5222 and a general rating of neutral, while arranged marriage has a mean of 3.23, standard deviation of 1.3020 also described as neutral.

Emotional Aspect: Attachment-Related Anxiety

Table 3 presented in the emotional aspect related to attachment anxiety as to the emotional-related anxiety, the respondents from arranged marriages agreed that they feel comfortable discussing romance and sex with their partners.

Table 4: Mean Ratings of the Respondents emotional aspect related to attachment anxiety

Indicators	LOVE MARRIAGE (N=132)				ARRANGED MARRIAGE (N=195)			
	Mean	SD	Descriptive Rating	Rank	Mean	SD	Descriptive Rating	Rank
I prefer not to show my real feelings towards my partner.	4.22	1.3553	Strongly Agree	1	3.51	1.7859	Agree	3
I find it relatively easy to get closer to my partner.	3.89	1.4892	Agree	2	3.99	1.4573	Agree	2
I worry that my partner might be interested with someone better than me.	3.55	1.7791	Agree	3	2.54	1.9028	Disagree	5
I could not take it if my partner would leave me.	2.64	1.7660	Neutral	4	3.22	1.7095	Neutral	4
I do not feel comfortable about discussing about romance and sex with my partner.	2.59	1.6758	Disagree	5	4.31	1.2761	Agree	1
I feel nervous when my partner gets closer to me.	2.41	1.5821	Disagree	6	1.66	1.3160	Strongly Disagree	10
I do not share my private thoughts and feelings with my partner.	2.17	1.6446	Disagree	7	1.95	1.5138	Disagree	9
I believe that my marriage would not last forever.	2.15	1.6507	Disagree	8	2.15	1.6097	Disagree	6
I have difficulty getting closer to my partner.	1.90	1.5326	Disagree	9	2.01	1.4142	Disagree	7
I do not get the affection and support that I deserved from my partner.	1.78	1.3095	Strongly Disagree	10	1.97	1.3657	Disagree	8
AVERAGE	2.73	1.5785	Neutral		2.73	1.5351	Neutral	

Scaling:

- 4.21 – 5.00 = Strongly Agree
- 3.41 – 4.20 = Agree
- 2.61 – 3.40 = Neutral
- 1.81 – 2.60 = Disagree
- 1.00 – 1.80 = Strongly Disagree

As can be gleaned in Table 4 in love marriage, statement #8 “I prefer not to show my real feelings towards my partner” ranks first with a mean of 4.22 and a descriptive rating of strongly agree, while in arranged marriage, statement #3 “I do not feel comfortable when we discuss about romance and sex with my partner” ranks first with a mean of 4.31 and a descriptive rating of agree. Furthermore, respondents of love and arranged marriage revealed that they both agree to statement “I find it relatively

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easy to get closer to my partner” with a mean of 3.89 and 3.99. Statement # 2 “I do not get the affection and support that I deserved from my partner” and statement #3 “I feel nervous when my partner get closer to me” with a mean of 1.78 and 1.66 rank 10 for love marriage and arranged marriage. In general, overall mean for love marriage is 2.73, standard deviation 1.5785 with a rating of neutral, while arranged marriage has a mean of 2.73, standard deviation of 1.5351 also described as neutral.

Level of Commitment

Table 5 shows illustrates the mean ratings of the respondents’ level of commitment.

Table 5: Mean Ratings of the respondents’ level of commitment

Indicators	LOVE MARRIAGE (N=132)				ARRANGED MARRIAGE (N=195)			
	Mean	SD	Descriptive Rating	Rank	Mean	SD	Descriptive Rating	Rank
I want my relationship to succeed very much.	4.73	0.5538	Very High	1	4.77	0.7202	Very High	1
I feel full satisfaction in my needs because my partner understands me.	4.43	1.2733	Very High	2	4.30	1.2938	Very High	3
I am very much faithful to my partner.	4.20	1.4166	High	3	4.14	1.3622	High	5
I do my best to save the relationship during trials in our relationship.	4.14	1.1772	High	4	4.43	1.1837	Very High	2
I prefer to share my thoughts and show my feelings to my partner.	3.92	1.3425	High	5	2.06	1.5252	Fair	9
I show appropriate affections expected of me by my partner.	3.91	1.4902	High	6	4.15	1.5152	High	4
I honestly open up everything to my partner if there is a need.	3.47	1.4940	High	7	3.31	1.8688	Moderate	8
I easily settle our disagreement with my partner.	3.42	1.5925	High	8	3.81	1.6309	High	7
I have high expectations with my partner for our marriage to last long.	2.67	1.6692	Moderate	9	4.09	1.3575	High	6
I am happy when I am with my partner’s relatives.	2.22	1.6220	Moderate	10	1.75	1.3046	Low	10
AVERAGE	3.72	1.3631	HIGH		3.68	1.3762	HIGH	

Scaling:

4.21 – 5.00 = Very High Commitment

3.41 – 4.20 = High Commitment

2.61 – 3.40 = Moderate Commitment

1.81 – 2.60 = Fair Commitment

1.00 – 1.80 = Low Commitment

Table 5 revealed the level of commitment of the respondents’ both love and arranged marriages have very high commitment for statement #1, “I want my relationship to succeed very much” with a mean of 4.73, ranks 1. Moreover, for love marriage, very high commitment is also revealed for statement #4, “I feel satisfied with my needs because my partner understands me,” with a mean of 4.43, ranking second in the levels of commitment in marriage Moderate commitment is revealed for statement #8, “I have high expectations with my partner that our marriage will last long,” with a mean of 2.67, ranking ninth and rank 10 also a moderate commitment for statement #10, “I am happy when I am with my partner’s relatives,” with a mean of 2.22. For arranged marriages, there was very high commitment, ranking second for statement #9, “I do my best to save the relationship whenever we are faced with trials,” with a mean of 4.43; fair commitment for statement #7, “I prefer to share my

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thoughts and show my feeling to my partner,” ranking ninth with a mean of 2.06; and lastly, low commitment was revealed for statement #10, ranking tenth with a mean of 1.75. Overall, love and arranged marriages have high commitment with an average mean of 3.72 and 3.68 respectively.

The findings show that both marriages aim for nothing but a successful one whether it is grounded with love or began as an arranged marriage. They also find happiness, although, low commitment, in spending time with their partners’ relatives. It is further revealed that the more the respondents’ partners show love and affection, the higher the respondents are committed to the marriage. It can be deduced that they believe that love is a give and take process for the relationship to work. It is notable that there is fair commitment arranged marriages provide to their partners with regards to sharing their thoughts and showing their feelings, compared to love marriage wherein they give high commitment to this aspect (G. Champman’s, 1995).

CONCLUSION

On the basis of the findings of the study, the following conclusions were formulated, Meranao society has been practicing arranged marriage as feature of the culture bound and traditions, according to the findings majority of the respondents was young at age when they got married, this indicates that Meranaos society was a product of their traditional culture. They were respondents get married at age of 15 years old which contradicted the Family Code of 1987 governs marriage in the Philippines that both men and women consent to marry at the age of 18 year old. Therefore, marriage in the Philippines have a certain limitations and parents must be inform regarding the Family Code 1987.

In terms of attachment anxiety, marital adjustment, marital quality and marital support of the respondents it was observed that love marriage had always notice their partner while arrange marriage had difficult to handle their partner, for marriage having issues with their marriage they must seek professional advice on coping with the changes bought about their marriage . Family counseling is needed for them to adjust in their marital adjustments to have family and way of living.

The findings show that both arranged and love marriage have the same marital quality of commitment and mutual interaction. Marital quality as an independent variable is observed from the different aspects of its influence on partners and marital family processes, satisfaction with life and marital partners’ Psychological, socio, emotional stability of marriage, marriage counseling session will be need both love and arranged marriages.

RECOMMENDATION

The following recommendations are hereby offered based on the findings and conclusion of the study.

1. The demographic profile of the respondents shows that love marriage has the greatest number from the age bracket 17-20. Majority of the respondents are younger in love marriage compare to arrange marriage. Since majority of the respondents was young the researcher recommended that before getting marriage individual couple is advised to undergo seminars or workshop about family and marriage in order for them to have knowledge on having lifetime partner or to cope with the difficulties marriage. They must seek professional advice on coping with the changes brought about by their marriage.
2. The level of attachment anxiety of the respondents implies that both marriages, in terms of psychological, Social, emotional and spiritual aspects. The love marriage has a strong relationship compare to love marriages. In order to handle the anxiety feeling of individual couple, it is recommended for women who are having issues with their marriage to spend quality time together with their husbands in order to sort out their differences and similarities so that they can easily handle their anxiety feelings. The individual with anxiety may feel guilty about their partner
3. For the marital adjust in both marriages it was imply that arranged marriage is better than love marriage because arrange marriage are more understanding towards each other. In arranged marriage, first few years of the marriage are spent in knowing and understanding the partner. The researcher recommended that couples should know how to adjust with their partner to make their marriage long last. It is also recommended that couple should have a commitment to make their marriage work is always the top priority, it seems to be the primary reason for success of both marriages.
4. The level of marital quality of the respondents in love and arranged marriages findings suggest how both marriages appreciate and give high regard to their marriage and their partners’ effort to make the relationship work. The researcher believes that the foundation of marriage is trusting your partner, being committed to, and being honest and open to one another. Partners should be aware of these foundations in order for their marriages to succeed. To spend more quality time with your partner the couple should try new things together, like go on weekend getaway, while it’s a relationship goal to travel the world together, commitment and mutual interaction is very important. Having a happy marriage is usually among the most important, marital happiness and marital satisfaction are closely related. Marital quality is observed from

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the aspect of its influence on partners and marital and family processes satisfaction with life, health and stability of marriage and the emotional stability of the couple.

5. The findings show clearly that love marriage respondents have a higher affective marital support system than arranged marriage, therefore the researcher strongly recommended especially to those who are having a hard time with marital support to their partner. Having an emotional, psychological and social support from partner may be the best things to sustain the relationship.
6. Arranged marriages more common in Meranao culture the couples must the consent of their parents with looking into every aspect, like wealth, health conditions and more stable. On the other hand, love marriages may not be completely acceptable to family and relatives. The researcher recommended having trust, commitment to your partner to make the relationship stronger and successful.
7. It is recommended for the future researches to have an in-depth research on the problems that are not addressed or stated to this study. Hence, it is recommended to explore on cultural diversities, having a larger and more intensive research. The current study only has four variables. It is recommended for the future researchers to explore other variables that can be applied with the study.

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Physical Fitness and Mental Health Index Lecturers and Staff of Yogyakarta State University



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ABSTRACT: This study aims to determine the level of physical fitness index and mental health of lecturers and educational staff at Yogyakarta State University. The research design used in this study uses an experimental research method. The population of this study were lecturers and educational staff at Yogyakarta State University. The instrument for measuring physical fitness used the Rockport Test. The instrument for determining the level of mental health used the Self Reporting Questionnaire-20 (SRQ-29). The study was conducted at the UNY Athletics and Football Stadium and the UNY Wates Stadium. The sample consisted of 202 UNY Lecturers and 62 UNY Educational Staff. The results of the study that have been carried out, obtained the results that the level of physical fitness of UNY Lecturers was 1% indicating good, 3% indicating very poor, 43% indicating sufficient, 53% indicating less. While for the percentage results of the Fitness Test for UNY Educational Staff, 13% indicated good, 2% indicated very poor, 48% indicated sufficient, 37% indicated less. Meanwhile, the mental health test of UNY Education Staff showed that 92% were good, 6% were quite good and 2% were lacking. Meanwhile, the mental health test of UNY Lecturers showed that 97% were good, 2% were quite good and 1% were lacking.

KEYWORDS: physical fitness, mental health, lecturers, education staff.

INTRODUCTION

Sports are an important factor in improving a person's physical fitness. Physical fitness itself can improve a person's survival. Previous research has shown that physical fitness consists of components related to health and skills that have been shown to correlate with a person's competitive ability. (Xiao et al., 2022). The same thing was also expressed in a study which revealed that physical activity has become one of the important ways for people to improve physical fitness (Zhang, 2023). After the COVID-19 pandemic, most universities changed their education model from online courses to on-site learning, so that lecturers and students can attend regular face-to-face classes. These changes can cause stress for lecturers and students, which has an impact on physical fitness (Suwannakul et al., 2023). Exercise is an effective strategy to improve quality of life and physical fitness (Dieli-Conwright et al., 2018). Physical fitness is one of the health indicators that plays a role in preventing non-communicable diseases that threaten public health (Dong et al., 2023).

Physical activity is a body movement by the body's muscles and supporting systems that require energy expenditure (Riyanto & Mudian, 2019). Physical activity is any body movement produced by skeletal muscle contractions that increase energy expenditure above resting levels and consists of daily routine tasks such as commuting, work-related activities, or household activities, as well as purposeful health-improving movements/activities (Aziz & Arofiati, 2019). This means that physical activity is an activity that is carried out consciously in moving the body by expending energy supported by the body's muscles. (Maharani & Sudaryanto, 2021) state that physical activity is a form of human behavior, including all body movements from small movements to participating in marathons. It can be concluded that physical activity is not only sports but daily activities such as cleaning the house, washing clothes, cycling, and jogging are also included in physical activity and can be done from simple activities to measured and planned activities.

The importance of mental health is an important aspect in improving a person's physical fitness. Mental health has been recognized as one of the most important determinants of mental health and has the potential to improve the mental health of both individuals and society (Muslić et al., 2020). Based on this, researchers in collaboration with lecturers and staff at Yogyakarta State

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University are interested in conducting research on the index of physical fitness and mental health. Mental health is one of the most serious health conditions that has a negative impact on every aspect of life. Mental health disorders are a growing global public health challenge and have a major impact on society (Javed et al., 2021). The high level of mental health problems is a growing concern in higher education, negatively impacting performance and well-being. Despite poor mental health, people often do not seek help because of a sense of shame about the mental health problems they experience (Kotera et al., 2022). Maintaining mental health can provide benefits including being better able to cope with stress and pressures of life, being physically or mentally healthy, being able to establish good relationships with other people, being able to contribute to society, working productively, and being aware of their potential (Fadilah, 2021).

Mental health is a condition where a person can do an activity happily, safely, and peacefully without any bias towards the mental condition. (Rosmalina, 2016) states that mental health is a mental condition that is always in a calm, safe and peaceful state, and tries to find inner peace through self-adjustment through resignation (complete surrender to God). Mental health is something that is very important for all humans, similar to physical health which needs to be maintained in general (Auliasin et al., 2019). Good mental health allows people to work well, cope with the pressures of their lives, and be able to realize their potential (Maharani & Sudaryanto, 2021). This indicates that if a person is mentally healthy, their physical health will be maintained simultaneously so that they are able to do something well, according to their mind and abilities. This statement is reinforced by the statement (Rahmayanthi et al., 2021) that mental health is defined as a state of well-being where individuals are aware of their own abilities, can cope with normal life pressures, can work productively and usefully and are able to contribute to their community. Based on the background above, this study aims to determine the level of physical fitness and mental health index of lecturers and education staff at Yogyakarta State University.

METHOD

The research design used in this study uses an experimental research method. The population of this study were lecturers and educational staff at Yogyakarta State University. The instrument for measuring physical fitness used the Rockport Test. The instrument for determining the level of mental health used the Self Reporting Questionnaire-20 (SRQ-29). The research was conducted at the UNY Athletics and Football Stadium and the UNY Wates Stadium. The research was conducted every Friday, on July 26, August 2, August 9, and August 16, 2024. The sample consisted of 202 UNY Lecturers and 62 Educational Staff.

1) Rockport Test Instrument

This test aims to evaluate human lung capacity based on the volume of exercise that can be tolerated. This test is designed for women and men aged 20 to 69 years. The test is done by walking fast/jogging at a constant speed for 1600 meters, then calculating how many minutes for 1600 meters. The Rockport test has a validity of 0.75 and a reliability of 0.071.

Assessment criteria

No	Travel Time (Minutes-Seconds)	VO2 Max (ml/kg/min)
1.	5'18"-5'-23"	62
2.	5'24"-5'-29"	61
3.	5'30"-5'-35"	60
4.	5'36"-5'-42"	59
5.	5'43"-5'-49"	58
6.	5'50"-5'-56"	57
7.	5'57"-6'-04"	56
8.	6'05"-6'-12"	55
9.	6'13"-6'-20"	54
10.	6'21"-6'-29"	53
11.	6'30"-6'-38"	52
12.	6'39"-6'-48"	51
13.	6'49"-6'-57"	50
14.	6'58"-7'-08"	49
15.	7'09"-7'-19"	48
16.	7'20"-7'-31"	47
17.	7'32"-7'-43"	46
18.	7'44"-7'-56"	45

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No	Travel Time (Minutes-Seconds)	VO2 Max (ml/kg/min)
19.	7'57"-8'10"	44
20.	8'11"-8'24"	43
21.	8'25"-8'40"	42
22.	8'41"-8'56"	41
23.	8'57"-9'14"	40
24.	9'15"-9'32"	39
25.	9'33"-9'52"	38
26.	9'53"-10'14"	37
27.	10'15"-10'36"	36
28.	10'37"-11'01"	35
29.	11'02"-11'28"	34
30.	11'29"-11'57"	33
31.	11'58"-12'29"	32
32.	12'30"-13'03"	31
33.	13'04"-13'41"	30
34.	13'42"-14'23"	29
35.	14'24"-15'08"	28
36.	15'09"-16'00"	27
37.	16'01"-16'57"	26
38.	16'58"-18'02"	25
39.	18'03"-19'15"	24
40.	19'16"-20'39"	23
41.	20'40"-22'17"	22
42.	22'18"-24'11"	21

Fitness Level/Norm Category:

VO2MAX NORMS FOR WOMEN					
Female	Fitness Level Category/Norm:				
Age	Less than once	Not enough	Enough	Good	Very Well
20-29	<24	24-30	31-37	38-48	>49
30-39	<20	20-27	28-33	34-44	>45
40-49	<17	17-23	24-30	31-41	>42
50-59	<15	15-20	21-27	28-37	>38
60-69	<13	13-17	18-23	24-34	>35

VO2MAX NORMS FOR MEN					
Male	Fitness Level Category/Norm:				
Age	Less than once	Not enough	Enough	Good	Very Well
20-29	<25	25-33	34-42	42-52	>53
30-39	<23	23-30	31-38	39-48	>49
40-49	<20	20-26	27-35	36-44	>45
50-59	<18	18-24	25-33	34-42	>43
60-69	<16	16-22	23-30	31-40	>41

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2) Mental Health Test Instrument

The mental health instrument used in this study, namely the Self-Reporting Questionnaire-29 (SRQ-29), the collection of validity evidence using confirmatory factor analysis showed that the SRQ-29 had met the model fit criteria (Triwahyuni & Prasetyo, 2021). Consisting of 29 questions. Each question has two answer choices, namely "yes" and "no". The answer "yes" is scored 1, while the answer "no" is scored 0. Individuals who get a total score of 6 are categorized as individuals who are indicated to have psychological disorders (neurotic disorders) and are advised to meet with a psychologist or other mental health workers (Triwahyuni & Eko Prasetyo, 2021). If you get a score of 0-7, you have good mental health, 8-15 have sufficient mental health, and 16-29 have poor mental health.

Variable	Indicator	Question Item Number	Number of Questions
Mental Health	Depression Symptoms	6,9,10,14,15,16,17	7
	Anxiety Symptoms	3,4,5	3
	Somative Symptoms	1,2,7,19	4
	Cognitive Symptoms	8,12	2
	Energy Decreased Symptoms	11,13,18,20	4

ANALYSIS AND DISCUSSION

Fitness Test Results

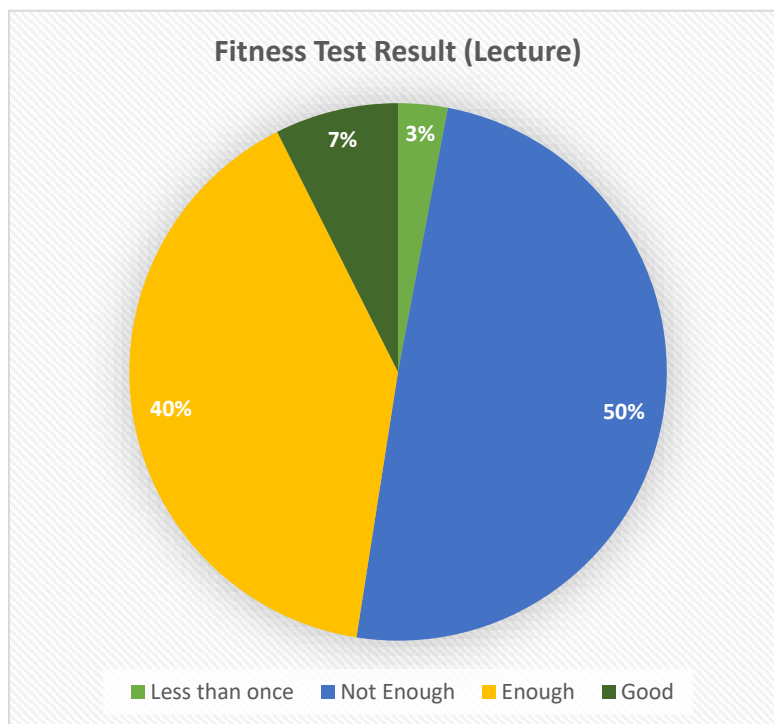


Figure 1. Lecturer Fitness Results

The percentage results of the Fitness Test for Lecturers, 1% shows good, 3% shows very poor, 43% shows sufficient, 53% shows poor.

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Table 1. Fitness Test Categories

CATEGORY	AMOUNT
Good	15
Enough	81
Not enough	100
Less than once	6
Amount	202

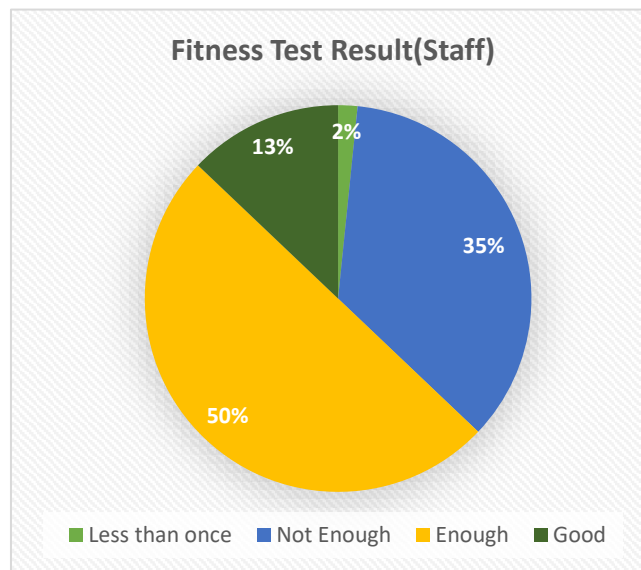


Figure 2. Staff Fitness Results

The results of the Fitness Test percentage for Education Staff, 13% showed good, 2% showed very poor, 48% showed sufficient, 37% showed poor.

Table 2. Fitness Test Categories

CATEGORY	AMOUNT
Good	8
Enough	31
Not enough	22
Less than once	1
Amount	62

Mental Health Test Results

Table 3. Number of Education Staff

STAFF STATUS	AMOUNT
Employees with employment agreements	15
Contract employees	17

Physical Fitness and Mental Health Index Lecturers and Staff of Yogyakarta State University

Civil Servant Employee	15
Non ASN permanent employees	15
Amount	62

Table 4. Mental Health Test Categories

CATEGORY	INFORMATION	AMOUNT
Good	Low levels of psychological problems or clinically insignificant symptoms.	57
Pretty Good	Moderate level of psychological problems, further assessment and psychological consultation required.	4
Not Good	Severe level of psychological problems, requires in-depth assessment and psychological therapy	1
Amount		62

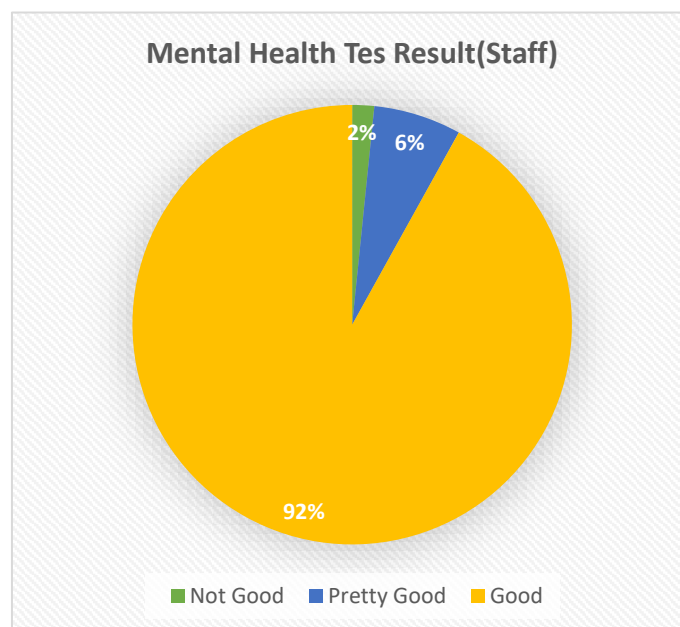


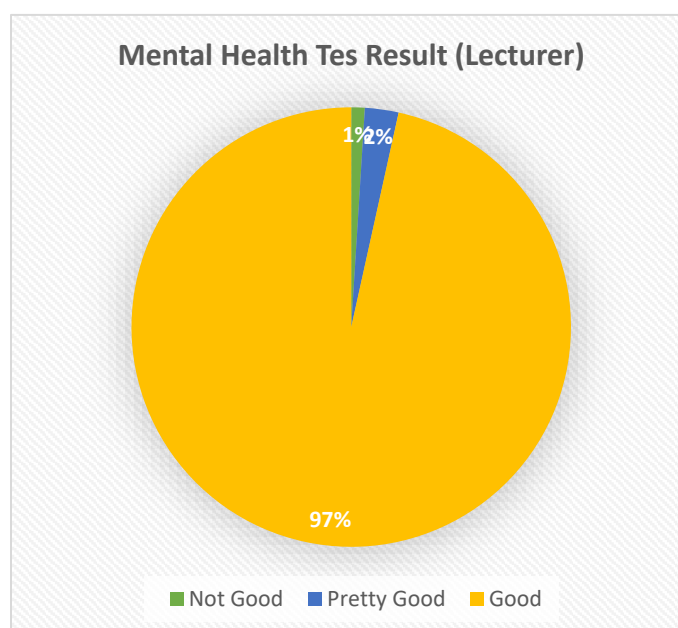
Table 5. Number of Lecturers

LECTURE STATUS	AMOUNT
Civil Servant Lecturer	45
PPPK Lecturer	16
PTNBH Lecturer	141
Amount	202

Physical Fitness and Mental Health Index Lecturers and Staff of Yogyakarta State University

Table 6. Mental Health Test Categories

CATEGORY	INFORMATION	AMOUNT
Good	Low levels of psychological problems or clinically insignificant symptoms.	195
Pretty Good	Moderate level of psychological problems, further assessment and psychological consultation required.	5
Not Good	Severe level of psychological problems, requires in-depth assessment and psychological therapy	2
Amount		202



CONCLUSION

This study aims to determine the level of physical fitness and mental health index of lecturers and educational staff at Yogyakarta State University. Based on the results of the research that has been carried out, it was found that the level of physical fitness of UNY Lecturers was 1% indicating good, 3% indicating very poor, 43% indicating sufficient, 53% indicating less. While for the percentage results of the Fitness Test for UNY Educational Staff, 13% indicated good, 2% indicated very poor, 48% indicated sufficient, 37% indicated less. While for the mental health test of UNY Educational Staff, the results showed that 92% were good, 6% were quite good and 2% were lacking. While for the mental health test of UNY Lecturers, it showed that 97% were good, 2% were quite good and 1% were lacking.

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Perception and Knowledge of Students on the Use of YouTube in Authentic Assessment



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ABSTRACT: Literacy design by using digital learning resources in the instructional activities at school is presently inevitable. Besides providing learning materials, digital learning materials are also suitable for applying authentic assessment that can improve learners' skills and competencies contextually. The study is intended to explore students' perceptions on the use of the YouTube as materials for authentic assessment. The study was carried out through quantitative and qualitative surveys with 47 graduate students at Yogyakarta State University, 45 domestic and 2 overseas students. The study took place in a blended learning context. Students were asked to complete an on-line questionnaire, practice authentic assessment in class, and conduct observation activities. Data were analyzed by descriptive statistics and descriptive qualitative method. Findings show that students' perceptions on the use of the YouTube channel and authentic assessment are generally positive. Almost all the students agree with the genre-based language learning and assessment of which one of the resources is the Internet and all its derivations; almost all of the students agree that the implementation of the YouTube-based instructional processes applies the authentic assessment model with the primary performances of speaking and writing using a rubric; practice of students' performances in authentic competencies is scored and commented on by their peer.

KEYWORDS: student's perception, use of YouTube, authentic assessment, contextual and real world, improvement of competency and professionalism

INTRODUCTION

Entrance into the 21st century is marked with the speedy of the flow of digital information that massively invades and influences all aspects of life. The digital era brings about incredible ways of literating and communicating. The course of information which previously is seen as effectively delivered by paper now, in the disruption era, undergoes "destruction" as do all other settled phenomena (Balbay & Kilis, 2017). The swiftness of the digital technology effectuates changes in literacy paradigms. In the world of education, informational technology has opened new prospects to carry out various instructional innovations by offering a wide variety of on-line learning resources that are more effective and are not restricted by traditional patterns of learning (Alwehaibi, 2015). This condition has fastened the transition of learning activities from those based on traditional approaches to those based on multi-modal digital media.

Communication sources and media which are used to obtain knowledge are now unlimited to traditional textual discourses but are on-line, which are multi-modal resources—the Internet and all its derivations—which can be accessed with ease. The various kinds of learning resources which are the products of the digital era such as the Internet, *E-book*, *E-journal*, *Facebook*, *WhatsApp*, *YouTube*, *Zoom*, and others have affected the attitudes, ways of thinking, and behaving of man. With the coming of the disastrous pandemic of the Covid-19, Learning through the digital media, and later after, that is more needed (Saeed, Razak, & Aladdin, 2022) since the various instructional activities are based more extensively on these media.

Use of the YouTube

As is the case with all the other on-line technological applications, the YouTube is greatly popular and has a wide impact on the life of the society and the school and university students. It is even seen that not a few school and university students become so independent on the YouTube channels and other digital technology media in order to acquire knowledge and or understanding of important things, all of which can also be applied in language learning (Tahima, 2023; Saed, Haider, Al-Salman

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et al., 2021; Chien, Huang, & Huang, 2020). Be that as it may, the emergence and development of the innovative technology, digital technology, and digital learning have dramatically and significantly changed the attitudes of the society in responding to something and instructional activities at the school. (Chien, Huang, & Huang, 2020). In short, the use of the digital learning medium, YouTube, has revolutionarily caused changes in instruction in the form of adjustment and adaptation in the learning method, strategy, and context (Balbay & Kilis, 2017).

With the utilization of the YouTube and various other digital learning media, language learning can become more interesting, not monotonous, and not tiring. All learning activities, such as vocabulary, listening, speaking, and writing, can be created using the YouTube as the basis for the learning resources. However, it must be noted that, in using the YouTube as an instructional medium, careful selection must become an essential criterion for selecting the material in order to match with the context and mission of the learning processes. It is at this point that critical and selective attitudes are needed in selecting and determining the learning program that is in coherence with the cultural contexts, criteria, and learning objectives including the students' proficiency levels (Kabooha & Elyas, 2018). In this relation, the teacher needs to consider the implications and impacts of using the YouTube in the classroom, especially concerning the instructional objectives of learning language. Cultural contexts are critical in the use of the YouTube to select programs that are suitable with the needs such in consideration with the local wisdoms or other cultural values.

Some studies show that the use of the YouTube in the learning of English as a foreign language (EFL) produce favourable results and give significant effects; for instance, Watkins & Wilkins (2011) in Japan, Alwehaibi (2015) in the Saudi of Arabia, Adisti (2022) in Indonesia, and Tahmina (2023) in Bangladesh. Other studies report successful significant results in the learning achievements for each of the language components such as in vocabulary Kabooha & Elyas (2018) dan Hia (2021); in speaking Balbay & Kilis (2017), Albahlal (2019), and Saed *et al.*, (2021); and in listening Chien *et al.* (2020) and Qomariyah, Permana, & Hidayatullah (2021).

Implementation of Authentic Assessment

In the language learning and assessment, the use of the YouTube or other multi-modal resources can generally be categorized as using authentic materials. In learning processes using authentic materials and activities, the learning evaluation must also use authentic assessment. Authentic assessment is one that is popular and used in many schools and universities around the world since it measures the learners' learning achievements more accurately in line with the contexts and needs. The key to the use of authentic assessment is being contextual, reflecting life in the real world, demonstrating an activity, and everything must be meaningful. Cook & Mills (2021) state that authentic assessment involves performance tasks, and real-world problem solving that allows learners to demonstrate their knowledge in multiple ways.

These things make authentic assessment become more meaningful for students since they can "see" and apply their competences and skills as they occur in the real world, such as in a workplace. In the case where university students take the class practicum demonstrating their competences in a workplace, they cannot yet consider as working in a real world in the true meaning. This is, then, what McArthur (2023) mentions the term "real-world" by saying that "some of us are living in some parallel unreal world". However, the use of the term "real-world" is actually meant to show how tight it is the relation between various authentic tasks demonstrated by students at the school and the concrete needs in the real world (Wiewiora & Kowalkiewicz, 2019). McArthur (2023) points out several fundamental statements concerning authentic assessment; namely the world of work that must be carried out, part of something larger, complex entity of the society; work is often essential to a well-being; humans by their nature need to do useful things; such usefulness is not narrow, utilitarian, or purely economic. Cook & Mills (2021) also mentions five essential components in the implementation of authentic assessment: namely real-world problems, complexity, ambiguous answers, actionability, and meaningfulness.

No difference from the use of the YouTube program and other resources from the Internet, authentic assessment is universal; it can be applied in various scientific disciplines, be they natural or social (Sutadji, Susilo, Wibawa *et al.*, 2021; Wiewiora & Kowalkiewicz, 2019)—including in linguistic learning—although the implementation is not the same. Use of authentic assessment in the academic world must become a primary priority since, in addition to being a foundation of academic standards, it becomes the best practice that can enrich students' competencies that really are needed in the real world (Sotiriadou, Logan, Daly *et al.*, 2020).

Research in the use of authentic assessment in the school is much conducted in learning and instruction in various parts of the world, either for language or non-language fields. For example, Schultz, Young, Gunning *et al.*, (2021) study the perceptions and practices around the use of authentic assessment within a diverse of science-based schools at an Australian University; Sokhanvar, *et al.* (2021) look into the advantages of authentic assessment in improving learners' experiences in learning competencies; Nieminen, Bearman, & Ajjawi (2022) explore the digital design in authentic assessment; and Hobbins, Kerrigan,

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Farjam *et al.* (2022) investigate classroom-based curriculum offering authentic assessment in relation to the context of work-integrated learning. In the field of language learning, a study on the use of authentic assessment is done by Susanti (2018) which looks into the implementation of authentic assessment in extensive reading; Ningsih & Wahyuniani (2020) that explore the use of authentic assessment in the learning of English at the high schools in Indonesia; Yulian, Ruhama', & Utami (2022) that study the perceptions of EFL university students in speaking classes; and others all of which offer significant results.

The focus of the present study is to use and students' perceptions on the use of the Internet and its derivations as learning resources—YouTube—and the implementation of authentic assessment. If, in most studies, the two points of discussions are separated into two parts, in the study, they are integrated into one focus. In this case, perception is defined as seeing, hearing, and feeling something (using the senses) and then identifying what it is within the interpretations learned from one's language and culture. Perception is a multifaceted concept that is as complex as the human mind itself (Qiong, 2019). Seen from the view of the processes, perception consists in three phases of selection, organization, and interpretation; while from its dimensions, perception can be categorized into physical and psychological dimensions (Qiong, 2017).

In relationship of language teaching, Rotjanawongchai (2023) found that perceptions situational variables, the students were more willing to speak outside the classroom than inside the classroom and interlocutors were significant factors affecting both inside and outside the classroom. There for teachers can apply the results of this present study to enhance WTC in the classroom and increase students' opportunities to speak inside and outside the classroom through pedagogical support. The other hands, Tailor (2022) investigating the perceptions of in-service English-medium instruction teachers towards CLIL and CLIL teachers' target language and intercultural competences and the results found that opportunities to learn and share about CLIL, to use English in intercultural settings, and to learn about intercultural awareness can contribute to EMI/CLIL teacher competences.

The objective of the present study is, therefore, to explore students' perceptions on the use of the YouTube and the implementation of authentic assessment in language learning.

METHOD

The study was carried out by using the survey method in a quantitative and qualitative approach (Creswell, 2014). The quantitative components came from the use of questionnaires and scoring practices by students; meanwhile, the qualitative components were obtained from observation and open questionnaires. The primary data of the study were quantitative while qualitative data were used to obtain open responses from the respondents to complement the quantitative data.

Participants

The research subjects were 47 students of the Graduate Program of Yogyakarta State University (There were formerly 49 students, two did not return the questionnaires). Two of the students were foreigners, coming from other countries. Some were school-teachers. Knowing that they were graduate students, it was expected that significant results would come out from the study and, actually, this was the reason for selecting the research subjects. Data about the respondents can be seen in Table 1.

Table 1. Description of the Student Research Respondents

No.	Indicator		Number		Remarks
			Frequency	Percent	
1.	Gender	Male	15	31.9	Domestic students come from various ethnics and cultures in Indonesia; the two foreign students come from Egypt and Russia
		Female	32	68.1	
2.	Nationality	Indonesian	45	95.7	
		Foreigner	2	4.3	
3.	Teaching Experience	None	39	83	
		Between 2 and 16 years	8	27	
		Total	47	100	

Instruments

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Data were collected through on-line questionnaires, while observation on the YouTube-based assessment practice was conducted during the learning processes in class. The validity of the questionnaire instrument was obtained from focus-group discussions by several resource persons who were experts in the fields. Specification of the questionnaire is presented in Table 2.

Table 2. Specification of the Questionnaire

No.	Indicator	Number of Questions	Remarks
	Student Identity		
1.	Genre-based language learning	2	
2.	Authentic assessment	4	
3.	Use of the YouTube	5	
4.	Scoring model	3	
5.	Use of learner scoring	1	
Total:		15	

Procedures

Student respondents were asked to respond to the questionnaire by selecting the agree or disagree options and filled in the space provided when having other opinions. The learning assessment derived from the YouTube was selected from three kinds, namely animation films, documentation of famous people, and speeches for classroom performance practices. These YouTube downloads were presented each by two respondents—there were two classes. So, there were three presentations in each class—by re-telling the contents of the story orally in front of the class. The students searched and downloaded from the YouTube program (animation films of traditional stories, famous people, and speeches). The other student respondents listened and then scored by using the rubric. The rubric consisted of five indicators for levels of competences, namely accuracy of the story, organization of presentation, language structures, diction, and fluency each with a score range between 2 and 5 (2: moderate; 3: sufficient; 4: good; 5: very good).

On the other hand, observation was conducted on the students' performances and scoring practice and giving comments on their peer's performances by stating the strengths and weaknesses. Students were asked to write down anything important to support the arguments of their comments. For example, if a student gave a score of 5 or 2 for an indicator, he must show the strength and weakness together with evidence in the forms of statements concerning the five indicators.

Analysis

Quantitative data were analyzed using the descriptive statistics of frequencies and percentages. Meanwhile, the qualitative data were analyzed by the descriptive-verbal technique through data condensation and drawing conclusion (Miles, Huberman, Saldana, 2019).

RESULT AND DISCUSSION

Results of the questionnaires, performance practices, and observations done by the student respondents show the following results.

Genre-based Language Learning

The majority of the student respondents (95.7%) agree that language learning and evaluation of language competencies are genre-based, while only 4.3% disagree. The genre-based learning resources and assessment being taken as examples are from textbooks, print or on-line media, print or on-line literary work, television and radio, and the Internet and all its derivations, including the YouTube. Choices of the student respondents on the five learning resources, all genre-based, are shown in Table 3.

Table 3. Genre-based Learning and Assessment of Language Competencies

No.	Question	Student Respondent's Attitudes		Remarks
		Agree (percent)	Disagree (percent)	
1.	Genre-based learning and assessment of language competencies	45 (95.7)	2 (4.3)	
2.	Learning and assessment resources			
	➤ textbook	47 (100)	0	

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➤ Print mass media (magazine, daily, etc.)	44 (93.6)	3 (6.4)	
➤ Literary work	45 (95.7)	2 (4.3)	
➤ Television, radio	33 (70.2)	14 (29.8)	
➤ Internet and all its derivations including the YouTube	47 (100)	0	
➤ Mention	0	0	

Use of Authentic Assessment

Understanding, competences, and use of authentic assessment that are asked consists of four questions; namely stresses on the use of authentic assessment, competences in carrying out authentic assessment, language competencies that are commonly measured by authentic assessment, and skills and willingness to use the Internet in the learning activities. Student respondents' responses to these four questions are presented in Table 4.

Table 4. Understanding and Using Authentic Assessment

No.	Question	Student Respondent's Answer		Remarks
		Agree (percent)	Disagree (percent)	
1.	Evaluation of language learning currently emphasizes on authentic assessment.	47 (100)	0	
2.	As a teacher candidate, are you interested, and do you feel competent to carry out authentic assessment?	47 (100)	0	
3.	Language competencies that are commonly measured by authentic assessment. are:			
	➤ speaking	46 (97.9)	1 (2.1)	
	➤ writing	45 (95.7)	2 (4.3)	
4.	As a teacher candidate, can you use and are you willing to search for multimodal resources in the form of the Internet and all its derivations?	47 (100)	0	

Use of the YouTube

Generally, many people can be seen as login to the YouTube including teachers, teacher candidates, university students, school students, and the ordinary people. This means that the YouTube has merged into the society. Can the YouTube be used as one of the resources for learning and authentic assessment? The complete respondents' answers to the question are presented in Table 5.

Table 5. Use of the YouTube for Learning and Evaluation

No.	Question	Respondents' Answer		Remarks
		Agree (percent)	Disagree (percent)	
1.	Are you able to download the YouTube for learning and evaluation?	47 (100)	0	
2.	Are you interested in using the YouTube as a source of learning?	47 (100)	0	

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3.	Are you able and willing to select multi-modal materials according to the objectives of language	47 (100)	0	
4.	What program do you access or download from the YouTube for the purposes of language learning and authentic assessment?			
	➤ Animation films (myths, legends, stories, and the like)	47 (100)	0	
	➤ Educational short films	45 (95.7)	2 (4.3)	
	➤ Speeches (including sermons, interviews, etc.)	44 (93.6)	3 (6.4)	
	➤ Songs and ballads	40 (85.1)	7 (14.9)	
	➤ Biography of famous figures	45 (95.7)	2 (4.3)	
	➤ Mention	0	0	
5.	In carrying out YouTube-based authentic tasks in speaking and writing, every student does it individually.	38 (88.9)	9 (19.1)	

Scoring Model

The use of authentic assessment in learning includes the scoring model that uses a rubric or is holistic and involving learners in scoring. Answers of the student respondents to this question are shown in Table 6.

Table 6. Scoring Model of the YouTube-based Authentic Assessment

No.	Question	Student Respondents' Answer		Remarks
		Agree (percent)	Disagree (percent)	
1.	Scoring model that is suitable for learning with authentic assessment.			
	➤ Holistic	38 (80.9)	9 (19.1)	
	➤ Analytic with rubric	47 (100)	0	
	➤ Mention....	0	0	
2.	Do you agree to involving students to give scoring to their peer?	39 (83)	8 (17)	
3.	Do you agree to asking students to give comments (strengths and weaknesses) on their peer's performances?	45 (95.7)	2 (4.3)	

Use of Authentic Assessment

Does the use of the YouTube-based authentic assessment need scoring make by learners? Most of the student respondents (63.8%) state that it does, while some (36.2%) answer no since they regard it just as a practice.

Practice in Scoring in Authentic Assessment

As a model of scoring practice in authentic assessment, three YouTube downloads of the students' own choices are used (animation film, educational film, and speeches). After observing and listening to the three downloads, each pair of students practice retelling the stories in front of the class while the other students give scores based on the 2-5 rubric. Scores from the students are then subjected to the frequency calculation for each component. Two to three students who give different scores, highest and lowest, are asked to give their argumentations for giving the scores. For example, why the score of 3, 4, or 5 is given

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together with the mistakes or appropriateness of the language; if appropriateness of diction or language is mentioned, the mistakes must be shown together with the more appropriate ones; etc.

It turns out that no student respondent fills in the open questions with any response. They only respond to the agree/disagree options. Through observation, it can be seen that students are very enthusiastic in arguing for the scores they give. For example, they score 5 for the contents because the answer matches the contents of the animation film being presented, or 3 on the diction and language use because there are some mistakes, and the mistakes are also pointed out.

DISCUSSION

Of the five indicators in 15 questions, most of the student respondents answer that they agree. There are even nine questions that are agreed by the respondents. These include, among others, questions concerning their ability and willingness to access the Internet and YouTube, use the downloaded materials for learning and authentic assessment, the importance of the YouTube as a learning resource, and use of the rubric for scoring in authentic assessment. This shows that perceptions and the use of the YouTube as a source for language learning and authentic assessment are agreed and accepted by respondents who are presently teachers or teacher candidates. Other research about students' perceptions on the use of the YouTube also shows significant results and brings about positive values such as those that by Balbay & Kilis (2017), Kabooha & Elyas (2018), and Tahmina (2023).

The curriculum at school and in the university in Indonesia and various other regions in the world are urged to use authentic assessment to evaluate the results of learning. This is because authentic learning requires conditions of the real world, contextual, and meaningful (Mueller, 2018; Nieminen *et al.*, 2022; McArthur, 2023), and, therefore, reflects the quality of the output of learning. In their study, Sokhanvar *et al.* (2021) find the importance of authentic assessment for students, namely, to support the students in obtaining and improving competencies that are essential in facing future professional life such as competencies for communication, collaboration, critical thinking, problem solving, self-awareness, and self-confidence.

In language learning, the implementation of authentic assessment must be through performance tasks, linguistic work, and meaningfulness. This means that the performance tasks must have the functions and usefulness in improving competences and skills for real life contextually (Nurgiyantoro, 2015; Sokhanvar *et al.*, 2021), such as for supporting various skills and needs of the world of work. If language learning and assessment are based on the YouTube, one must have the willingness and competences to download and use it for the learning processes, and these been owned and agreed by the student respondents. In the observation of the learning processes in class, it can be seen how they are happy, enthusiastic, and enjoying the learning activities.

Various authentic tasks that are suitable for language learning are speaking and writing because these two tasks have required linguistic performances. Receptive competences of listening and reading can actually also become authentic tasks, but tasks must be conditioned that the responses are in the form of reading and writing tasks (Susani, 2018). The varieties of the speaking and writing tasks must be created in such a way that they contextually reflect the various needs of the real world so that they can improve competences in various components of language learning especially speaking and writing of the professional levels. Several studies about authentic learning show results of improvement in competencies and professionalities (Rukmini & Saputri, 2017; Sotiriadou *et al.*, 2020; Schultz *et al.*, 2021). In fact, the improvement of competence and professionalism must be required by linguistic competence.

Authentic assessment places more emphasis on the actual use of language used by language speaking community. This requires students to listen or read various concrete discourses which models can be obtained via YouTube. In conducting a study, authentic assessments involve at least two things, namely what must be expressed - such as ideas, concepts, opinions, etc. - and how to express it, which is a linguistic aspect. The YouTube program is very promising to improve the competence and professionalism, so it is good to be chosen as a teaching material for authentic assessment of language learning. Moreover, the study by Wiewiora & Kowalkiewicz (2019) even show that the use of authentic assessment can improve self-understanding and authentic leadership.

The YouTube channel is one of the digital learning resources that is multi-modal for language learning and authentic assessment. With all its richness, variation, attractiveness, and ease of access, the YouTube is a learning resource that is unavoidable. Factually, as one of the most popular programs in the world, that is so much liked that school and university students even become so dependent on it, it is appropriate that the YouTube is used at the school for various subjects of learning including language learning (Tahmina, 2023). The present study finds that student respondents highly agree that the YouTube is used as a material resource for authentic assessment. Program contents that are selected can be of many kinds depending on the learning objectives, such as ones related to character education. Thus, there are minimally two things that are targeted to be achieved:

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namely improving the competences of the linguistic performances in reading and writing and inputting character education as an accompanying impact.

The YouTube program that is going to be used as a learning resource and authentic assessment must be selected and suited critically and reflectively to the contexts, educational levels, and learning objectives. Kiili *et al.* (2018) state the importance of that attitude such as the aspects relates to the content identification, content credibility, synthesis with other similar information, giving added values, and so on. The YouTube contents that are asked in the questionnaire in the form of animation films about traditional literature (such as myths, legends, and folk tales), educational short films, speeches, biographies of famous figures, and music (general songs and regional songs) are generally agreed on by most of the student respondents. Students are given the opportunity to add good programs to select. All these YouTube contents must be based on good meaning contents, educative, supporting local wisdoms, complementing character education, and make possible the construction of authentic tasks such as speaking and writing.

The YouTube program for educational purposes and authentic assessment must be based on careful selection. If the learning objectives are focused on the appreciation of the attitudes and local wisdoms, YouTube programs containing animation films of myths, legends, and folk tales from various corners of the country will be good to select. If the learning objectives are related to introduction to famous figures, appreciation, respect, and admiration that are inspiring, nationally, or internationally, programs that contain films of famous people will be good to select. Numerous studies on the use of the YouTube and authentic assessment by researchers from various regions of the world generally show positive and significant results. Research results also include all the components of authentic assessment in language learning, such as vocabulary (Arndt *et al.*, 2018; Kabooha & Elyas, 2018; Hia, 2021), listening (Chien *et al.*, 2020; Qomariyah *et al.*, 2021), and reading (Susani, 2018). In their research Makovskaya & Juraeva (2023) show that students' perceptions of the significance of academic words changed in all four skills from the first to third year of study.

In addition, the more essential in authentic assessment is which involves the productive assessment of speaking and writing. Factually, the form of language activities is speaking and writing, so those two competencies must be trained to students when language learning is sourced from YouTube program. Students take the content in YouTube program, while select various aspects of the language to them. Listening and writing competencies apply the various elements of language such as vocabulary, structure, intonation (listening), and spelling (writing). In this context, the students learn and practice to apply various aspects of their language competencies in real conditions. Through this condition -learning and practicing of listening and retelling through a pleasant atmosphere- learning activity and applying authentic assessment can be said to be promising. This condition is reinforced by a study on listening (Albahlal, 2019; Saed *et al.*, 2021) dan writing (Felanie, 2021; Hardianti & Saosang, 2022; and Wahyuni, Wiyaka, & Yoshepine, 2023) which is done well. Generally, this study was conducted by comparing the application of listening and writing through YouTube program with other strategies and the result of learning through YouTube were significantly better.

The scoring model of the authentic assessment using the rubric are agreed upon by all the student respondents. The rubric consists of several indicators—the match with the story contents, sequence of presentation, language structure, diction, and fluency—scored separately so that the total score obtained by a respondent is the cumulative score from all the indicators. The scoring by using the rubric is analytical and, simultaneously, shows the level of the achievement for each indicator that reflects the level of the language competencies. This will be useful for the teacher to give an improvement or remedial program as a form of learning feedback (Nurgiyantoro, 2015). Learning feedback in the form of teacher's correction or peer assessment on notes and comments will be very useful for speaking or writing performances. Besides being used as learning variation, this process gives students advantages that are more impressive and therefore more memorable (Seifert & Feliks, 2019).

LIMITATIONS OF THE STUDY AND FUTURE RESEARCH

The study was limited to 47 (45 are Indonesian students and 2 abroad) university students in Universitas Negeri Yogyakarta. Therefore, it was not possible to generalise the findings to other university students in the same context or in different cultural contexts.

CONCLUSION

Based on the research results and discussion, the study has some conclusions as follows. First, students' perceptions on the use of the YouTube channel in language learning appraised by the authentic assessment model are generally positive. Second, students are agreed with genre-based language learning and assessment using the Internet and its derivations as one of the sources. Third, YouTube-based learning assessment is carried out by using the authentic assessment model with the primary competencies of speaking and writing through the rubric. Fourth, students' performance practice that is scored and commented

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by their peer has a positive impact and is more impressive. Contents of the YouTube programs are selected critically and selectively depending on the learning objectives, especially to improve the active and productive language competencies and simultaneously support character education objectives. Therefore, two things are involved that need to be achieved, namely input into the improvement of active productive language competencies—speaking and writing—and input into character education as a side effect.

Use of the authentic assessment model is recommended in the curriculum, both nationally and internationally, so that the output of the language learning program (as well as learning in other programs) reflects the competency conditions that are needed in the real world, contextual, and has more meaningfulness. The primary components of the language learning assessment are active productive competencies of reading and writing; however, for active receptive competencies of listening and reading, the authentic assessment model can also be applied if it is created as active productive linguistic competencies. The application of the authentic assessment model offers the advantages for improving essential skill competences to face the future professional life like communication, collaboration, critical thinking, problem solving, self-awareness, and self-confidence, and, even, self-understanding and authentic leadership.

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Mentoring Towards Information Communication and Technology in Utilizing Electronic Media for Bachelor of Teaching Livelihood Education Students in Eastern Visayas State University



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ABSTRACT: The study aimed to determine the effects of mentoring towards Information Communication Technology (ICT) integration process in teaching Trainer's Methodology I in Facilitating Learning, specifically on competency-based learning materials on Utilizing Electronic Media in Facilitating Learning. In this process, interaction among the mentors and the mentees are encouraged to improve their work-based practice. The quasi-experimental design used specifically the pretest-posttest method. The module and pre-posttest exam used in this study constructed by the researchers. The mentees' participation had determined, and modifications in teachers ICT' integration indicators have analyzed. Observation and result of pre-test and post-test data described for skill and proficiency level of the mentees before and end of peer mentoring activity. The results indicated that the mentees in the experimental group show a noticeable improvement in their scores from pretest to posttest. The respondents compared to the controlled group which there is no significant difference between the pretest mean scores in ICT mentoring among Bachelor in Teaching Livelihood Education (BTLEd) students in the experimental groups. A significant result between the posttest means scores in ICT mentoring among BTLEd students in the experimental and control group and finally, using the mentoring approach in ICT to BTLEd students is more effective than using the traditional methods of teaching the same lesson.

KEYWORDS: Computer-Mediated Teaching, Mentoring, Electronic Media

INTRODUCTION

The Philippines Educational System is delivering education by protecting and promoting the rights of every Filipino. This advent will promote quality, equitable, culture-based, and complete basic education. The school finds itself duty-bound and deliberate in finding everything within its level best that sets standards and integrative approaches to uplifting teachers' educational practices. In connection with the school's aim of providing access to quality education through shared governance with its stakeholders. Hence, the school and teaching personnel have "digital divide" experience of the most viable technological reforms in education, the use of ICT. The impact of digital education is to make the learning process relevant in acquiring technological advancement of the individual [1]. It provides a focus on improving the students' ICT skills and proficiency through mentoring in the key subjects in general education, professional and major related subjects. Mentoring has to determine the efforts to raise rates of student retention and to promote educational achievement. Moreover, the impact of mentoring ICT in teaching and learning process contributes learners more actively in the educational process [2]. Macasaet [3] in his report cited the numbers of articles, studies, and works of various authors for articulating the use of technology in education. According to Mercado Jr., [4] mentioned the modification of technology curriculum in recent years encountered more challenges in the area of ICT. It involved promoting distinct technologies in facilitating learning and determining the impact on the learning motivation to the learner. Moreover, Ongoz, [5] examined the utilization of ICT in e-mentoring, among those are multimedia applications and preferred ICT tools. It reveals that media applications in terms of online documents and storage are utilized to provide interaction in the e-mentoring activity. Besides, most of the respondents encounter ICT programs more convenient for classroom demonstration activity. However, some respondents mentioned that direct experience must be considered in the ICT mentoring activity. According to a study conducted by Project Tomorrow [6], having access to the internet, students would be able to research

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information and access online textbooks, which in turn can help the students perform better inside the classroom. Furthermore, through the use of computers and the internet, students would be able to communicate and collaborate with classmates for school work. Steele, A., Snell, S. and Snell-Siddle, C. [7] asserts that the most significant aspect of the student mentoring program is to provide a mechanism to track and measure the effectiveness of mentoring. Students and teachers can establish interactive communication with anybody or any source, making learning more relevant to their lives' interests and concerns. The College of Education (EVSU) is offering a new program for Bachelor Teaching of Livelihood Education (BTLEd). The subject offered is on Facilitating Learner-Centered Approaches with Emphasis on Trainer's Methodology I. On this context, it introduces one of the learning competencies in Utilizing Electronic Media thru computer and Internet technologies, which student can have access to available information more quickly and accurately. The electronic system in utilizing hardware and application provides an advantage to teachers and students in dealing with social and academic learning. For them, it provides beneficial interest and compiled platforms for conveying information since they motivate learners to want to learn effectively and efficiently. Hence, the school advocated and aligning for staff development on the principles spelled out in the National Competency-Based Teacher Standard- Teachers Strengths and Needs Assessment (NCBTS-TSNA). All concern for improvements criteria for teachers' academic advancement is hinged towards professional development needs towards stipulated staff development plans. The modern classroom today needs new teaching strategies and modern technology devices in delivering classroom interaction. Based on the implementation of ICT school-based curriculum, the learning environment can take advantage of the basic competencies for actual learning. Thus, a plan to embrace technology teaching to support the models of teaching that emphasize learning with understanding and more active involvement is inevitable. The issue when to use technology, what technology to use, and for what purpose are isolating from theories of teaching and learning that support learning with understanding. The present study seeks to evaluate this student-mentoring activity of teachers in ICT classroom discussion. The characteristics of learning partnerships in the process-oriented models of mentoring may provide the knowledge to underpin a mentoring activity for teachers where the mentor student poses advanced skills on ICT compared to mentees participants. This study anticipated providing a concrete idea and strategy on productive mentoring activity, where learners act as mentors to help teachers be more effective and proficient with ICT. A review of the efficiency of the ICT mentoring activity will take place to identify recommendations to improve the quality of the outcome.

Objectives of the Study

The study operates and anchored upon the following objectives:

1. Find the pretest and posttest mean scores in mentoring ICT according to media hardware and media application of the BTLEd of Eastern Visayas State University in the control and experimental groups, SY 2023-2024.
2. Determine whether there is a significant difference between the pretest mean scores in mentoring ICT according to media hardware and media application of the BTLEd of Eastern Visayas State University in the control and experimental groups, SY 2023-2024.
3. Determine whether there is a significant difference between the posttest mean scores in mentoring ICT according to media hardware and media application of the BTLEd of Eastern Visayas State University in the control and experimental groups, SY 2023-2024.
4. Determine the effectiveness of mentoring in enhancing the basic ICT media hardware and media application of the BTLEd of Eastern Visayas State University in the experimental groups, SY 2023-2024.

The hypothesis of the Study

The following Hull hypothesis is advanced:

H₀: There is no significant difference between the pretest mean scores in mentoring ICT according to media hardware and media application of the BTLEd of Eastern Visayas State University in the control and experimental groups, SY 2023-2024..

H_a: There is no significant difference between the posttest mean scores in mentoring ICT according to media hardware and media application of the BTLEd of Eastern Visayas State University in the control and experimental groups, SY 2023-2024.

METHODOLOGY

The study engaged the quasi-experimental design, categorically the pretest-posttest method that allowed the researchers to find out whether there is a significant difference in the students mentoring process according to necessary ICT media hardware and media application before and after the hands-on administered. The posttest result was treated as the dependent variable in the experimental group and also the effect of mentoring ICT in the class. The BTLEd 1-A and B class in the College of Education taking Facilitating Learner-Centered Approaches with Emphasis on Trainer's Methodology I are respondent

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of this study. These two sections were assigned to the control group and experimental respondents. A purposive method of sampling utilized in this study. Four classes are taking this subject, only BTLEd 1-A and BTLEd 1-B selected. The respondents are chosen through homogenous pairing employing their National Certificate (NC) acquired. Those students earned NC paired and assigned to the controlled group while the others were placed in the experimental group. These respondents have NC 1 designated as a mentor in the study. Both the control and experimental group are composed of two classes in which fifteen of the respondents in every category have respondents of this study — thirty students assigned to the control group, another thirty respondents in the experimental groups. A total of sixty (60) respondents participated in this study. The pretest administered to both the control group and experimental groups of the study respondents in the second semester for the school year 2023-2024. After the administration of the pretest, the respondent in the experimental group undergoes instruction using a mentoring approach to enhance their basic ICT skills and proficiency in terms of electronic media. The control group taught using the ordinary lecture method of teaching. After eight sessions of treatment, posttest administered to both groups of respondents. To obtain the pretest and posttest result of every respondent the mean value is calculated. The t-test paired sample for pretest and posttest mean scores utilized for both controlled and experimental groups with the test set at .05 level of significance. The effectiveness of mentoring in ICT is taken from pretest to posttest in both the experimental and controlled groups and calculated by subtracting the students' scores in pretest from their scores in the posttest and getting the mean of their difference.

RESULTS

Pre-Test and Post Test Mean Scores

The table 1 below shows the pre-test mean scores of 34.10 of the respondents in the experimental group is almost equal with that of the pre-test with 33.23 means scores in the controlled group. Meaning, the prior knowledge of both groups of respondents before treatment conducted was almost the same.

Table 1. Pre-test means scores in mentoring ICT for the experimental and controlled group

Groups Mean Scores	Means Scores
Experimental Group	34.10
Controlled Group	33.23

Table 2 shows that the posttest means scores of the respondents in the experimental group increased significantly compared to the posttest means scores of the respondents in the controlled group which only shows a very slim increase.

Table 2. Posttest means scores in mentoring ICT for the experimental and controlled group.

Groups Mean Scores	Means Scores
Experimental Group	45.45
Controlled Group	35.58

Difference between the Pretest Mean Scores

The table 3 shows that the p-value of 0.34276 is more significant than 0.05 level of significance. The hypothesis which states that there is no significant difference between the pretest mean scores of both groups of respondents is then accepted. This result implies that the prior knowledge of the learners of both groups on sentence construction is almost the same. Thus, there is no significant difference between the pretest mean scores in English sentences according to structure among the Grade 9 learners in the experimental and controlled groups.

Table 3. The significant difference between the pretest means scores in mentoring ICT for the experimental and controlled group.

Pair 1	Mean of Pretest Scores	t value	p value (2-tailed)	Decision	Interpretation
Experimental Group	34.10	-0.996	0.34276	Accept null hypothesis	Not significant
Controlled Group	33.23				

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Difference between Post-Test Mean Scores

Table 4 below shows that the p-value of 0.0001 is less than 0.05 level of significance. The hypothesis which states that there is no significant difference between the posttest mean scores, is then rejected. This result suggests that both groups show improvement differs significantly. The experimental groups manifest a very noticeable increase in mean scores, while the controlled group shows a very minimal gain. They conclude that there is a significant difference between the posttest mean scores in English according to structure among Grade 9 learners in the experimental and controlled group.

Table 4. The significant difference between the posttest means scores in mentoring ICT for the experimental and controlled group.

Pair 1	Mean of Pretest Scores	t value	p value (2-tailed)	Decision	Interpretation
Experimental Group	45.45	8.8434	0.00001	Reject null hypothesis	Significant
Controlled Group	35.58				

The Effectiveness of Mentoring in Enhancing Basic ICT Skill and Proficiency

The table below shows that the students in the experimental group gained a mean of 11.35 as compared to the students in the controlled group which had only 2.35 low gain. Thus, using the modular approach in teaching English sentences according to the structure to Grade 9 learners is far more effective than using the conventional method of preparing the same lesson.

Table 5. The effectiveness of mentoring in enhancing basic ICT skills and proficiency as measured of they are learning in both the experimental and controlled groups.

Groups Mean Scores	Means Scores
Experimental Group	11.35
Controlled Group	2.35

Table 6 shows that the p-value of 0.00001 is less than 0.05 level of significance on their gain in scores. The hypothesis which states that there is no significant difference between the posttest mean scores, is then rejected. Thus, there is a significant difference in scores between the experimental and controlled group. It concluded that the modular approach in teaching English sentences according to the structure to Grade 9 learners is far more effective than using the conventional method of teaching.

Table 6. The result of the paired samples of T-test to determine the effectiveness of mentoring in enhancing necessary ICT skill and proficiency in terms of gain scores

Pair 1	Mean of Pretest Scores	t value	p value (2-tailed)	Decision	Interpretation
Experimental Group	11.35	8.7915	0.00001	Reject null hypothesis	Significant
Controlled Group	2.38				

DISCUSSIONS

This study employed the quasi-experimental design; specifically, the pretest-posttest method which allowed the researchers to determine whether there is a significant difference in the respondent ICT mentoring according to the skills and proficiency before and after tutoring has administered. Moving on to results of research question one, the pretest means a score of the respondents in the experimental group has very slim difference from the mean scores of the respondents in the control group, which can conclude that their skill and knowledge in ICT mentoring for electronic media, prior to the treatment are almost the same. It is, therefore, correct in the study by Mercado Jr., [4] that respondents have the same perception of their familiarity to media hardware available in the classroom. However, on the posttest mean scores of the same respondents show a big difference. Indicating, the students in the experimental group show a noticeable improvement in their scores from pretest to posttest, as compared to the students in the controlled group. Ingham [8] disclosed in her study, after mentoring activity done by

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the teachers in their ICT professional capability had improved. On the difference between the pretest mean scores, reveals the p-value of 0.282 is greater than 0, 05 levels of significance for the pretest mean scores. The hypothesis states that there is no significant difference between the pretest mean scores of both groups of respondents, and is then rejected. Thus, there is no significant difference between the pretest mean scores in mentoring ICT according to media hardware and media application of the BTLEd of Eastern Visayas State University in the control and experimental groups. Therefore, this finding is parallel to the results of the studies of Mercado Jr., [4] show that respondents are slightly familiar with a software application which statistically has no significant effect. So, it is clear that according to Ongoz [5], e-mentoring is entirely flexible. It means that individuals exposed to mentoring were in a stagnant mediocrity which causes the teachers to fail in imparting the standard skills that the learners should master at a particular stage of learning. On the difference between posttest mean scores, show the p-value of 0.000 is less than 0.05 level of significance for the posttest mean scores. The hypothesis which states that there is no significant difference between posttest mean score, is therefore rejected. The result, therefore, concluded that there is a considerable difference between the posttest means ratings in mentoring ICT according to media hardware and application of the BTLEd students of Eastern Visayas State University in the control and experimental group. The study of Ongoz [5] after e-mentoring to the respondents the preferred, various technologies offered. The respondents for the experimental group gained a mean of 11.35 as compared to the students for the controlled group which has only 2.35 low gain. Thus, using a mentoring approach in teaching the ICT for BTLEd students is more effective than using the lecture method of training in the same lesson. Ongoz [5] reported in her study that the majority of the respondents in the e-mentoring program are sufficient in interaction.

CONCLUSIONS

Based on the result, the following conclusions were drawn:

1. The pretest means scores of the respondents in the experimental group have a very slim difference from that of the mean scores of the respondents in the controlled group, which can conclude that their knowledge on ICT mentoring according to electronic media utilization, before the treatment, is almost the same. However, the posttest means scores of the same respondents show a big difference. Indicating, the students in the experimental group show a noticeable improvement in their scores from pretest to posttest, as compared to the students in the controlled group.
2. There is no significant difference between the pretest mean scores in ICT mentoring according to electronic media utilization among BTLEd students in the experimental and controlled group.
3. There is a significant difference between posttest mean scores in ICT mentoring according to electronic media utilization among BTLEd students in the experimental and controlled group.
4. The learners in the experimental group gained a mean of 11.35 as compared to the students in the controlled group which had only 2.38 low gain. Thus, using the mentoring approach in teaching ICT subjects according to electronic media utilization to BTLEd students is far more effective than using the lecture method of preparing the same lesson.

RECOMMENDATIONS

Based on the conclusions drawn from the results of the study, the following recommendations offered;

1. Using a mentoring approach in teaching ICT in Facilitating Learner-Centered Approaches according to electronic media utilization is recommended to allow the students to work independently, practice and master the skill and learning.
2. Give the students a lot of hands-on activity for electronic media utilization to master the technical knowledge of ICT.
3. Replicate the study using other strategies and assessment tools and a more diverse population to ascertain the significance.
4. Conduct a similar study to confirm the results of this study and improve the generalizability of the findings.

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Purchase Intention Role as Mediation between Social Media, Brand Image and Service Quality towards Purchase Decision at INSPIRED27 Distro, Malang City



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ABSTRACT: This research focuses on purchase decision and all of the factor that affected, including social media, brand image, service quality, and purchase intention. Therefore, this research analyze and explore social media effect, brand image and service quality, to know the role of purchase intention as mediation at INSPIRED27 Distro in Malang City. The research using descriptive approach with 113 respondents chosen by simple random sampling method. The data explain with Structural Equation Modelling (SEM) procedure. The results are: 1) social media and brand image significantly influence purchase intention, 2) service quality have positive but not significant towards purchase intention, 3) media social significantly and positively influence purchase decision, meanwhile 4) brand image and service quality have positive but not significant towards purchase decision, 5) purchase intention significantly and positively influence purchase decision, 6) media social and brand image have positive and significant effect towards purchase decision through purchase intention, and last, 7) service quality have positive effect, but not significant towards purchase decision through purchase intention.

KEYWORDS: Social Media, Brand Image, Service Quality, Purchase Decision, Purchase Intention

I. INTRODUCTION

The Indonesian market primarily consists of consumers. Hence, the potential is enormous for various businesses, especially the apparel industry. Nowadays, the apparel industry is in fierce competition, the Small and Medium Enterprises (SMEs) are having difficulty maintaining their position in the market because of many competitors. The competition is internal within a city and involves competitors from another city opening a new branch in a specific location. Moreover, there is also a significant amount of apparel from overseas, whether new or second-hand, which further intensifies the competition in the apparel industry. The large number of goods from abroad that are used causes losses of up to trillions of rupiah. Meanwhile, the trend of imported clothing, which is widely intended, is increasing. Hence, imported clothes attract not only lower-class customer interest but also middle and upper-class customers.

Consequently, many apparel industries in the form of "distro" need to make an effort to attract customer attention by providing information about the service, branding, and quality of the products. Promotion becomes essential for SMEs' success and keeping the business sustainable in the market. With the correct promotion strategy, companies can continue to grow, survive, and achieve maximum profits. The owner of the distro SMEs needs to apply various ways to keep their business operating well, and the selling needs to fulfill what consumers need effectively.

Distro must have an effective and efficient way to figure out the market situation; one of the ways is to pay attention to the store's location and create an excellent brand image. Therefore, companies must formulate a great and optimum strategy to seize the market needs and increase customer purchasing decisions. A successful strategy stimulates buyer intent to make purchases. According to Anuang et al. (2020), a shoe and leather product company is observing social media, and the result is that purchasing decisions are affected by purchasing intention. On the other side, Rahayu and Witjaksono (2023) found that the purchasing decision of coffee products "Kopi Kenangan" is not affected by social media; most respondents think that social media marketing is ineffective.

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However, although social media does not directly show the quality of the products to the customer like other methods, brand image can build a strong image for the products and services it offers. A great brand image can show some particular social class, which can impress and persuade customers to buy the products, especially in the INSPIRED27 distro.

Increasing purchase intention can be achieved by creating a profitable shopping experience for the customer, such as providing convenience in the shopping process, providing a variety of product choices, and offering greater flexibility. Besides, increasing customer trust and brand image is crucial in stimulating purchase intention. According to Ryan and Johan (2022), increasing brand image in "Erigo" products positively influences purchase decisions. Therefore, Nasution et al. (2020) found that the brand image of some products in e-commerce Shopee does not significantly affect purchase decisions. Hence, it's important to note that brand image's effect on purchase decisions can vary according to the condition and the products themselves.

Besides the brand image, service quality also impacts purchase decisions. According to Kuswanto (2009) and Dapas (2019), service quality is an evaluation by the customer about the specialty of a product or service. Comfortable and safe service is a crucial component that buyers consider before visiting or purchasing at the INSPIRED27 store. INSPIRED27 distro in Malang faces a significant challenge in the fierce competition between all distros in Malang City, either online or offline. The competition offers customers various options to choose the distro or e-commerce that is most compatible with their needs. Therefore, INSPIRED27 strives to continuously improve its brand image and service quality and establish itself in social media to appeal to and attract purchase intention and purchase decisions. This research aims to analyze the role of social media, brand image, and service quality towards purchase decisions through purchase intention and to know which factors are more visible in influencing the decision to purchase a product.

II. LITERATURE REVIEW

Base Theory

The theory of Planned Behaviour (TPB) is an improvement of the Theory of Reasoned Action (TRA). The theory of Planned Behaviour can be used in various research, including research about customer intention to buy sports products (Chiu & Leng, 2015; Soh et al., 2017) and overseas products. This research is relevant for marketers who want to learn about the customer intention effect, especially in fashion or apparel products, where the demand increases rapidly (Narang, 2011; Ngai & Cho, 2012; Soh et al., 2017). The TPB model explains that behavioral beliefs are expected to influence attitudes, which, in turn, normative beliefs become the basis for controlling behavior.

Social Media

Social media is a medium for online advertisement in the cultural context, including various things such as social networking platforms, cyberspace, social information positions, and a platform for sharing opinions and communicating for some purposes (Tuten, 2008). According to Gunelius (2011), the indicators of social media include content creation, content sharing, and connected interaction

Brand Image

Brand image is the overall impression buyers have of a brand, which influences their behavior as customers (Zhang, 2015). According to Aaker & Biel (2009), brand image indicators include corporate image, product image, and user image.

Service Quality

Service quality is defined as efforts to satisfy buyers' needs and desires by providing appropriate services in accordance with consumer expectations (Tjiptono, 2007). According to Griffin (2005), the indicators of service quality include reliability, assurance, tangible aspects, empathy, and responsiveness.

Purchase Intention

Purchase intention is a buyer attitude that shows a desire for a particular item and/or brand. It can be measured through questions about the consumer's possibility of buying the advertised product (Martinez & Kim, 2012). According to Ferdinand (2006) and Priansa (2017), the indicators of purchase intention include transaction intention, explorative intention, and referential intention.

Purchase Decision

According to Amirullah (2002), the stage where buyers evaluate various alternatives and make choices based on certain considerations can be called a purchasing decision. According to Dharmmesta & Handoko (2012), the indicators of purchase decision include product type, brand choice, and number of products purchased.

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III. HYPOTHESIS

Social Media influence towards Purchasing Intention

Armawan, et al. (2022) found that social media significantly and positively influence purchasing intention in “Kedai Kopi Hitam Manis”. Align with Erlangga (2021) that found social media significantly influence purchasing intention in SMEs in food. Aji, et al (2020) also found that social media relevant and impact towards purchasing intention in tea industry. Last, Meliawati, et al. (2023) stated that social media significantly influence purchasing intention food cover in social media Tiktok. Therefore, the first hypothesis:

H1: Social media positively and significantly influence purchasing intention

Brand Image influence towards Purchasing Intention

Meisye and Muhmin (2023) found that brand image significantly influences purchasing intention. Align with Fakrozi, et al. (2024) indicate that brand image able to influence purchasing intention. Mandey, et al. (2022) and Kamu, et al. (2023) also found that brand image significantly influences purchasing intention. Therefore, the second hypothesis:

H2: Brand image positively and significantly influence purchasing intention

Service Quality influence towards Purchasing Intention

Dapas, et al. (2019) stated that service quality positively and significantly influences purchasing intention. Align with Haro, et al. (2020), Arisinta (2023) and Won and Jung (2019) found that service quality significantly influences purchasing intention in the positive side. Therefore, the third hypothesis:

H3: Service quality positively and significantly influence purchasing intention

Social Media influence towards Purchasing Decision

Ervinna, et al. (2023) found that social media significantly and relevant in influence purchasing decision frozen product in PT. Royal Sultan Agung. Study by Putri & Nilowardono (2021) found that social media significantly influence purchasing decision in Marine Restaurant in Surabaya. Align with Hanaysha (2022) and Barusman & Suwandi (2020) found that social media significantly and positively influence purchasing decision in food industry. Therefore, the fourth hypothesis:

H4: Social media positively and significantly influence purchasing decision

Brand Image influence towards Purchasing Decision

Tannady, et al (2023) found that brand image positively and significantly influences purchasing decision a shoes product in Jakarta. Align with Patimah, et al. (2023) stated that brand image able to affected purchasing decision in cereal product. The same as Saputra & Hernandez (2024), and Jusuf (2024) found that brand image able to influences positively towards purchasing decision in Café and restaurant. Therefore, the fifth hypothesis:

H5: Brand image positively and significantly influence purchasing decision

Service Quality influence towards Purchasing Decision

Essardi, et al. (2022) stated that service quality positively and significantly influences purchasing decision in Jumbo Supermarket. Meanwhile, Wahyuni (2021) found that service quality significantly influences purchasing decision in Garuda Indonesia airlines. Align with Ega (2023) and Angel, et al (2023) found that service quality significantly influence purchasing decision in J.Co Donuts & Coffee and in a local CV Indo Surya Abadi. Therefore, the sixth hypothesis:

H6: Service quality positively and significantly influence purchasing decision

Purchasing Intention influence towards Purchasing Decision

Study by Wandira & Rahman (2021) found that purchasing intention significantly influence purchasing decision. Align with Ningsih (2023), Subana & Kerti (2019), and Amri & Prihandono (2019) also found that purchasing intention significantly and positively influence purchasing decision. Therefore, the seventh hypothesis:

H7: Purchasing intention positively and significantly influence purchasing decision.

Social Media, Brand Image and Service Quality influence towards Purchasing Decision through Purchasing Intention

According to Zuhad & Yoestini (2023), social media and brand image able to significantly influence purchasing decision through purchasing intention in Tokopedia customer in Semarang. Meanwhile, Welsa, et al. (2023) found that social media and service quality supported purchasing decision through purchasing intention in 3Second distro customer in Instagram. Therefore, the 8th hypothesis:

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H8: Social media, brand image, and service quality positively and significantly influence Purchasing Decision through Purchasing Intention.

IV. METHODS

This descriptive procedure research aims to describe the influence of social media, brand image, and service quality towards purchase decisions through purchase intention in INSPIRED27 distro, Malang. The data was collected by interview to know the depth of the social media, brand image, service quality, purchase intention, and purchase decision. This research also uses a questionnaire to 113 customers of the INSPIRED27 distro, using a simple random sampling method. According to Sugiyono (2018), simple random sampling is a method to retrieve samples randomly without paying attention to the level of the population. The Hair formula determines the sample number because the population is unknown. The data was analyzed using structural equation modeling (SEM), which combines factor analysis, regression, and path analysis. The data was processed with SPSS 25.

V. RESULTS

A. Respondent Characteristics

The specimen from this research obtained in INSPIRED27 distro, located in Soekarno-Hatta Street D-511, Lowokwaru, Malang City, East Java. Questionnaire was distributed to 113 cutomers, which most of them are 80 male respondents, 20-25 years old and most of them have last education in high school/vocational high school. Furthermore, the characteristics of the respondent explain in Table 1:

Table 1. Respondent Characteristics

Characteristics	Category	N	Percentage
Gender	Female	33	29.2%
	Male	80	70.8%
Age	15-20 years old	25	22.1%
	21-25 years old	38	33.6%
	26-30 years old	30	26.5%
	31-35 years old	14	12.4%
	>36 years old	6	5.3%
Education	High School/Vocational High School	64	56.6%
	Bachelor	37	32.7%
	Magister	7	6.2%
	Doctoral	1	0.9%
	Others	4	3.5%

B. Reliability Test

Table 2. Reliability Test

Variable	Coefficients	Result
Social Media (X ₁)	0.860	Reliabel
Brand Image (X ₂)	0.796	Reliabel
Service Quality (X ₃)	0.873	Reliabel
Purchasing Intention (Y ₁)	0.803	Reliabel
Purchasing Decision (Y ₂)	0.805	Reliabel

Based on the Table 2 found that all of the reliability test show that the coefficient reliability greater than 0.7. Therefore, all of the variables are decent for further research.

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C. Hypothesis Analysis

Hypothesis analysis based on coefficient regression and significant value from two sub-structure model. Therefore, next the model will combine become one complete model. Next, hypothesis examination occurs directly to all of the relationship between variables. Furthermore, the result shows in the Table 3:

Table 3. Path Analysis Result Recapitulation

Hypothesis	Coefficient	t	Sig.	Result
Direct Effect				
Social Media -> Purchasing Intention	0.223	2.315	0.022*	Significant
Brand Image → Purchasing Intention	0.304	3.179	0.002*	Significant
Service Quality → Purchasing Intention	0.075	0.860	0.391	Insignificant
Social Media → Purchasing Decision	0.215	2.692	0.008*	Significant
Brand Image → Purchasing Decision	0.134	1.655	0.101	Insignificant
Service Quality → Purchasing Decision	0.081	1.136	0.258	Insignificant
Purchasing Intention → Purchasing Decision	0.489	6.305	0.000*	Significant
Indirect Effect				
Social Media → Purchasing Intention → Purchasing Decision	0.215			Insignificant
Brand Image → Purchasing Intention → Purchasing Decision	0.134			Significant
Service Quality → Purchasing Intention → Purchasing Decision	0.081			Insignificant

Note: *is significant

VI. DISCUSSION

Social Media influence towards Purchasing Intention

From table 3 found that social media significantly influence purchasing intention with 0.223 coefficient shows that social media positively influence purchasing intention. Furthermore, t value is 2.315 which as bigger than t table (1.659) also the Sig. value $0.022 < 0.05$ shows that social media significantly influence purchasing intention. Hence, the respondents stated that they found exciting content on social media that influence their purchasing intention in INSPIRED27 distro in Malang City. It's aligned with Manzoor, et al. (2020) that stated social media can increasing purchasing intention. Even sometimes, the dependence in social media can drive the customer purchasing intention.

Brand Image influence towards Purchasing Intention

In this research found that brand image significantly and positively influences purchasing intention with coefficient 0.304, t value 3.179 and Sig. value $0.002 < 0.05$. Means that the brand image of INSPIRED27 distro products is already great, also the customer knows that INSPIRED27 product can met their needs, so that the purchasing intention is also increasing. It is the same as Nurhandayani, et al. (2019) found that brand image influences purchasing intention. The strong brand image able to increasing revenue and purchasing intention from the customer.

Service Quality influence towards Purchasing Intention

Table 3 shows that service quality positively influence purchasing intention with coefficient 0.075 and t value 0.860. Therefore, the Sig. value is 0.391 which is bigger than 0.05 so that the relationship is not significant. It can be concluded that whether the service quality is great, but it's not significantly influence customer purchasing intention. Which, the customer needs greater, or more unique service quality to increasing their purchasing intention.

Social Media influence towards Purchasing Decision

Social media significantly and positively influence purchasing decision with coefficient 0.215, t value 2.692 and Sig. value is 0.008 which smaller than 0.05. Therefore, the content in the social media of INSPIRED27 or other social media that review the products, can influence people to buying the products. This is aligned with Sabathini & Nofiauwaty (2024) that stated social media can supported customer purchasing decision.

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Brand Image influence towards Purchasing Decision

Table 3 shows that brand image positively influence purchasing decision with coefficient 0.134 and t value 1.655. Hence, the Sig. value is 0.101 which is bigger than 0.05, therefore the relationship is not significant. The brand image of INSPIRED27 is not enough to make customer choose to purchase. Although INSPIRED27 had a great popularity and image. Conversely, Hermansyah, et al (2024) stated that brand image able to influence customer purchasing decision in mineral water Sanford. But this research is aligned with Wowor, et al. (2021) that found brand image is not enough to influence customer purchasing decision in Janji Jiwa coffeeshop in Manado.

Service Quality influence towards Purchasing Decision

Service quality able to positively influence purchasing decision with coefficient 0.081 and t value 1.136. Therefore the Sig. value is 0.081, which is bigger than 0.05 so the relationship is not significant. It can be concluded that the service quality of INSPIRED27 is not enough to influence customer decision in purchasing INSPIRED27 products. It's aligned with Ramadani (2019) that found service quality is not enough to influence purchasing decision in a cellphone store. Most of the customer didn't pay much attention to the service quality, however the customer influenced by other factor because there are many alike stores. On the other side, Wong, et al (2024) found that service quality able to support purchasing decision in service store "HP Cemerlang".

Purchasing Intention influence towards Purchasing Decision

From table 3 show that purchasing intention positively influence purchasing decision with coefficient 0.489, t value 6.305, with Sig. value $0.000 < 0.005$ which means the relationship is significant. Hence, the customer that feel like have intention in buying INSPIRED27 products, will choose to actually buy the products. It is aligned with Setiawan, et al. (2024) that found purchasing intention significantly influence purchasing decision in fashion products at Rawa Lumbu. Even the bigger the intention of the customer, the faster they will complete the transaction to buy the products.

VII. CONCLUSION

The analysis and discussion about the independent variables and dependent variables show that brand image has a relevant effect on purchasing decisions through purchasing intention. The implementation of a marketing strategy was found to effectively increase purchasing intention and intensify mutually beneficial relationships, which ultimately have a positive impact on increasing purchasing decisions. The mediation between exogen and endogen variables shows that social media, brand image, and service quality positively influence purchasing decisions through purchasing intention in INSPIRED27 distro, Malang City. Hence, if the customer feels satisfied with INSPIRED27 products, they will purchase them. Therefore, purchasing intention does not significantly affect social media marketing and service quality towards purchasing decisions. This research found that purchasing intention is not effective in mediating between social media and service quality towards purchasing decision, but it is able to mediate between brand image and purchasing decision.

Hence, this research has three limitations. First, understanding how psychological and emotions influence purchasing intention is still limited. Second, the sample and research scope is limited only to the customer willing to complete the questionnaire. Third, this research does not find the relevant effect of service quality on purchasing intention and purchasing decisions. This research provides several ideas that can be used for further research to broaden understanding and improve the implementation of purchasing decisions. Additional research can be conducted to improve previous results and develop variables that have not been studied and have the potential to influence purchasing decisions so that future research results become more comprehensive and in-depth.

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The Temple as a Tangible Heritage of India: A Living Testament to Culture, Spirituality, and Architecture



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ABSTRACT: The temples of India stand as a remarkable testimony to the nation's spiritual, cultural, and architectural heritage. This paper delves into the multifaceted role of temples as tangible heritage, tracing their evolution from the early Gupta period to the architectural marvels of the Chola and Chandela dynasties. It explores the architectural diversity across regions, from the Nagara and Dravida styles to the unique Kalinga and Vesara forms. Temples are not just religious spaces but have historically served as cultural, social, and economic centers, nurturing art, education, and local economies. Their architectural brilliance, rich symbolism, and sacred geometry embody profound spiritual philosophies. Moreover, temples reflect the political and social history of India, with kings commissioning grand edifices to solidify their rule and connect with the divine. The preservation of these temples, many of which are threatened by neglect, environmental factors, and human activity, is crucial. Governmental and international efforts, including UNESCO designations, play a significant role in conserving these living monuments. As India modernizes, safeguarding its temple heritage is essential to maintaining the continuity of its cultural and spiritual identity for future generations.

KEYWORDS: Nagara, Dravidan, Vesara, Garbhagriha, Shikhara

INTRODUCTION

India, a land of diverse cultural expressions and profound spirituality, has a rich heritage embodied in its historical monuments, particularly its temples. Temples are more than just places of worship in the Indian context; they serve as cultural, architectural, and social hubs that reflect the evolution of India's religious, artistic, and architectural traditions. Spanning across millennia, the temple as a tangible heritage forms a central part of the country's identity and history, representing the syncretic and pluralistic nature of Indian civilization. This paper aims to explore the significance of Indian temples as tangible heritage, examining their historical, cultural, spiritual, and architectural dimensions.

The Concept of Tangible Heritage and Temples

Tangible heritage refers to physical objects, sites, and monuments that carry cultural significance. In India, tangible heritage is not limited to secular structures like palaces and forts; it also includes religious structures like temples, mosques, and churches that hold both spiritual and historical value. Temples, as tangible heritage, are deeply intertwined with intangible cultural practices such as rituals, festivals, and religious traditions, making them living monuments. They serve as embodiments of both sacred and secular aspects of life, reflecting the social, economic, and political dynamics of their time.

The temples of India can be broadly divided into two main architectural styles: **Nagara** (North Indian) and **Dravidan** (South Indian). However, regional variations such as the Vesara style in Deccan and the indigenous temple architecture in regions like Bengal, Odisha, and the Northeast further enrich the diversity of temple designs in India. Each temple reflects its era's social, religious, and cultural influences, becoming a living museum of India's evolving heritage.

Historical Evolution of Temple Architecture in India

The evolution of Indian temple architecture can be traced back to the early centuries of the Common Era. The **Gupta period** (3rd to 6th century CE) is often regarded as the formative period for temple construction in India. The temples from this era, though simple in design, laid the foundation for more complex structures that would evolve in later periods. The early Gupta temples, such as the **Dashavatara Temple in Deogarh**, showcase the rudimentary beginnings of temple architecture, with a focus on a sanctum (garbhagriha) and a pillared hall (mandapa).

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With the rise of the **Pallava dynasty** in South India during the 6th and 7th centuries, temple architecture saw significant developments. The Pallavas pioneered rock-cut temples, particularly in **Mahabalipuram**, where the famous shore temple and the five Rathas stand as outstanding examples of early Dravidian architecture. These temples represent a transition from rock-cut to free-standing structures.

The **Chalukyas of Badami** and the **Rashtrakutas** further advanced the art of temple construction, particularly in the Deccan region. The temples at **Aihole**, **Pattadakal**, and **Ellora** display a fusion of Nagara and Dravida architectural styles. This period also witnessed an increased focus on sculptural decoration, with intricate carvings adorning temple walls, ceilings, and pillars.

The zenith of Indian temple architecture was reached during the **Chola period** (9th to 13th century CE) in South India and the **Solanki** and **Chandela periods** in North and Central India. The **Brihadeshwara Temple** in Thanjavur, built by Raja Raja Chola I, is an engineering marvel of its time, showcasing grandiose scale and intricate detailing. Similarly, the **Khajuraho temples** in Madhya Pradesh, constructed by the Chandela rulers, are celebrated for their exquisite erotic sculptures and architectural finesse.

In Odisha, the **Kalinga style** developed, with the **Sun Temple at Konark** and the **Jagannath Temple at Puri** being prime examples. These temples are notable for their towering spires (shikharas) and rich iconography. In the western region, the **Dilwara Temples** in Mount Abu, built by the Solanki rulers, stand out for their intricate marble work.

Architectural Significance of Temples

The architecture of Indian temples is a visual representation of spiritual philosophies. Temples were conceived as sacred spaces where the divine could manifest in the material world. The layout of a temple was designed to replicate the cosmos, with the sanctum sanctorum (garbhagriha) representing the nucleus or the universe's core, where the divine energy resides. The towering spire (shikhara) above the garbhagriha symbolized the axis mundi, or the cosmic axis, connecting the heavens and the earth.

The elaborate carvings and sculptures that adorn temple walls are not merely decorative but are imbued with deep symbolism. For instance, the erotic sculptures on the outer walls of temples like Khajuraho represent the cycle of life and the transition from the material to the spiritual realm. Similarly, depictions of gods, goddesses, celestial beings, and mythical creatures on temple walls serve to narrate the stories from sacred texts like the Ramayana, Mahabharata, and Puranas.

Each element of temple architecture, from the base to the apex, carries a metaphorical meaning. The mandapa, or pillared hall, represents the transitional space between the outer world and the inner sanctum. The intricate carvings on pillars, ceilings, and walls depict stories from scriptures, cosmological diagrams, and geometric patterns, often reflecting the concept of **sacred geometry**, believed to resonate with the divine order of the universe.

The different architectural styles of temples across India also reflect regional diversity in terms of materials, design, and artistic expression. In South India, temples are characterized by their towering gopurams (ornate gateways) and spacious courtyards, while North Indian temples are distinguished by their beehive-shaped shikharas and smaller, more compact plans.

Cultural and Social Significance of Temples

Temples in India were not only centers of religious activity but also hubs of social, economic, and cultural life. In ancient and medieval India, temples played a vital role in the local economy. They were often endowed with vast landholdings and engaged in various forms of economic activities, including agriculture, craft production, and trade. Temples also served as educational institutions, where scholars, artists, and craftsmen gathered to exchange knowledge and hone their skills. For instance, the temples in the **Chola Empire** functioned as major centers of learning, where subjects like philosophy, astronomy, mathematics, and medicine were taught.

Temples were also patrons of the arts, particularly classical dance and music. The **Devadasi tradition** of temple dancers, particularly in South India, is an example of how temples nurtured and preserved artistic traditions. Temple festivals, such as **Rath Yatra** in Puri and **Mahashivratri** in Varanasi, continue to draw millions of devotees and tourists, serving as important platforms for cultural expression and community bonding.

Temples were often the stage for significant social and political events. Kings and emperors built temples to legitimize their rule and demonstrate their devotion to the divine. The construction of grand temples by powerful rulers such as the Cholas, Pallavas, and Vijayanagar kings was a way to assert their dominance and leave a lasting legacy. The architecture and scale of these temples reflected the power and wealth of the rulers who commissioned them.

Spiritual and Religious Significance

Temples, first and foremost, are sacred spaces that serve as abodes for deities. In Hinduism, the temple is believed to be the place where the divine manifests, and the deity is treated as a living entity. The rituals, prayers, and festivals conducted in temples are central to Hindu worship and spirituality. Temples offer a space where devotees can connect with the divine through rituals such as **darshan** (viewing the deity), **puja** (worship), and **archana** (chanting prayers).

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The temple also plays a critical role in other religions in India, such as **Jainism** and **Buddhism**. Jain temples, such as the **Dilwara Temples**, are known for their exquisite marble work and detailed carvings, reflecting the Jain emphasis on purity and non-violence. Similarly, Buddhist stupas and chaityas served as early prototypes for Indian temple architecture, with monuments like the **Sanchi Stupa** marking significant developments in early religious architecture in India.

In addition to their architectural and cultural significance, temples also function as pilgrimage sites. Thousands of temples across India attract pilgrims from all over the country and the world, contributing to the continuity of religious practices and community traditions.

Conservation and Preservation of Temples as Heritage Sites

While temples hold immense historical, cultural, and spiritual significance, they also face challenges in terms of conservation and preservation. Many ancient temples, especially those in remote regions, are in a state of disrepair due to neglect, environmental factors, and human activities. The delicate carvings and sculptures that adorn temple walls are susceptible to weathering and vandalism, while many temples have been altered or damaged over time due to natural disasters, war, or misguided restoration efforts.

Government bodies like the **Archaeological Survey of India (ASI)** and various state heritage boards are actively involved in the restoration and preservation of temple structures. However, preserving temples as living monuments requires more than just physical restoration. It necessitates a holistic approach that respects the temple's religious and cultural significance, engages local communities in the process, and ensures that conservation efforts are sustainable in the long term.

In recent years, there has been growing awareness of the need to preserve India's temple heritage. Several temples have been recognized as **UNESCO World Heritage Sites**, including the **Sun Temple at Konark**, the **Khajuraho Group of Monuments**, and the **Great Living Chola Temples**. These designations not only highlight the global importance of Indian temples but also help mobilize resources and support for their preservation.

CONCLUSION

The temple, as a tangible heritage of India, is a multifaceted symbol of the country's spiritual, cultural, and architectural legacy. It reflects the richness of India's artistic traditions, the diversity of its regional styles, and the depth of its religious and philosophical thought. Temples stand as a testament to the creative and devotional spirit of the Indian people, transcending time and space to remain living symbols of cultural continuity.

In the context of globalization and modernization, the preservation of temple heritage is of paramount importance. As living monuments, temples continue to play a vital role in the spiritual lives of millions of people while serving as crucial links to India's historical and cultural past. By recognizing, preserving, and respecting the significance of temples as tangible heritage, we can ensure that these monumental structures continue to inspire and resonate with future generations.

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Glomerular Filtration Rate and Blood Urea Nitrogen Levels between Coastal and Desert Regions within Libya



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ABSTRACT

Background: Limited research exists on how geographic location and environmental factors influence kidney function. This study investigates potential variations in Glomerular Filtration Rate (GFR) and Blood Urea Nitrogen (BUN) levels between individuals residing in the coastal and desert regions of Libya.

Methods: An observational, retrospective analysis was conducted using medical records. Participants (n=260) were recruited from Benghazi (coastal) and Jalu/Samnu/Sabha (desert) regions. Inclusion criteria included age range (18-90 years) and residency in the designated location. Exclusion criteria focused on factors affecting GFR (e.g., pre-existing kidney disease). GFR was estimated using the CKD-EPI formula. BUN levels were obtained from medical records. T-tests and Mann-Whitney U tests were used for statistical analysis.

Results: The final sample size (after exclusions) and participant demographics was 134 participants. The study found no statistically significant difference in GFR between the coastal and desert groups (p-value = 0.238). However, BUN levels were significantly higher in the desert group (mean = 28.2 SD = 30.5) compared to the coastal group (mean = 15.5, SD = 10.5) with a p-value of (p-value = 0.026).

Conclusion: This study did not identify a significant association between GFR and geographic location (coastal vs. desert) within Libya. However, BUN levels were significantly higher in the desert population, suggesting potential differences in kidney function or contributing factors that warrant further investigation.

KEYWORDS: Kidney Function, Glomerular Filtration Rate (GFR), Blood Urea Nitrogen (BUN), Libya, Geographic Variation.

INTRODUCTION

The kidneys are vital organs responsible for maintaining blood volume and composition, filtering waste products, and regulating blood pressure. Few studies highlight the early abnormalities of the kidneys function as kidney diseases have few signs and symptoms early in the disease progression, and the only way to assess the kidneys function is by laboratory tests. Tests should detect abnormalities early enough to allow corrective treatment [1]. With renal Function tests, namely the concentrations of urea and creatinine in the serum could certainly detect the glomerular filtration rate (GFR) of the kidneys depending on the age, sex and ethnicity could affect the function. Also, other health issues as Diabetes, hypertension and even the lifestyle of the household has an effect on the renal function [2]. Age-related changes in intrarenal vascular structure coincide with a reduction in renal volume and size. Both the bulk of the juxtamedullary nephrons and the number of glomeruli decrease. As a result, the glomerular basement membrane's filtration area and permeability both decrease. As people age, their glomerular filtration rate (GFR) decreases [3].

Persistent kidney damage is known as chronic kidney disease (CKD), which has a significant financial and social cost to both the patient and his family [3]. It would be crucial to identify the illness in advance while examining the population's glomerular filtration rate (GFR), particularly in those with coexisting conditions. Researchers have demonstrated that a community's and an individual's lifestyle is one of the primary variables influencing glomerular filtration rate (GFR) [4,5]. Both high-income industrialized nations like the United States and developing nations like China and Libya face significant challenges and public

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health issues as a result of the global pandemic of chronic kidney disease (CKD) [6–12]. The population of Libya is diverse in terms of lifestyle, geography, demographically and environmental factors, while the Studies in Libya are scarce [13]. The high prevalence and low awareness of impaired renal function and urinary abnormalities in the population illustrates the urgent need to implement a CKD prevention program in the different areas of Libya.

Glomerular filtration rate (GFR) is a key measure of kidney function, reflecting the rate at which blood plasma is filtered by the kidneys [14]. It is estimated using various formulas, with the CKD-EPI formula being a commonly employed method [15]. GFR declines naturally with age, but various factors can accelerate this decline and contribute to kidney disease [16].

Blood urea nitrogen (BUN) is a waste product generated from protein breakdown in the body. Healthy kidneys efficiently filter BUN, maintaining its blood concentration within a specific range. Elevated BUN levels can indicate reduced kidney function or dehydration [17]. Environmental factors, including climate and geographic location, have been hypothesized to influence kidney health. Studies suggest that hot climates and dehydration can increase BUN levels, potentially impacting GFR [18,19]. However, research on the association between geographic location (e.g., coastal vs. desert) and GFR variations remains limited.

Understanding the potential impact of environmental factors on kidney function is crucial for several reasons. Socially, a significant portion of the global population resides in arid or desert regions. If geographic location is linked to increased risk of kidney disease, identifying these populations becomes crucial for preventive healthcare measures and resource allocation. Medically, early detection of kidney dysfunction allows for timely intervention and management, potentially delaying or preventing progression to chronic kidney disease (CKD) and its associated complications [14].

This study investigates potential variations in GFR and BUN levels between individuals residing in the coastal and desert regions of Libya. By exploring the association between geographic location and these kidney function markers, this research contributes to a better understanding of environmental influences on kidney health and informs public health strategies in arid regions.

Aim:

To investigate the association between geographic location (coastal vs desert) and kidney function in Libya as measured by Glomerular Filtration Rate (GFR) and Blood Urea Nitrogen (BUN) levels.

METHODOLOGY

GFR Estimation:

The CKD-EPI formula was used to estimate GFR [14]. This widely accepted and validated method utilizes readily available clinical data (serum creatinine, age, gender,) to estimate GFR. The formula was applied to participants' documented serum creatinine levels in their medical records.

Sample Selection:

A convenience sample of 260 participants was determined using the Epi-info software they were recruited by reviewing medical records at Al Akeed Labs in Benghazi (coastal region) and General hospitals in Jalu/Samnu/Sabha (desert region) within the time period 01/11/2023 – 01/04/2024. The final sample size was determined after applying the following inclusion and exclusion criteria.

CKD-EPI	$\text{GFR} = 141 \times \min(S_{cr}/\kappa, 1)^\alpha \times \max(S_{cr}/\kappa, 1)^{-1.209} \times 0.993^{\text{Age}} \times (1.018 \text{ if female}) \times (1.159 \text{ if African American})$	[14]
<p>*S_{cr} is serum creatinine in mg/dL κ is 0.7 for females and 0.9 for males α is -0.329 for females and -0.411 for males min indicates the minimum of S_{cr}/κ or 1 max indicates the maximum of S_{cr}/κ or 1</p>		

Inclusion Criteria:

- Age range: 18-90 years.
- Complete medical records with documented:
 - Creatinine levels
 - BUN levels

Exclusion Criteria:

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- Pre-existing chronic kidney disease (CKD).
- GFR estimated to be lower than 90 mL/min/1.73m². [14]

Data Collection:

Medical records of participants meeting the inclusion criteria were reviewed to collect the following data:

- Demographic information (age, gender).
- Geographic location (coastal or desert).
- Estimated GFR (calculated using the CKD-EPI formula). [14]
- BUN level.

Statistical Analysis:

SPSS version 26 was used, Descriptive statistics (mean, standard deviation) were used to summarize participant demographics, GFR, and BUN levels for the coastal and desert groups. Independent-samples t-tests were used to compare GFR and normally distributed continuous variables (e.g., age) between the two regions. Mann-Whitney U tests were used to compare BUN levels, a non-normally distributed variable, between the coastal and desert groups.

The level of statistical significance was set at $\alpha = 0.05$. All statistical analyses were performed using appropriate statistical software.

RESULTS

This section presents the findings of the analysis investigating potential associations between GFR and BUN levels, stratified by geographic location (coastal vs. desert) within Libya.

Overall Population Characteristics

A total of 134 participants were included in the final analysis after applying the inclusion and exclusion criteria.

Gender: The overall sample included 65 males and 69 females. (Figure 1)

Age: The participants' ages ranged from 18 to 90 years old, with a mean age of 46.46 (SD = 16). (Figure 2).

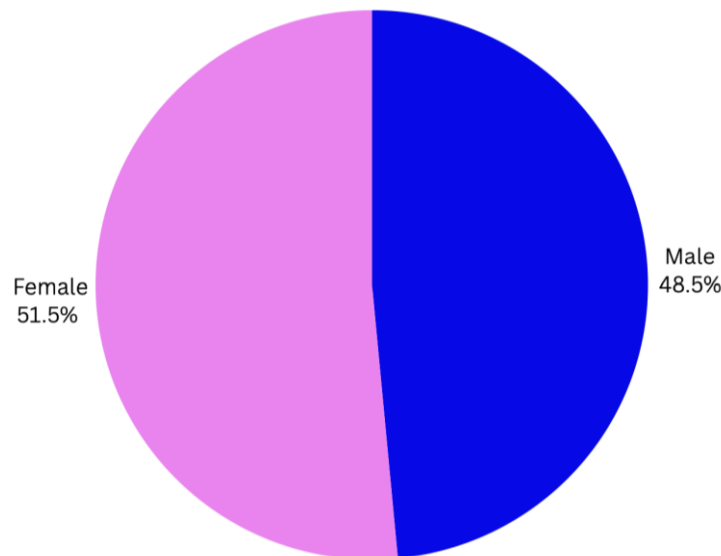


Figure 1: Percentage of males to females

Figure 3 and Figure 4, show the eGFR levels and he BUN levels in the different age groups and the highest number was at the years between 18 – 37 years of age for the eGFR with no significant differences between the groups, while the ages between 38 -57 years old were the highest group for the BUN groups, whereas, the older group was significantly lower than the other groups, could be because of the limited number or other medical causes.

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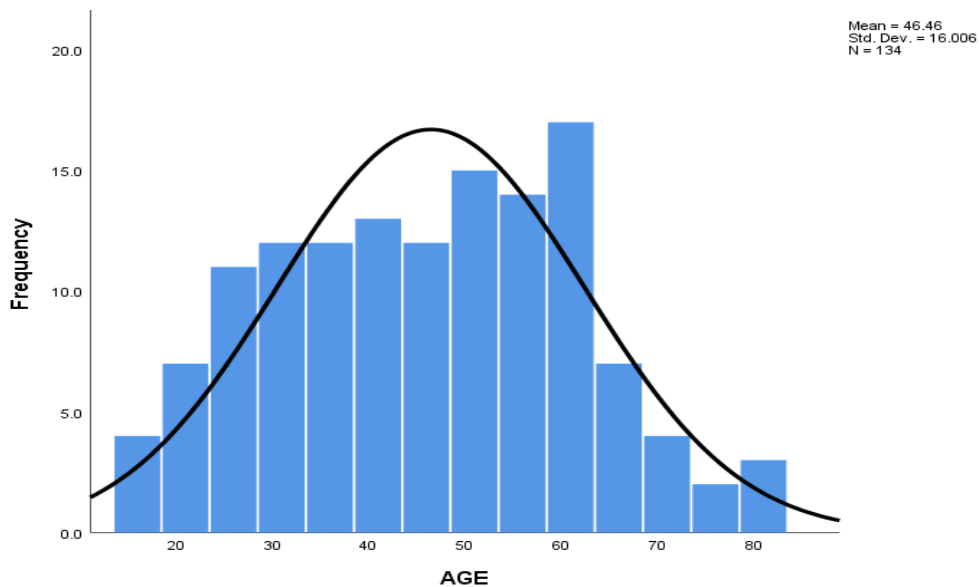


Figure 2: Frequency of individuals across different ages

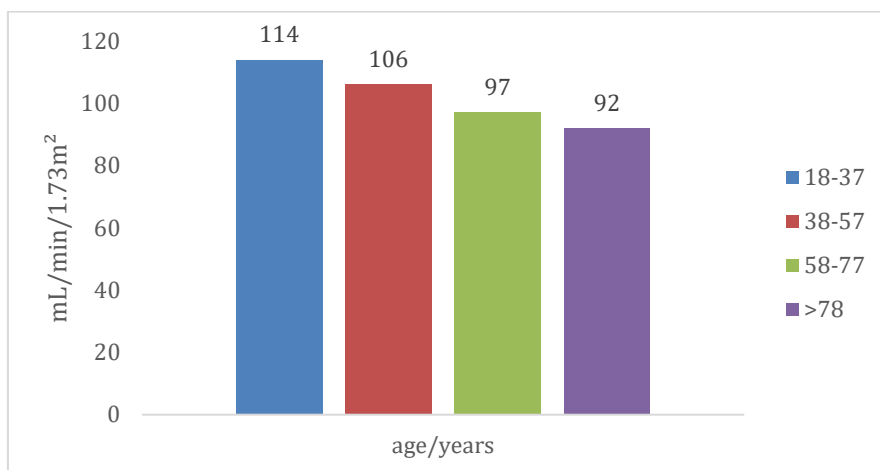


Figure 3: The eGFR levels in the different age groups

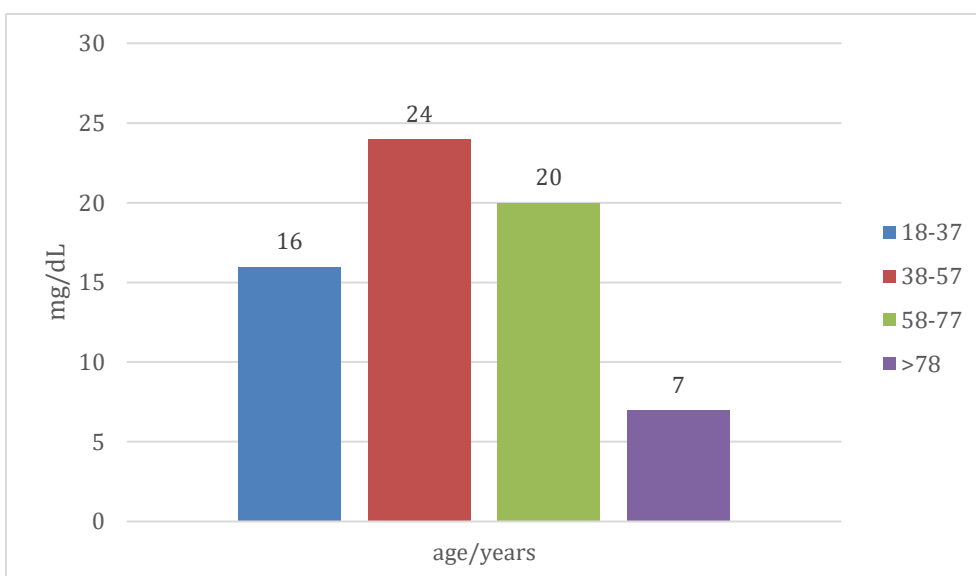


Figure 4: The BUN levels in the different age groups

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GFR Findings:

The analysis included data from 134 participants after applying the inclusion and exclusion criteria. As shown in (table 1), no statistically significant difference was found in GFR between the coastal and desert groups based on the independent-samples t-test (p -value = 0.283). The mean GFR for the coastal group was 108 (SD =21.2), while the mean GFR for the desert group was 104 (SD =21.6).

Table 1: Results of Independent-Samples t-test

eGFR	Levene's test for equality of variances			T-test for equality of Means		
	Equal variances assumed	F	Sig.	Sig.(2-tailed)	Mean Difference	Std.Error Difference
		0.093	0.760	0.283	4.11	3.82

Table 2 and 3 show the difference in means between coastal and desert regions within each gender. As is clear in table 2, males do not have significantly different GFR results between the two regions. Similarly, the results for GFR within females also did not show any significant difference between the regions.

Table 2: Results of Independent-Samples t-test for Males only

eGFR	Levene's test for equality of variances			T-test for equality of Means		
	Equal variances assumed	F	Sig.	Sig.(2-tailed)	Mean Difference	Std.Error Difference
		0.002	0.963	0.643	-2.514	5.401

Table 3: Results of Independent-Samples t-test for Females only

eGFR	Levene's test for equality of variances			T-test for equality of Means		
	Equal variances assumed	F	Sig.	Sig.(2-tailed)	Mean Difference	Std.Error Difference
		0.890	0.349	0.071	9.859	5.367

BUN Findings

As shown by (table 4), the Mann-Whitney U test revealed a statistically significant difference in BUN levels between the coastal and desert groups (p -value = 0.026). Participants residing in the desert region had significantly higher BUN levels compared to those in the coastal region. The mean BUN level for the desert group was 28.2 (SD =30.5), while the coastal group had a mean BUN level of 15.5 (SD = 10.5). The 95% confidence interval for the mean difference in BUN levels ranged from 13.2 to 36.8.

Table 4: Result of Mann-Whitney U test for BUN

	coastal	Desert	p-value
N	84	50	0.026
Mean +/- Sd	15.5 +/- 10.5	28.2 +/- 30.5	

DISCUSSION

This study investigated potential associations between GFR and BUN levels, stratified by geographic location (coastal vs. desert) within Libya. While we did not observe a significant difference in GFR between the two regions (p -value = 0.283), BUN levels were significantly higher in the desert group compared to the coastal group (p -value = 0.026).

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Limited research exists on the association between geographic location and GFR. Some studies suggest that hot climates and dehydration can increase BUN levels, potentially impacting GFR [20]. However, our results do not fully support this notion. Several factors might explain this discrepancy. First, our study relied on a convenience sample from medical records, potentially introducing selection bias. Second, while we categorized participants by coastal or desert residence, factors like variations in water intake or air conditioning use within these regions might have influenced GFR [21] but weren't captured in this study design. Finally, dietary habits could also play a role in both GFR and BUN levels [22], and future studies could explore potential dietary variations between the coastal and desert regions.

The significantly higher BUN levels in the desert group (p-value = 0.026) require further exploration. Dehydration is a potential explanation, as dehydration can lead to increased BUN concentration in the blood. However, other factors like dietary protein intake or even undiagnosed chronic conditions could also contribute [23]. Future research could investigate these possibilities.

These elevated BUN levels in the desert population warrant attention, even though we did not observe a significant GFR difference. While a single elevated BUN level might not be indicative of kidney dysfunction, chronically high levels can be a sign of underlying issues. Identifying populations at risk for elevated BUN levels allows for targeted public health interventions, such as educational campaigns on hydration and healthy eating habits.

Study Limitations:

The retrospective design relies on existing medical records, potentially introducing bias based on documentation practices. Additionally, the reliance on a convenience sample might not fully represent the target population. Future research could benefit from a prospective cohort study design with a more rigorously selected sample and detailed data collection on environmental factors and dietary habits. Furthermore, including additional kidney function markers beyond BUN could provide a more comprehensive picture.

CONCLUSION

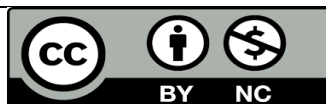
This study provided insights into potential geographic variations in GFR and BUN levels. The higher BUN levels observed in the desert population highlight the need for further investigation into environmental and lifestyle factors that might influence kidney function in arid regions. Future studies with more robust methodologies can build upon these findings to inform public health strategies for promoting kidney health in diverse geographic settings.

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The Influence of Income, Family Consumption and Technology on the Welfare of Fishermen in Tanjung Benoa Bali



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ABSTRACT: The high potential of fishery resources owned by Tanjung Benoa Village is a positive thing and can be a good source of income for the community. However, the fact is that this potential has not been able to provide the expected welfare. The purpose of this study is to analyze 1) The simultaneous effect of income, family consumption, and technology on the welfare of fishing families; 2) Partial effect of income, family consumption, and technology on the welfare of fishing families; 3) Variables that have a dominant effect on the welfare of fishing families in Tanjung Benoa Village. This research uses an associative quantitative approach. The type of data used primary data with a population of 140 fishermen in Tanjung Benoa Village. Data analysis techniques included descriptive statistics and multiple linear regression analysis using Stata software. The results of the analysis showed that: 1) income, family consumption, and technology have a significant effect simultaneously on the welfare of fishing families; 2) income, family consumption, and technology have a significant effect partially on the welfare of fishing families; 3) the technology variable is the dominant variable affecting the welfare of fishing families. Technology variable is the variable that has a dominant effect on the welfare of fishing families in Tanjung Benoa Village. Based on the results of the study, it is expected that the fishing community is expected to pay attention to the technology variables used in helping the process of catching seafood owned in order to increase their income so as to be able to generate a general level of welfare.

KEYWORDS: Income, Family Consumption, Technology, Welfare

I. INTRODUCTION

The use of fish resources and marine life in Indonesia's waters has great potential to make a significant contribution to the welfare of coastal residents, especially fishermen. The role of the fisheries sector is crucial in efforts to improve the welfare of coastal communities, especially fishermen. The benefits obtained involve the provision of basic needs, increased income, job opportunities, foreign exchange receipts, and development progress in the region (Ahsan & Muhammad, 2017). The uncertain impact of climate change is a sign that nature has shown a very extreme situation and has an impact on the socio-economy that is getting worse (Sanjaya et al., 2020).

The welfare of fishermen is one of the problems in Indonesia that has not been solved until 2023. The word welfare cannot currently be described for fishing families because fishing families have a life that can be said to be far from the word prosperous. The welfare of fishermen and coastal communities and small islands in Indonesia, including in the province of Bali, is threatened by the impact of climate change. Improving the welfare of fishermen in Bali Province remains a concern, and various steps have been taken to improve the condition of fishermen. There are 9 (nine) districts in Bali Province, one of the districts that is respected thanks to its sea charm is Badung Regency, whose charm is not only radiated from the beauty of its beaches but also reflected in its population which reaches 521,996 people in 2022 (BPS, 2022). South Kuta District is a sub-district that has the highest population of fishermen in Badung Regency with 302 people.

South Kuta District has a Fish Landing Base (PPI) located in Tanjung Benoa Village. Based on the Bali Provincial Regulation Article 1 number 46, the Fish Landing Base (PPI) is a class D Fishing Port to serve fishing vessels that carry out fishing activities in Indonesia waters. The fishing community in Tanjung Benoa Village has a very low level of welfare, the low level of welfare of fishing families is indeed one of them due to the low level of income received. The high potential of fishery resources owned by Tanjung Benoa Village is a very positive thing and can be a good source of income for the community, however, the reality is that this potential has not been able to provide the expected welfare.

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Welfare is the goal of the whole family. It is undeniable that every household wants a prosperous life, but due to certain conditions, not all can realize it (Rusdiana et al., 2020). Family welfare is a dynamic family condition where all physical, mental, spiritual, and social needs are met (Rahim et al., 2018). Income is the most crucial component of well-being because of its various aspects, including family well-being depends on income (Lein & Setiawina, 2018). The income from working as a fisherman is not enough to meet the needs of the family to achieve welfare, the income of fishermen is low and cannot meet the needs of the family's life because the income of fishermen is very dependent on the catches that obtained every day (Astawa & Pramitha, n.d.).

Fishermen have done many things that they think can improve the welfare of their families, but unfortunately the methods taken by fishermen are not appropriate and there are times when the methods they take actually trap them in dependence with other parties while putting themselves in a position of dependency weak. This can happen due to the lack of knowledge by these fishermen about the development of existing supporting and renewable technologies and also due to a lack of attention from the government (Sanjaya et al., 2019). That factor causes the fishing community to get the view that they have not achieved the welfare they aspire to.

II. METHOD

This study uses an associative quantitative approach method. This quantitative research is conducted by collecting data in the form of numbers, from which the data is then processed and analyzed to obtain scientific information (Cresswell et al., 2020). The use of quantitative methods because the data in this study are in the form of numbers and the processing is carried out using statistical analysis. This research method is associative, because this research is used to look for the effect of the independent variable on the dependent variable (Krisna Adwitya, Dian Agustina, 2019). The analysis technique used in this research is multiple linear regression analysis to determine the relationship between the independent variables of income, family consumption, and technology on the variable welfare of fishermen in Tanjung Benoa Village. With this research, a theory can be built that serves to explain, predict and control a symptom.

This research will look at the application of the Ordinary Least Square (OLS) Econometric model or the least squares method on family welfare with the influence of each explanatory variable using the Stata software computer application. Before testing the regression model, first test the normality of the data and then test the classical assumptions which include multicollinearity, heteroscedasticity tests so that the model used meets the Best Linear Unbiased Estimator (BLUE) rules.

The data analysis technique used is Ordinary Least Square linear regression analysis with a logarithmic transformation model used to determine the effect of the independent variable on the dependent variable, the form is as follows.

$$LY_i = \beta_0 + \beta_1 LX_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + e_i \dots \dots \dots (1)$$

Description:

- LY_i = Fishermen's Family Welfare
- LX_{1i} = Income
- X_{2i} = Family Consumption
- X_{3i} = Technology
- $\beta_1, \beta_2, \beta_3$ = Regression Coefficient
- β_0 = Intercept
- e_i = Estimated Confounding Error (*error term*)
- i = Observation - i

III. RESULT AND DISCUSSION

A. Descriptive Statistics Results

Table 1. Descriptive Statistics Test Results

Variable	Obs	Mean	Std. Dev	Min	Max
Family Welfare	140	43.16429	9.773412	19	61
Income	140	55.18705	12.17808	22.36068	83.666
Family Consumption	140	53.64539	11.75924	22.36068	89.44272
Technology	140	1.240431	.3009154	1	2.236068

Source: Primary data processed, 2024

Descriptive statistical analysis in this study is used to describe the research data seen from the number of samples, maximum value, minimum value, average value and standard deviation. The income variable has an average of 55.18705, the family

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consumption variable has an average of 53.64539, the technology variable has an average of 1.240431, and the family welfare variable has an average of 43.16429 with a standard deviation of 9.773412.

B. Classical Assumption Analysis Results

Normality Test

The normality test aims to test whether the residuals of the regression model made are normally distributed or not (Utama, 2017). The normality test method used is the Shapiro-Francia (SF) test statistic to determine the normality of a population based on sample data. The regression model residuals are said to be normally distributed if the sig value is greater than the significance level (0.05).

Table 2. Normality Test Results before Transformation

Variable	Obs	W'	V'	z	Prob>z
Family Welfare	140	0.95870	4.971	3.240	0.00060
Income	140	0.97691	2.780	2.065	0.01944
Family Consumption	140	0.96071	4.729	3.139	0.00085
Technology	140	0.97473	3.042	2.248	0.01229

Source: Primary data processed, 2024

Based on Table 2 of the normality test, it can be concluded that the data is not normally distributed, which is indicated by the significance value of the variables of family welfare, income, family consumption and technology less than 0.05, this is what causes the data results not to be normally distributed. According to (Ghozali, 2017), data that is not normally distributed can be transformed to become normal. This aims to get a new data group so that later it can get the desired output. The results of the normality test after data transformation can be seen in Table 3 as follows:

Table 3. Normality Test Results after Transformation

Variable	Obs	W'	V'	z	Prob>z
Family Welfare	140	0.99586	0.181	-1.710	0.88097
Income	140	0.99770	0.277	-2.597	0.99530
Family Consumption	140	0.99426	0.691	-0.747	0.77242
Technology	140	0.99815	0.223	-3.031	0.99878

Source: Primary data processed, 2024

Based on Table 3, the normality test using Shapiro-Francia shows that the prob>z value of the family welfare variable is 0.88097, the income variable is 0.99530, the family consumption variable is 0.77242 and the technology variable is 0.99878, which has a sig value of more than 0.05, indicating that the data used in this study are normally distributed so it can be concluded that the model fulfills the normality assumption.

Multicollinearity Test

The multicollinearity test is used to determine whether there is a strong correlation between the independent variables in the regression model (Hausman & Palmer, 2021). In a good regression model, there should not be a strong correlation between the independent variables. If the variance inflation factor (VIF) value is smaller than 10 and the 1/VIF value is greater than 0.1, it can be concluded that there is no multicollinearity.

Table 4. Multicollinearity Test Results

Variable	VIF	1/VIF
Income	3.63	0.275540
Family Consumption	3.41	0.293587
Technology	1.65	0.605264

Source: Primary data processed, 2024

Based on table 4 above, the VIF value is smaller than 10 and the 1/VIF value is greater than 0.1, it can be seen that the income variable has a 1/VIF value of 0.275 and a VIF value of 3.63, a family consumption variable that has a 1/VIF value of 0.293 and a VIF

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value of 3.41 and a technology variable that has a 1/VIF value of 0.605 and a VIF value of 1.65. Thus it can be said that this regression model is free from multicolineartitas.

Heteroscedasticity Test

The Breusch Pagan test is a method that can be used to identify symptoms of heteroscedasticity in a regression model. If the p value in the results of this test is greater than 0.05, then the regression model is considered free from symptoms of heteroscedasticity or homoscedasticity.

Table 5. Heteroscedasticity Test Results

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Ho	Constant variance
Variables	fitted values of kesejahteraan keluarga
chi2(1)	3.63
Prob > chi2	0.0566

Source: Primary data processed, 2024

Based on the test results shown in Table 5, the p value is above 0.05 where the Prob> chi2 value is 0.0566. Thus, it can be said that in this regression model there are no symptoms of heteroscedasticity.

Simultaneous Regression Coefficient Test Results (F Test)

Number of obs	=	140
F (3, 136)	=	6.73
Prob > F	=	0.0003
R-squared	=	0.1292
Adj R-squared	=	0.1100
Root MSE	=	9.2201

Table 6. Simultaneous Test Results (F)

Source	SS	df	MS
Model	1715.78558	3	571.928525
Residual	11561.4359	136	85.0105577
Total	13277.2214	139	95.5195786

Source: Primary data processed, 2024

The simultaneous regression coefficient test (F test) is a test of the variables in the research data simultaneously. The F test was conducted to determine the variables of income, family consumption and technology simultaneously affect the welfare of fishing families in Tanjung Benoa Village. Based on the data above, it shows that the Prob> F value = 0.0003, meaning that the sig.0.0003 value < 0.05 so that H0 is rejected. This means that income, family consumption and technology simultaneously have a significant effect on the welfare of fishing families in Tanjung Benoa Village.

Partial Regression Coefficient Test Results (t Test)

Table 7. Partial Test Results (t)

Family Welfare	Koefisien	Std.Err	t	P> t	[95% Conf.	Interval]
Income	.0956139	.0010666	0.81	0.042	.0029622	.0012563
Familt Consumption	.4447705	.1266945	3.51	0.001	.1942244	.6953166
Technology	6.652887	3.340505	1.99	0.048	13.25894	.0468343
_cons	32.83349	3.964757	8.28	0.000	24.99294	40.67404

Sumber: Data primer diolah, 2024

The t test is conducted to determine how far the influence of the independent variable partially on the dependent variable. Based on Table 7 of the partial test results (t), the results are as follows:

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1. The effect of income on family welfare, based on the results of the analysis, the income variable has a sig value of 0.042 (p-value <0.05) so that H0 is rejected and H1 is accepted, which means that this result means that income has a positive and significant effect partially on the welfare of fishing families in Tanjung Benoa Village. The regression coefficient of the income variable of 0.0956139 means that if income increases by 1 percent, there will be an opportunity of 0.0956139 percent to be prosperous, assuming other variables remain constant.
2. The effect of family consumption on family welfare, based on the results of the analysis, the family consumption variable has a sig. 0.001 (p-value <0.05) so that H0 is rejected and H1 is accepted, which means that family consumption has a positive and significant effect partially on the welfare of fishing families in Tanjung Benoa Village. The regression coefficient of the family consumption variable of 0.4447705 means that if family consumption increases by 1 percent, there will be an opportunity of 0.4447705 percent to be prosperous, assuming other variables remain constant.
3. The effect of technology on family welfare, based on the results of the analysis, the technology variable has a sig. 0.048 (p-value <0.05) so that H0 is rejected and H1 is accepted, which means that technology has a positive and significant partial effect on the welfare of fishing families in Tanjung Benoa Village. The technology variable regression coefficient of 6.652887 means that if technology increases by 1 percent, there will be an opportunity of 6.652887 percent to be prosperous, assuming other variables remain constant.

Discussion of Research Results

1. The Effect of Income on Family Welfare

The results of this study show that the income variable has a positive and significant influence on the welfare of fishing families in Tanjung Benoa Village. This means that the increasing amount of income received will increase the level of welfare of fishing families, and vice versa, the decreasing amount of income received will reduce the level of welfare of fishing families. This is supported by research conducted by (Budhi et al., 2024), (Sukono et al., 2021) and (Ahsan & Muhammad, 2017) which states that income has a positive and significant effect on family welfare. This shows that income and consumption patterns have an important role in the level of family welfare. By increasing the amount of income and managing consumption patterns wisely, the level of needs will be met properly, which will have implications for the level of family welfare.

2. The Effect of Family Consumption on Family Welfare

The family consumption variable has a significant positive relationship with family welfare in Tanjung Benoa Village. The results show that by fulfilling the consumption needs of fishermen families in Tanjung Benoa Village, it will affect their welfare level. The more consumption needs are met, the higher the level of family welfare, and vice versa, the lower the consumption needs are met, the lower the level of family welfare. This is supported by research conducted by (Sapovadia, 2004), (Sudrajat et al., n.d.) and (Paramasivam, 2023) which states that family consumption has a positive and significant effect on family welfare. The more consumption needs are met, the higher the level of family welfare, and vice versa, the lower the consumption needs are met, the lower the level of family welfare. Where consumption is an absolute thing that is needed by everyone to fulfill all their needs and desires in an effort to maintain their welfare. Fishing families whose income depends on fishing are known to have unpredictable income fluctuations. Therefore, managing consumption expenditure effectively is very important, because families must be able to manage family consumption properly such as classifying needs must be prioritized and less important needs must be ignored in order to save the remaining funds.

3. The Effect of Technology on Family Welfare

The technology variable in this study has a positive and significant influence on the welfare of fishing families in Tanjung Benoa Village. This result shows that the more/varied the amount of technology used in the process of catching seafood can improve the welfare of fishing families. This is supported by research conducted by (Darma et al., 2020), (Hapsari et al., 2019) which states that technology has a positive and significant effect on family welfare (Paramasivam, 2023).

4. The Most Dominant Variable on Family Welfare

In this study, the most dominant variable or influence on the welfare of fishing families in Tanjung Benoa Village is technology (Wicaksono et al., 2021). This is evidenced by the beta coefficient value of the technology variable being the largest compared to other variables, which is 6.652887. This result provides empirical evidence that the greater the amount of technology used in the process of catching seafood can improve the welfare of fishing families. The consideration that with the increasing number of seafood production technology, the higher the possibility of achieving efficiency and productivity allows the welfare of the fishermen's family to increase.

IV. CONCLUSION

A. Conclusions

Based on the results and discussion of the research, the conclusions can be drawn as follows:

1. Income, family consumption and technology simultaneously have a significant effect on the welfare of fishing families in Tanjung Bena Village, Bali.
2. Income, family consumption and technology partially have a positive and significant effect on the welfare of fishing families in Tanjung Bena Village, Bali.
3. Technology is the most dominant or influential variable on the welfare of fishermen families in Tanjung Bena Village.

B. Suggestions

Based on the results and discussion of the research, suggestions can be proposed including:

1. The fishing community is expected to pay attention to the technological variables used in helping the process of catching seafood owned in order to increase their income.
2. Future research should consider variables outside of this study, because then future researchers will be able to provide a more specific picture of the welfare of fishing families in Tanjung Bena Village. For example, if considering the use of income variables outside of being a fisherman, it will describe more specifically what factors affect the welfare of fishing families in Tanjung Bena Village.

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Analyzing Morphological Errors and Contextual Influence in Senior High School Students' Written Works: A Qualitative Study



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ABSTRACT: Morphological skills are essential for developing linguistic competence, as they underpin various aspects of language acquisition, including reading comprehension and effective writing. This study examined morphological errors in the written works of 25 Grade 11 students in the Oral Communication course at Northern Abra National High School, exploring how these errors reflected their understanding of word formation rules and the influence of contextual factors like educational background and language exposure. Using a document analysis design, the research involved evaluating students' assignments and essays to identify error types and frequencies. A systematic coding process categorized errors through qualitative content analysis, revealing themes related to inflectional, derivational, and compounding errors.

The study identified common morphological errors in the written works of 25 Grade 11 students enrolled in the Oral Communication course. Inflectional errors were the most prevalent, comprising 40% of the total, with students frequently misusing verb conjugations and plural forms, indicating a fundamental misunderstanding of grammatical rules. Derivational errors accounted for 30%, highlighting confusion around suffix and prefix application. Compounding errors, at 20%, involved incorrect separation and formation of compound words, leading to clarity issues in writing. Affixation errors made up 10%, reflecting overgeneralization and misuse of affixes. Also, students from well-resourced families made 12% fewer morphological errors than those from under-resourced families, with dedicated language programs leading to a 20% reduction. Teacher expertise contributed to a 15% decrease in errors. Students exposed to multiple languages had 30% fewer errors, with those speaking three or more languages showing a 40% reduction, highlighting the benefits of multilingualism on language skills. Moreover, students with both quality education and extensive language exposure made 35% fewer errors than those lacking either factor. These findings emphasize the need for educational equity and multilingualism to enhance morphological skills. A combined approach integrating quality instruction with diverse language experiences is recommended to improve writing proficiency.

Generally, the educational background and language exposure significantly impact Grade 11 students' morphological accuracy. Students from well-resourced schools made fewer errors, especially with effective language instruction, while multilingual students demonstrated enhanced writing proficiency. The synergy between quality education and diverse linguistic exposure is essential for improving students' linguistic skills. To address morphological challenges, educational policies should focus on integrating robust language programs and promoting multilingualism, fostering better writing outcomes for all students.

KEYWORDS: linguistic competence, morphological errors, written works

I. INTRODUCTION

Morphology, the study of word formation and structure, is a fundamental aspect of linguistic competence. It encompasses the use of morphemes—the smallest units of meaning—through processes such as inflection, derivation, and compounding. The development of morphological competence is crucial for students, as it contributes not only to their language skills but also to their overall academic success, particularly in written communication. However, Senior High School students often face challenges in mastering morphological rules, which results in errors in their writing. Understanding these errors, alongside the students' morphological development, can provide valuable insights into the areas where students struggle and the patterns in their linguistic growth.

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This research aims to describe the common types of morphological errors found in the written works of Senior High School students and examines how these errors reflect their understanding of word formation rules. Additionally, it understands how contextual factors, such as educational background and language exposure, influence the morphological errors made by these students in their writing. By focusing on the types and frequency of these errors, the study aims to provide a clearer understanding of students' grasp of morphological rules and the progression of their morphological development across different levels of linguistic complexity. Morphological competence plays a vital role in language acquisition, serving as a foundation for reading comprehension, vocabulary expansion, and effective writing. As students progress through the Senior High School level, their ability to manipulate morphemes—through inflection, derivation, and compounding—becomes increasingly critical for academic achievement.

Globally, studies have explored the relationship between morphological awareness and language proficiency. For example, Berninger et al. (2010) found that morphological awareness is a strong predictor of writing ability in students, with a direct link between morphological errors and language comprehension difficulties. Similarly, research conducted by Goodwin et al. (2013) highlighted the importance of teaching morphological structures to improve students' literacy skills, noting that students with higher morphological awareness performed better in reading and writing tasks. Carlisle (2016) emphasized the role of derivational morphology in academic writing, identifying that many students struggle with complex word formations such as suffixes and prefixes, which are often misused or overgeneralized in written texts. Deacon et al. (2019) extended this research, noting that morphological development is an ongoing process, with students typically progressing from simpler inflectional errors (e.g., incorrect pluralization) to more complex derivational and compounding errors.

From a local perspective, studies in the Philippines, such as those by Balaguer and Manalansan (2018), have underscored the importance of morphological competence in Filipino students. Their research highlighted how multilingual environments can either facilitate or hinder students' morphological development, especially when transitioning between local languages and English. Similarly, Garcia and Liwanag (2020) found that Filipino students often display a high frequency of inflectional errors, such as incorrect verb conjugations, and struggle with derivational processes, particularly when writing in English as a second language. These global and local studies suggest that while morphological competence is a critical area of focus, students often struggle with the correct application of morphological rules.

However, there remains a gap in the literature regarding the specific patterns of morphological errors and their implications for linguistic development in Senior High School (SHS) students. This research seeks to address this gap by conducting an in-depth qualitative analysis of the morphological errors and development observed in the written works of Senior High School students in the Philippines. This study stems from the critical role that morphology plays in language development, particularly in writing. Senior High School students are expected to produce increasingly sophisticated written texts, yet many struggle with applying morphological rules correctly. These struggles can result in errors that not only affect the clarity and precision of their writing but also hinder their overall academic performance. Understanding the types and patterns of these errors is essential for educators, as it can inform teaching strategies and curriculum development aimed at improving students' linguistic competence.

Moreover, as the education system in the Philippines continues to emphasize the importance of English proficiency, particularly at the Senior High School level, it is crucial to explore how students navigate the complexities of English morphology in their writing. By analyzing the errors and developmental patterns in students' written works, this study seeks to provide valuable insights into the areas where students need further support, as well as the stages of morphological development they typically experience. This study also contributes to the broader field of linguistics and education by highlighting the unique challenges faced by students in multilingual settings like the Philippines, where morphological errors may arise not only from a lack of understanding but also from the influence of other languages. The findings of this study will be useful for educators, linguists, and curriculum developers, offering practical recommendations for improving the teaching and learning of morphology in Senior High School education.

This study is grounded in several key theories that illuminate how students acquire and apply morphological rules. Morphological Awareness Theory (Carlisle, 1995) posits that morphological awareness—the ability to recognize and manipulate morphemes—is critical for reading, writing, and overall language development. This theory will guide the analysis of how students' awareness of morphemes affects their use of inflectional and derivational morphemes, framing the relationship between morphological knowledge and the progression of writing skills. Interlanguage Theory (Selinker, 1972) explains how language learners create a hybrid linguistic system that incorporates elements from both their native language (L1) and the target language (L2). This theory aids in understanding why students, particularly those learning English as a second language, make consistent morphological errors, such as overgeneralizing rules from their L1.

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Additionally, Error Analysis Theory (Corder, 1967) focuses on identifying and categorizing errors in language production, differentiating between random mistakes and systematic errors. This framework will support the analysis of morphological errors in students' writing, helping to infer their stages of morphological development and identify challenging rules. Furthermore, the Connectionist Model of Language Learning (Rumelhart & McClelland, 1986) posits that language learning occurs through exposure to patterns, where repeated experiences strengthen neural connections. This theory will be utilized to analyze how students learn morphological rules over time and explain their tendency to overgeneralize morphemes based on frequency and repetition.

Hence, this research builds on the theoretical frameworks and related studies to analyze morphological errors and development in Senior High School students' writing. The findings will contribute to a better understanding of how students progress from simple to complex morphological forms, guiding future educational strategies aimed at improving writing proficiency. In examining the common types of morphological errors and their implications for students' understanding of word formation rules, several studies provide valuable insights. A study by Goodwin et al. (2012) identified that inflectional errors, such as incorrect verb conjugations or plural forms, were the most prevalent among young learners. This highlights challenges in mastering basic grammatical rules, which are foundational for literacy development. Similarly, Carlisle (2003) found that inflectional morphemes are frequently overgeneralized, particularly in second-language learners, demonstrating a common struggle with irregular forms.

McCutchen & Stull (2015) focused on derivational errors, noting that students often struggled to apply prefixes and suffixes correctly, particularly in transforming base words. Their findings indicate that younger students face significant challenges in deriving new word forms. Research by Deacon, Francis, & Tong (2016) revealed that ESL students frequently made errors with derivational morphemes, especially when forming adjectives or nouns, reflecting gaps in their understanding of word formation rules. Clark (1993) explored compounding errors, revealing that children often misapplied syntactic rules rather than morphological ones, leading to incorrect word formations. This suggests a misunderstanding of the morphological structures of language. Additionally, Berninger et al. (2010) observed frequent affixation errors, where students overgeneralized morphological rules, resulting in incorrect suffix usage, illustrating the development of morphological awareness over time.

The progression of morphological development, as observed through students' written errors, has also been explored in various studies. Nunes, Bryant, & Bindman (2006) demonstrated that students typically move from mastering simple inflectional morphemes to more complex derivational ones as their literacy skills advance. Errors in more complex forms, such as "unhappiness," indicate developmental stages in their morphological understanding. Anglin (1993) emphasized that students acquire simpler morphemes before tackling more complex structures, with errors in advanced forms revealing a lack of morphological awareness. Moreover, Clark (2001) found that children generally acquire inflectional morphemes earlier than derivational ones, suggesting that as students progress, they encounter greater challenges with more complex transformations. Overgeneralization is a common phenomenon in language development, where young learners apply regular grammatical rules to irregular forms. This tendency diminishes as children gain exposure to diverse morphemes and linguistic structures. Children often use overgeneralized forms to navigate complex morphological systems, as seen in Croatian, where verb frequency and class size influence the rate of such errors (Hrzica et al., 2023). A study on a two-year-old revealed that overgeneralization occurs alongside cognitive development, with errors decreasing as the child learns to conceptualize word-reference relationships (Baihaqi, 2020). Thus, this research fills a significant gap in the existing literature and provides valuable insights that can help enhance educational practices and language instruction strategies.

II. METHODOLOGY

This study employed a document analysis research design to investigate morphological errors and development in the written works of Grade 11 Senior High School students enrolled in the Oral Communication course at Northern Abra National High School in the province of Abra. Document analysis, as defined by Bowen (2009), is a qualitative research method that involves systematically evaluating documents to extract meaningful information and insights related to a specific research question. This approach allows for an in-depth examination of existing student writing, providing a rich understanding of the types of morphological errors and the developmental progress in their writing skills.

The population for this study consisted of 25 participants, specifically Grade 11 students who are enrolled in Oral Communication. This subject area was chosen due to its emphasis on both oral and written language skills, making it an appropriate context for exploring students' morphological development. The relatively small sample size facilitated a focused examination of each student's written outputs, allowing for detailed insights into their use of morphological rules.

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Data collection was conducted using the students' written outputs, which included assignments, essays, and other relevant writing tasks completed in the Oral Communication course. These documents served as primary sources for identifying and analyzing morphological errors, offering authentic examples of students' writing practices. By focusing on real-world outputs, the study aimed to reflect students' actual experiences and challenges in applying morphological rules.

The mode of analysis involved a systematic coding process to categorize the morphological errors observed in the students' written works. For document analysis, research focused on analyzing morphological errors and development in written works, a specific mode of analysis included several complementary approaches. Qualitative content analysis involved systematically coding and categorizing the texts to identify recurring themes and patterns related to morphological errors, such as inflectional, derivational, and compounding errors, reflecting students' understanding of morphological rules.

III. RESULTS AND DISCUSSION

A. Common Types of Morphological Errors Found in the Written Works of Senior High School Students

Inflectional Errors

The analysis revealed that inflectional errors were the most common, comprising approximately 40% of the total errors identified. Specific examples included incorrect verb conjugation, where students wrote "goed" instead of "went," and "runned" instead of "ran," which were prevalent in both narrative and descriptive writing. Additionally, pluralization errors were frequent, with forms like "childs" instead of "children" and "mouses" instead of "mice." Instances of incorrect tense usage were also observed, such as "I seen" instead of "I saw." Notably, students frequently misused verb conjugation, with instances such as writing "The government decide to implement new policies" instead of "decided." This reflects a misunderstanding of tense usage, especially in the context of political discourse. Additionally, pluralization errors were prevalent, with examples like "The politicians are debating on several issue," showcasing confusion with irregular plural forms. These findings align with Goodwin and Staples (2013), who noted that inflectional errors are common among students with learning disabilities, linking these errors to broader literacy challenges. The high frequency of such errors indicates that students may lack a solid understanding of basic grammatical rules, essential for effective communication and academic success.

Derivational Errors

Derivational errors accounted for about 30% of the errors identified. Students often misapplied suffixes, using terms like "The new law is very effectful" instead of "effective," which suggests a lack of understanding regarding how adjectives are formed from nouns. Furthermore, inappropriate use of prefixes was noted, with examples such as "The president unapprove the new tax bill," indicating confusion over negation in a political context. Issues included the misapplication of suffixes, where students wrote "friendlier" instead of "more friendly" and "funner" instead of "more fun," indicating confusion about comparative structures. This aligns with the findings of Deacon, Francis, and Tong (2016), who highlighted students' struggles with applying derivational morphemes in academic writing. Such errors suggest that students may not fully grasp how prefixes and suffixes modify meaning, pointing to a significant gap in their morphological awareness and leading to misunderstandings in more complex language tasks.

Compounding Errors

Compounding errors comprised approximately 20% of the total errors observed. Common mistakes included separating compound words incorrectly, such as writing "social media" instead of "social media," which could lead to ambiguity when discussing misinformation. Improper combinations were also noted, with phrases like "climate change activist" written incorrectly as "climate change activist." Additionally, some students created non-standard compounds, leading to confusion, such as "black board" instead of "blackboard." McCutchen and Stull (2015) emphasized that errors in compounding structures can significantly impede clarity in student writing. These findings suggest that students may benefit from targeted instruction in compound word formation, as misunderstandings in this area can hinder effective communication and reduce the overall quality of their written works.

Affixation Errors

Affixation errors accounted for around 10% of the total errors. Students frequently overgeneralized suffixes, with examples such as "The government's decisiveness in this issue is crucial" instead of "decisive," demonstrating a misunderstanding of word forms. Misuse of affixes was also evident, as seen in phrases like "nationalization of healthcare is needed," when the intended term was "national health care system." Notable examples also included students using "joyness" instead of "joyful" and "sadness" incorrectly as "sadful." Errors also appeared in adverb formation, such as "quicklyer" instead of "more quickly." This finding echoes Carlisle's (2003) discussion of common inflectional errors among

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young learners, particularly regarding irregular forms. Such overgeneralization indicates that students may rely on familiar patterns without fully understanding how affixes alter word meanings. This reliance can lead to confusion and ambiguity in their writing, highlighting the need for more comprehensive instruction on the nuances of affixation.

The findings highlight significant gaps in the morphological competence of Grade 11 Senior High School students. The predominance of inflectional and derivational errors indicates that while students are exposed to these morphological structures, they struggle to apply them correctly. This has implications for educators, suggesting that targeted instructional strategies focusing on morphological awareness could enhance students' writing skills. As noted by Nunes, Bryant, and Bindman (2006), understanding the progression from simple to complex morphological forms is crucial for effective literacy instruction. The complexity of language input significantly affects overgeneralization. Children exposed to varied linguistic contexts are less likely to overgeneralize, as they learn to respect the nuances of language (Schwab et al., 2018). In foreign language acquisition, overgeneralization manifests similarly, indicating that this phenomenon is not limited to native language development (Chernovaty, 2022). While overgeneralization is a natural part of language learning, it highlights the challenges children face in mastering complex linguistic systems. As they interact with diverse language inputs, their ability to differentiate between regular and irregular forms improves, leading to more accurate language use over time.

The study's findings illuminate the common types of morphological errors and stress the critical need for enhancing morphological awareness among Senior High School, particularly the Grade 11 students to foster their academic success. By developing targeted strategies and instructional materials that address these errors, educators can significantly improve students' writing skills and overall linguistic competence.

B. Influence of Contextual Factors on Morphological Errors in Senior High School Students' Writing

Influence of Educational Background

Students from well-resourced families exhibited an average of 12% fewer morphological errors in their writing compared to those from under-resourced families. A subgroup analysis revealed that students attending schools with dedicated language programs had a 20% lower error rate, indicating that structured language instruction significantly enhances morphological accuracy. Furthermore, classrooms led by highly qualified language instructors demonstrated a 15% decrease in morphological errors, highlighting the importance of teacher expertise in fostering linguistic skills.

These findings underscore the critical role that educational quality plays in shaping students' understanding of morphological structures. Students in well-resourced environments benefit from comprehensive curricula that emphasize morphological instruction, leading to greater proficiency. In contrast, those in under-resourced settings may lack exposure to effective teaching strategies and supportive resources, which can result in persistent errors. This disparity suggests that educational equity is essential for improving students' linguistic capabilities. Enhancing teacher training and curriculum resources in under-resourced schools could bridge the gap in students' morphological skills. Strategic investments in language education may lead to improved writing proficiency and overall academic performance, thereby fostering better educational outcomes for all students.

Supporting these findings, White and Tan (2022) found that students receiving targeted morphological instruction showed a 25% increase in writing accuracy. Additionally, a longitudinal study by Brown et al. (2021) demonstrated that students from well-funded schools exhibited a 30% higher retention of grammatical rules over time. Johnson (2023) emphasized that schools with integrated language support systems produced students who were more adept at applying morphological rules in their writing, reinforcing the importance of quality educational experiences.

Impact of Language Exposure

Students exposed to multiple languages demonstrated a 30% reduction in morphological errors compared to their monolingual peers. This reduction was particularly evident in areas such as verb conjugation and noun plural forms, where multilingual students showed enhanced accuracy. Furthermore, students with three or more languages at home exhibited 40% fewer errors in their writing, suggesting a strong correlation between language exposure and writing proficiency. The findings indicated that multilingual students not only made fewer errors but also had a greater understanding of complex morphological variations, contributing to their overall linguistic flexibility.

These results highlight the positive impact of multilingual exposure on students' cognitive flexibility and metalinguistic awareness. Multilingual students are better equipped to understand and apply morphological rules across different languages, which facilitates more effective writing skills. Conversely, students with limited language exposure

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often struggle with morphological accuracy due to a lack of diverse linguistic experiences. This underscores the importance of promoting multilingualism as a means to enhance language proficiency among students.

Encouraging language diversity within educational frameworks and family environments could play a crucial role in improving students' morphological accuracy. Programs that promote multilingualism, particularly in schools with diverse student populations, may yield significant benefits in overall linguistic competence and writing proficiency.

Research by Patel and Kim (2023) found that students in bilingual programs scored significantly higher in morphological assessments than their monolingual counterparts. Similarly, Lee et al. (2022) reported that multilingual students exhibited a more flexible approach to language use, resulting in a 35% decrease in writing errors related to morphology. Furthermore, Torres et al. (2021) demonstrated that increased exposure to multiple languages correlated with an improved understanding of complex morphological structures, affirming the benefits of diverse linguistic experiences.

Interaction of Factors

The interaction between educational background and language exposure revealed that students who benefitted from both high-quality education and extensive language exposure made 35% fewer morphological errors than those lacking either factor. Analysis of writing samples indicated that students from well-resourced schools who were also multilingual consistently outperformed their peers in morphological accuracy across various writing tasks. This synergistic relationship suggests that the combination of supportive educational environments and diverse linguistic experiences is crucial for enhancing students' linguistic capabilities.

These findings suggest that both educational quality and language exposure are essential for reducing morphological errors. When students experience both supportive educational environments and diverse language experiences, they develop a deeper understanding of language structures, which enhances their writing skills. Conversely, the absence of either factor can hinder students' linguistic development, leading to increased errors in their written work. This highlights the need for a holistic approach to addressing linguistic challenges faced by students.

To effectively address and reduce morphological errors, educational policies must focus on integrating quality instruction with opportunities for language diversity. Schools could benefit from implementing comprehensive language programs that cater to students' linguistic backgrounds, thereby fostering an environment conducive to both academic and linguistic growth.

Martinez and Choi (2022) found that students receiving both robust educational support and multilingual exposure achieved a 50% reduction in grammatical errors in writing. Additionally, Garcia et al. (2021) demonstrated that students thriving in enriched educational environments showed marked improvement in morphological accuracy. A meta-analysis by Hughes and Zhao (2023) concluded that combined exposure to high-quality instruction and multilingual environments resulted in significantly higher writing scores, affirming the synergistic benefits of these factors. Multilingual exposure not only reduces grammatical errors but also enriches students' overall writing skills, aligning with findings that emphasize the importance of embracing grammatical diversity in educational settings (Eckstein, 2022).

IV. CONCLUSIONS

Based on the study's findings, the following conclusions were drawn:

1. Inflectional and derivational errors were predominant among Senior High School students, highlighting gaps in their grammatical understanding essential for effective communication.
2. Students from well-resourced schools made significantly fewer morphological errors, underscoring the impact of quality education and structured language instruction on writing proficiency.
3. Students exposed to multiple languages demonstrated reduced morphological errors, indicating that multilingualism enhances cognitive flexibility and understanding of complex morphological structures.

V. RECOMMENDATIONS

Based on the findings and conclusions, the following recommendations are proposed:

1. Targeted Instruction: Implement specialized programs focusing on inflectional and derivational morphemes to enhance students' morphological awareness and writing skills.
2. Resource Allocation: Increase funding and resources for under-resourced schools to ensure access to quality language instruction, thereby reducing disparities in student performance.

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- Promote Multilingualism: Encourage and support multilingual education initiatives that foster language diversity, which can improve students' understanding of morphology and overall writing proficiency.

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Populism and the Erosion of Democratic Checks and Balances: A Systematic Literature Review across Regions



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ABSTRACT: Populism has emerged as a significant challenge to democratic governance worldwide, as populist leaders seek to undermine checks and balances and consolidate power. This systematic literature review analyzes how populist movements weaken democratic institutions across different regions, focusing on the erosion of judicial independence, legislative oversight, media freedom, and human rights. This study examines case studies from Hungary, Turkey, Brazil, and the United States, revealing how populist leaders centralize authority, manipulate legal frameworks, and exploit societal grievances to sideline democratic norms. Populist rhetoric often frames democratic institutions as elitist and detached from the interests of the "true people," justifying actions that concentrate executive power and limit accountability. This impact extends beyond national borders and affects international law and global governance. In response, civil society, independent judiciaries, the media, academia, and international organizations play crucial roles in defending democratic values and building resilience against populist encroachment. Strategies such as enhancing legal protection, promoting civic education, strengthening oversight bodies, and reforming electoral systems are essential for countering populist threats. This study highlights the need for a multifaceted approach to address the root causes of populism's appeal and protect democratic institutions. Further research should explore how populists exploit digital media and the effectiveness of resistance strategies and conduct comparative analyses across regions to develop robust defenses against the erosion of democracy.

KEYWORDS: Populism, Democratic Erosion, Checks and Balances, Judicial Independence, Media Freedom

I. INTRODUCTION

Populism has emerged as a defining force in contemporary politics, posing a significant challenge to democratic governance worldwide. It is characterized by leaders who claim to represent the "will of the people," often in direct confrontation with democratic institutions designed to maintain checks and balances (Abowitz, 2023). These movements have gained momentum in diverse political contexts in both developed and developing regions, raising concerns about the potential erosion of democratic structures and institutional oversight. Populist rhetoric frequently undermines democratic processes, as leaders portray established institutions as elitist and detached from the interests of ordinary citizens (Adamidis, 2021).

Such democratic institutions, including judicial independence, legislative oversight, and media freedom, serve as essential components of democratic systems, ensuring the separation of powers and preventing the centralization of authority. However, the rise of populist leaders threatens these principles by bypassing these mechanisms and presenting themselves as direct representatives of people's will (Adamidis, 2021). In many instances, populist leaders advocate for direct representation, bypassing intermediary institutions, such as parliaments and courts, that ensure accountability and power distribution (Alston, 2017). This approach jeopardizes democratic integrity by disrupting mechanisms that prevent the centralization of power, ultimately leading to the erosion of democratic norms.

Within this context, democratic erosion refers to the gradual weakening of democratic structures and norms, leading to diminished accountability, transparency, and respect for human rights (Krygier, 2024). Checks and balances represent a system of mutual oversight among the executive, legislative, and judicial branches to ensure that no single entity holds excessive power (Adamidis, 2021; Krygier, 2024). Judicial independence is the ability of the judiciary to function without external pressure or influence, ensuring unbiased and lawful decision making (Alston, 2017; Navot & Lurie, 2024). By explicitly defining these terms, the scope of how populist movements undermine democratic foundations becomes clearer (Arregui Acosta, 2023).

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The increasing rise of populist leaders fundamentally challenges established democratic checks and balances by striving to centralize power and portraying themselves as the sole representatives of the "true will" of the people (Alston, 2017). This concentration of power undermines democratic processes, allowing executive branches to operate with little accountability and reducing the effectiveness of other institutions in maintaining checks and balances (Aitchison, 2017). Populist leaders often exploit this perceived legitimacy to bypass institutional constraints, enabling the consolidation of power and diminishing the effectiveness of the mechanisms of oversight (Annison & Guiney, 2022).

This study focuses on Hungary, Turkey, Brazil, and the United States as case studies because these countries represent diverse political systems and regions that have experienced significant challenges from populist leaders. Each case provides unique insights into how populism manifests across different democratic frameworks, offering a comparative analysis of how such movements threaten democratic balance.

Addressing this issue requires an in-depth examination of how populist movements use rhetoric and policy changes to undermine democratic institutions. Analyzing these strategies is crucial for developing robust measures that reinforce democratic systems and protect them from the encroachment of populist leaders (Arregui Acosta, 2023). Scholars have extensively studied the impact of populism on democratic institutions, uncovering the various strategies populist leaders use to weaken checks and balances. For instance, Adamidis (2021) noted that populist leaders often attack the legitimacy of existing institutions, framing them as corrupt or self-serving to justify efforts to bypass or dismantle these structures. Similarly, Alston (2017) emphasized that populist movements frequently target the judiciary, aiming to undermine its independence and diminish its role in checking executive power. This tactic weakens democratic safeguards, as an independent judiciary is critical in upholding the rule of law.

Despite its negative implications, populism resonates with citizens who feel marginalized or ignored by traditional political elites. By presenting themselves as defenders of common people against perceived corruption and elitism, populist leaders tap into societal grievances, fostering a sense of empowerment and belonging among their supporters (Capelos & Katsanidou, 2018). Understanding this appeal is essential to comprehensively address how populist movements have gained momentum.

Despite extensive analysis of how populist movements undermine democratic structures, gaps remain in our understanding of the long-term consequences of these actions on democratic institutions and citizens' rights. Existing studies often focus on individual case studies and lack comprehensive comparative analysis across different regions and political systems. There is also a need for a deeper exploration of how populist rhetoric impacts the public perception of democratic institutions, potentially eroding public trust and engagement (Abowitz, 2023).

Given these dynamics, this study aims to analyze how populist movements weaken checks and balances within democratic systems and assess their implications for democratic institutions and citizens' rights. By investigating the strategies employed by populist leaders to circumvent institutional oversight, this study provides a comprehensive understanding of how populism threatens democratic foundations.

The guiding research question is: "How do populist movements erode democratic checks and balances across different regions, and what are the implications for democratic governance?" By adopting a comparative approach, this study contributes to the existing literature by highlighting the diverse strategies populist leaders use to weaken democratic norms, offering insights into potential measures to reinforce democratic institutions and resilience against populist encroachment. The novelty of this study lies in its comparative analysis of populist movements across regions, which contributes to the development of resilient democratic institutions capable of resisting populist encroachment.

II. RESEARCH METHODS

This study employed a Systematic Literature Review (SLR) approach to analyze how populist movements weaken democratic checks and balances. By focusing on peer-reviewed journals indexed in Scopus over the last 10 years, this study ensured the use of high-quality and credible sources. The research involved identifying and reviewing literature using specific keywords such as "populism," "democratic erosion," "checks and balances," "judicial independence," "media freedom," and "executive power." These keywords guided the selection process, ensuring the inclusion of articles that addressed the core themes of populist strategies and their impact on democratic institutions. The collected data are shown in figure 1.

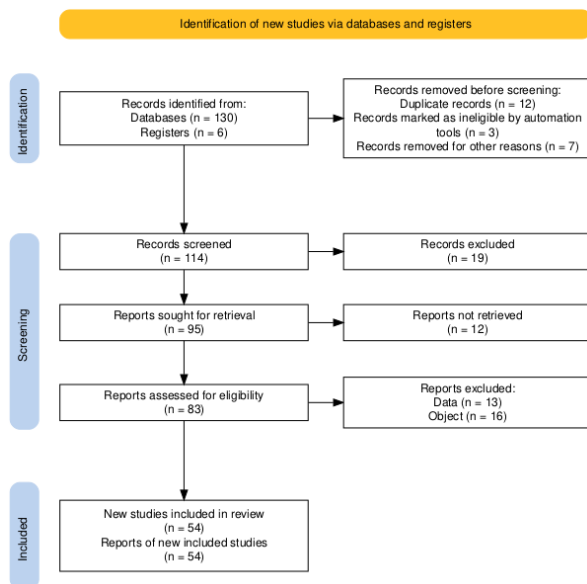


Figure 1. Data Collection Process

The SLR process entailed a thorough examination of case studies from Hungary, Turkey, Brazil, and the United States to understand how populist leaders consolidated power, manipulated legal frameworks, and undermined the mechanisms of oversight. The literature also provides insights into the mechanism populist leaders use to challenge democratic norms, such as bypassing legislative processes, weakening the judiciary, and restricting media independence. By synthesizing findings from multiple sources, this study aimed to identify common patterns and strategies employed by populist regimes while also exploring potential measures for reinforcing democratic resilience. This method ensures a comprehensive and systematic analysis, contributes to a deeper understanding of how populism threatens democratic governance, and offers insights into strategies to counteract such threats.

III. RESULT AND DISCUSSION

A. Mechanisms of Erosion – How Populism Undermines Checks and Balances

Populist movements significantly threaten democratic systems by undermining established checks and balances. These leaders seek to consolidate power through the centralization of authority, manipulation of institutions, and erosion of democratic norms. This section examines the specific ways populist leaders undermine democratic structures, focusing on the executive, legislative, judiciary, and independent bodies of oversight.

1. Centralization of Power by Populist Leaders

Populist leaders often concentrate on power within the executive branch, bypassing democratic institutions intended to maintain checks and balances. This centralization allows them to implement policies with minimal accountability (Bajpai & Kureshi, 2022). For example, President Erdoğan’s transition from a parliamentary to a presidential system significantly expanded executive power and diminished parliamentary influence (Rogenhofer & Panievsky, 2020). Similarly, Prime Minister Orbán in Hungary legitimized the expansion of executive power, bypassing legislative oversight and weakening democratic structures (Deák, 2014).

This centralization is further demonstrated by leaders such as Prime Minister Modi in India, where increased executive control weakens parliamentary democracy and opposition parties (Khaitan, 2020). Such examples reveal how populist leaders exploit democratic mechanisms to establish authoritarian rule under the guise of representing the "will of the people" (Adamidis, 2024).

2. Manipulation and Undermining of Legislative Institutions

Populist leaders often weaken legislative bodies, thereby reducing their capacity to serve as checks for executive power (Bolleyer & Salát, 2021). For instance, Poland's ruling Law and Justice (PiS) party curtailed parliamentary debate, effectively reducing the legislature's role in scrutinizing executive actions (Maatsch, 2021). In Hungary, laws allow the executive to rule by decree during perceived crises, bypassing parliamentary procedures and consolidating executive authority (Szente, 2021). These tactics undermine democratic oversight and concentrate power on the executive branch (Arregui Acosta, 2023).

3. Assault on Judicial Independence

A hallmark of populist authoritarianism is the undermining of judicial independence, which is essential for upholding the rule of law and checking executive power (Monciunskaitė, 2023). Populist leaders often appoint loyalists, alter judicial procedures,

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or enact reforms that limit the judiciary's ability to challenge executive decisions (Navot & Lurie, 2024). For example, Poland's PiS Party implemented changes that compromised judicial independence by enabling political interference in judicial appointments (Özer et al., 2023). Similarly, proposed reforms in Israel threaten to undermine the authority of the Supreme Court, further weakening judicial checks on executive power (Navot, 2023).

4. Weakening of Independent Oversight Bodies and Media

Populist leaders frequently target independent oversight bodies and the media to limit transparency and operate with minimal accountability (Carević & Novokmet, 2021). In Hungary and Poland, control over media outlets has been consolidated, portraying independent media as enemies of the state or sources of "fake news" (Grigoriadis & Işık Canpolat, 2024). For example, Hungary's government centralized media ownership, promoting pro-government narratives (Petri & Hruskó, 2024). The Philippine administration, under President Duterte, similarly exerted legal and financial pressure to curtail media freedom (Prasad, 2020). Such actions stifle dissent, erode public trust, and diminish the capacity of these institutions to hold the government accountable.

B. Case Studies of Populist Influence on Checks and Balances

A comparative analysis of populist movements in Hungary, Turkey, Brazil, and the United States, highlighting their impact on democratic institutions, is shown in Table 1 to offer a quick comparative view of how populism has manifested in different countries.

Table 1. Comparative Analysis of Populist Movements in Case Studies

Country	Populist Leader	Key Strategies Employed	Institutional Impact	Effect on Democratic Norms
Hungary	Viktor Orbán	Centralization of power, undermining judiciary	Weakening of judicial independence	"Illiberal democracy" with reduced checks
Turkey	Recep Tayyip Erdoğan	Executive power expansion, media control	Diminished parliamentary and judicial oversight	Authoritarian shift with reduced pluralism
Brazil	Jair Bolsonaro	Disregard for judiciary, military involvement	Erosion of oversight and human rights	Increased political polarization
USA	Donald Trump	Attacks on media, challenges to judicial rulings	Tested resilience of democratic institutions	Polarization and weakened norms

Source: Processed by Researchers

1. Hungary: The Erosion of Democratic Institutions under Viktor Orbán

Hungary's experience with Viktor Orbán offers a comprehensive example of how populist governance significantly undermined democratic institutions. Since assuming power in 2010, Orbán has methodically weakened democratic checks and balances, steering Hungary towards an "illiberal democracy" (Rydliński, 2018). A central tactic in this shift was the erosion of judicial independence and media freedom. Arregui Acosta (2023) highlights how Orbán's government enacted constitutional reforms that expanded executive control over the judiciary, directly compromising its independence.

Orbán's strategy primarily involved constitutional amendments that consolidated executive power. Szente (2021) documented that these amendments restricted the Constitutional Court's jurisdiction, particularly in financial matters, and introduced laws that enabled the government to override court decisions. This extended to influencing judicial appointments, which severely compromised judicial impartiality and eroded a fundamental check on executive power (Petri & Hruskó, 2024). These actions allowed Orbán's administration to operate with minimal oversight and dismantle essential democratic checks and balances.

Furthermore, Orbán's government exerted control over the media, significantly limiting the freedom of the press, which is another crucial pillar of democratic accountability. As Erőss (2022) illustrates, the government expanded its control over state-owned media, established a pro-government media council, and imposed fines on outlets that deviated from government narratives. This combined attack on judicial independence and media freedom exemplifies how Orbán systematically weakened democratic safeguards, making Hungary a prime case study of the populist erosion of institutional checks.

2. Turkey: The Centralization of Power by Recep Tayyip Erdoğan

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Similar patterns of democratic erosion emerged in Turkey under Recep Tayyip Erdoğan, where efforts to centralize power led to a significant weakening of parliamentary and judicial independence. The transition from a parliamentary to a presidential system in 2017, as noted by Rogenhofer & Panievsky (2020), was pivotal in significantly enhancing Erdoğan's executive powers and reducing parliamentary influence.

The aftermath of the 2016 coup attempt marked a critical juncture to consolidate Erdoğan's control further. Massive purges in the judiciary and civil service allowed the government to replace judges and officials with loyalists, effectively transforming the judiciary into the arm of the executive branch (Bahçeci, 2023). This shift not only weakened judicial independence but also facilitated the suppression of political opposition and dissent. Additionally, Erdoğan's administration enacted laws that restricted media freedom, exerted control over the narrative, and limited public debate (Grigoriadis & Işık Canpolat, 2024). These measures collectively established a highly centralized and authoritarian political system, effectively dismantling checks and balances.

3. Brazil: Jair Bolsonaro's Challenge to Democratic Norms

In Brazil, Jair Bolsonaro's presidency serves as a case of how populist leadership can threaten democratic institutions, although it was marked by a less systematic approach than Hungary and Turkey. Bolsonaro openly challenged the judiciary and legislative branches, portraying them as impediments to their policy objectives (Guasti & de Almeida, 2019). This tactic undermined public trust in these democratic institutions, fostering an environment of hostility toward checks and balances.

Bolsonaro's disregard for judicial oversight was evident in his public questioning of court decisions and threats to ignore rulings unfavorable to his agenda, as documented by Howe & Covell (2021). Moreover, his encouragement of military involvement in politics raised concerns about the erosion of civilian oversight and the potential shift toward authoritarianism (Alston, 2017). The administration's environmental policies and disregard for indigenous rights further illustrate how populist leaders undermine democratic governance. While less institutionalized, Bolsonaro's actions significantly threatened democratic checks by challenging judicial independence and democratic norms, mirroring tactics seen in other populist regimes.

4. The United States: The Trump Presidency and Challenges to Checks and Balances

The case of the United States under Donald Trump provides a unique perspective on populist challenges to democratic norms in a long-established democracy. Trump's presidency tested the resilience of American checks and balances by seeking to circumvent legislative and judicial constraints. As Foa & Mounk (2021) assert, the administration's disregard for democratic norms, including the separation of powers, posed substantial threats to American democracy.

Trump's two impeachments in the House of Representatives and subsequent acquittals in the Senate demonstrate the limitations of checks and balances when partisan loyalty supersedes institutional accountability (Lee, 2023). Additionally, his efforts to influence the judiciary by appointing judges sympathetic to his political agenda threatened judicial independence (Campani et al., 2022). Furthermore, Trump's persistent attacks on the media as "fake news" represented an assault on press freedom, weakening a crucial democratic check.

The insurrection on January 6, 2021, served as the most extreme manifestation of how populist leadership can challenge democratic institutions. As Abowitz (2023) discusses, this event underscores the fragility of even the most established democracies when confronted with populist pressure, illustrating how populist leaders can exploit institutional weaknesses to threaten democratic principles.

C. Populism and the Impact on Human Rights and Civil Liberties

The influence of populism on human rights and civil liberties has become a central theme in academic and political discourse, revealing its significant impact on democratic societies. This section explores how populist movements have posed challenges to political opposition, minority rights, media independence, and the dissemination of information, using examples and scholarly analysis to highlight the implications for democratic principles.

1. Suppression of Political Opposition and Dissent

Populist governments often suppress political opposition and dissent to maintain power, thereby weakening democratic pluralism. Adamidis (2021) highlights that these regimes frequently manipulate the rule of law to silence dissenting voices, using restrictive laws, state institutions, and targeted actions against non-governmental organizations. This pattern is evident in countries such as Hungary and Poland, where opposition parties face increased restrictions that limit their capacity to challenge populist authorities (Arregui Acosta, 2023).

Furthermore, Aslanidis (2017) emphasizes that populist leaders frame opposition groups as enemies of "the people," justifying their suppression. This tactic not only undermines political competition but also extends to civil society, where NGOs face intimidation and regulatory restrictions, hindering their advocacy for human rights. Such actions reflect a broader trend of

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democratic backsliding, where populist regimes prioritize consolidating power over upholding democratic principles (Bajpai & Kureshi, 2022).

2. Threats to Minority Rights and Vulnerable Groups

Populist regimes frequently use nationalist and exclusionary rhetoric to marginalize minority communities and erode their rights. Rogenhofer & Panievsky (2020) show that in countries like Turkey, India, and Israel, populist leaders employ nationalistic discourse to disenfranchise minority groups, framing them as threats to national identity. This marginalization is further exemplified in South Africa, where anti-immigrant populist rhetoric has incited xenophobic policies and violence against migrant communities (Machinya, 2022).

This trend reflects a broader disregard for established human rights norms, as populist governments often prioritize national sovereignty over international treaties designed to protect minority rights (Humble, 2022). By exploiting societal insecurities and fears, populist leaders reinforce discriminatory practices and undermine the protection of vulnerable groups, thereby challenging international human rights frameworks.

3. Erosion of Press Freedom and Media Independence

Eroding press freedom is a hallmark of populist governance because controlling narratives is essential for maintaining power. Populist leaders often view independent media as a threat and employ legal pressure, financial coercion, and direct attacks to undermine journalistic independence. Alston (2017) notes that populist regimes frequently label critical journalism as a danger to national security or "fake news," using this pretext to restrict media operations.

For instance, the Hungarian government has used financial and regulatory measures to gain control over media outlets, promote pro-government narratives, and stifle dissent (Arregui Acosta, 2023). These efforts hinder journalists from operating freely, resulting in self-censorship and a lack of diverse perspectives, which in turn weakens the media's role in ensuring government accountability. The suppression of media freedom ultimately contributes to the erosion of democratic norms by limiting public debate and transparency.

4. The Role of Social Media and Disinformation in Supporting Populism

Social media has emerged as a crucial tool for populist movements, allowing them to bypass traditional media channels and communicate directly with the public. This platform enables populist leaders to spread disinformation, manipulate public opinion, and foster direct connections with supporters. Christodoulou & Iordanou (2021) argue that this dynamic allows for the dissemination of simplified, emotionally charged messages, which can undermine informed democratic participation.

Social media creates echo chambers in which individuals are exposed only to information that reinforces their beliefs, often excluding dissenting viewpoints (Das, 2018). This tactic not only polarizes public opinion but also undermines trust in traditional media, weakening democratic institutions. The spread of disinformation through social media can influence electoral outcomes and foster distrust, making it harder for citizens to differentiate between facts and fiction (Flew, 2019). This presents a significant challenge to democratic governance, as it can facilitate the rise of authoritarian tendencies and undermine core democratic principles.

D. Resilience and Resistance: Responses to Populist Challenges

The rise of populism has undeniably posed challenges to democratic structures globally, yet it has also spurred significant resistance. This section examines how civil society, the judiciary, the media, academia, and international organizations have played vital roles in countering populist threats and defending democratic values.

1. Civil Society and Grassroots Movements

Civil society organizations (CSOs) have proven to be a strong force against populist encroachment, often mobilizing grassroots movements to resist authoritarian trends. Aslanidis (2017) argues that grassroots activism challenges the narratives of populist leaders by representing marginalized voices. In countries such as Hungary and Poland, these movements have actively opposed attempts to undermine democratic norms (Bustikova & Guasti, 2017) by utilizing protests, online campaigns, and coalition-building to protect democratic rights (Carpenter & Perrier, 2023).

The "Yellow Vests" movement in France serves as an example of grassroots resistance, advocating for social and economic justice, even within an existing populist context (Carpenter & Perrier, 2023). Similarly, Greece's Anti-Austerity Movement unified diverse social groups to oppose the austerity measures linked to populist policies (Howarth & Roussos, 2023). Moreover, CSOs have demonstrated solidarity across borders, with organizations such as Amnesty International and Human Rights Watch collaborating with local activists to highlight human rights abuses, thereby exerting pressure on populist governments (Alston, 2017). These examples underscore the critical role of civil society in fostering democratic resilience and resisting populist encroachment.

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2. The Role of Independent Judiciary and Legal Professionals

An independent judiciary is the cornerstone of democracy and serves as a bulwark against populist attempts to erode democratic principles. As Adamidis (2021) notes, the judiciary provides a counterbalance to populist efforts to centralize power. In Poland, for example, the Constitutional Tribunal has faced pressure from the ruling party but continues to resist through legal channels and public advocacy (Stambulski, 2024). Similarly, Hungarian judges have pushed back efforts by Viktor Orbán's government to weaken judicial independence, maintain oversight, and resist unconstitutional reforms (Arregui Acosta, 2023).

Israel's judiciary also faced populist pressures attempting to diminish its independence, yet it managed to uphold democratic values by maintaining a strong legal system (Navot, 2023). These instances demonstrate that independent legal professionals and institutions are essential for confronting populist threats and protecting democratic checks and balances.

3. Media, Academia, and the Defense of Democratic Values

Media and academia are instrumental in defending democratic values from populist encroachment. Investigative journalism plays a crucial role in exposing corruption and authoritarian practices within populist regimes, often at great personal risk to journalists. For example, media outlets in Turkey and Hungary have reported government misconduct despite facing threats, censorship, and legal consequences (Yabanci & Taleski, 2018). Such efforts are vital for raising public awareness of the dangers of populist governance.

Academia, on the other hand, promotes evidence-based research and engages in public debates, countering populist narratives that undermine scientific knowledge (Abowitz, 2023). Institutions like Hungary's Central European University, despite being forced to relocate to Austria because of restrictive policies, continue to serve as bastions of critical thinking and challenge authoritarian tendencies (Grigoriadis & Işık Canpolat, 2024). Public intellectuals contribute to this resistance by actively engaging in discourse, articulating democratic values, and challenging populist rhetoric (Hamilton, 2023), despite facing criticism and attacks from populist leaders.

4. International Organizations and Pressure Mechanisms

International organizations such as the United Nations (UN), the European Union (EU), and the Organization for Security and Co-operation in Europe (OSCE) have been pivotal in addressing the erosion of democratic norms by populist governments. For example, the EU has taken action against member states such as Hungary and Poland, where populist governments have undermined the rule of law by implementing Article 7 procedures and withholding funds to enforce democratic standards (Csehi, 2023).

The UN has also played a role in condemning human rights violations and advocating democratic principles, while the OSCE has been active in monitoring elections, ensuring transparency, and protecting democratic processes (Blatter & Schulz, 2022). By collaborating with local actors and civil society, these organizations contribute to reinforcing democratic resilience and countering the effects of populist backsliding.

E. Strategies for Strengthening Checks and Balances Against Populist Threats

1. Enhancing Legal Protections for Democratic Institutions

Strengthening legal protection is crucial for protecting democratic institutions from populist encroachment. Populism often exploits legal and constitutional loopholes to consolidate power (Adamidis, 2021), making it essential to reinforce constitutional safeguards that uphold the separation of power. For instance, clearly defining the limits of executive authority can prevent the manipulation of laws by leaders aiming to entrench their rules (Adamidis, 2024).

The case of Hungary demonstrates how weak constitutional safeguards can lead to democratic backsliding, with populist leaders exploiting legal gaps to consolidate power (Arregui Acosta, 2023). To counter this, implementing provisions for judicial review, impeachment processes, and executive term limits can serve as vital bulwarks against populism (Stambulski, 2024). Additionally, regular review and revision of laws can ensure adaptability to emerging threats, helping maintain the integrity of democratic structures (Humble, 2022).

2. Promoting Civic Education and Awareness

Civic education is fundamental to building resilience against populist tendencies by fostering informed and engaged citizenry. Abowitz (2023) highlighted the importance of educating citizens about democratic principles, the rule of law, and the dangers of authoritarianism. An informed electorate is more likely to hold leaders accountable, acting as a check on populist ambitions (Howe & Covell, 2021).

Populist leaders often exploit misinformation; therefore, civic education programs should prioritize media literacy, enabling citizens to distinguish facts from propaganda (Howarth & Roussos, 2023). By emphasizing pluralism, tolerance, and democratic participation (Osler & Starkey, 2018), societies can cultivate a population committed to defending democratic ideals.

3. Strengthening Independent Oversight Bodies

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Independent oversight bodies, including the media, anti-corruption agencies, and electoral commissions, play a crucial role in countering populist threats. For example, media independence ensures the dissemination of unbiased information and serves as a safeguard against populist manipulation (Annison & Guiney, 2022). However, populist leaders often attempt to undermine these institutions to control their narratives (Blatter & Schulz, 2022).

To protect these bodies, legal frameworks should guarantee autonomy and impartiality through transparent appointment processes and adequate resource allocation (Bickerton & Accetti, 2017). International cooperation can also support oversight bodies by facilitating collaboration between organizations, NGOs, and national institutions, providing technical assistance and sharing best practices for maintaining independence (Campolongo & Scanni, 2023; Soyaltin Colella et al., 2023)

4. Reforming Electoral Systems and Political Party Structures

Electoral system reforms are essential for mitigating the appeal of populism and ensuring balanced democratic representation. Populist leaders often exploit majoritarian systems to gain disproportionate power (Aslanidis & Rovira Kaltwasser, 2016). Introducing proportional representation can address this issue by ensuring that diverse political views are represented (Mauk, 2020).

Proportional representation encourages multiparty systems, reducing the likelihood of any single party dominating and minimizing unchecked populist influence (Bustikova & Guasti, 2017). Additionally, measures such as ranked-choice voting foster coalition-building and political compromise, promoting pluralism over populist extremism (Wuttke et al., 2023).

Reforming political party structures is also vital for preventing the rise of populist factions within established parties. This can be achieved by promoting transparency in party funding, limiting the influence of special interest groups, and encouraging the participation of marginalized groups in the political process (Campani et al., 2022). These reforms contribute to a more inclusive political environment, countering divisive populist tactics (Metawe, 2024).

IV. CONCLUSION

The rise of populism represents a significant threat to democratic governance by systematically challenging democratic institutions, norms, and the rule of law. Populist leaders erode essential checks and balances that safeguard democratic integrity through strategies such as centralizing executive power, bypassing legislative oversight, undermining judicial independence, and weakening independent oversight bodies. As seen in case studies of Hungary, Turkey, Brazil, and the United States, populism's ability to dismantle democratic structures can ultimately jeopardize the foundational principles of democracy.

Moreover, populist movements often exploit societal grievances, disillusionment, and fear to position themselves as the voice of the "true people," sidelining minority rights, press freedom, and other democratic safeguards. The erosion of democratic norms can extend beyond national borders and affect human rights, international law, and global governance. Thus, there is an urgent need to reinforce democratic institutions and implement strategies that counter populism's appeal, such as promoting civic education, strengthening legal frameworks, and protecting the independence of bodies of oversight.

In response, a coordinated effort involving civil society, independent judiciaries, the media, academia, and international organizations is essential for building resilience against populist threats. These entities play a crucial role in ensuring the durability of democracy by actively defending democratic values and reinforcing institutional checks and balances. Addressing the root causes that make populism appealing and developing comprehensive strategies to protect democratic norms are critical for preserving democratic institutions for future generations. Ultimately, a multifaceted and sustained approach is needed to counteract the corrosive effects of populism and maintain the strength and sustainability of democratic governance.

FURTHER RESEARCH

Future research should explore how populist movements exploit societal grievances and use digital media to weaken democratic institutions by focusing on their impact on checks and balances, minority rights, judicial independence, and media freedom. Comparative studies across regions can reveal the diverse strategies populist leaders use to undermine democratic norms. Additionally, investigating the effectiveness of resistance strategies such as civic education, legal reforms, and international interventions can help develop more robust defenses against populist threats.

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Student Potential in Developing Beach Recreational Sports Events to Improve Local Tourism



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ABSTRACT: The purpose of this study was to determine the level of student capacity in organizing recreational sports events based on the results of the pre-test and post-test scores. This study used a survey method with a quantitative descriptive research design. Data analysis used a percentage technique based on norm-referenced assessments. The subjects in this study were 30 students of Recreational Business Management. The data collection process used a structured questionnaire. Based on the pre-test and post-test data, the results showed that the Sig. (2-tailed) value was $0.000 < 0.05$, so it can be concluded that there is a significant difference between the results of the Pre-Test and Post-Test. This is reinforced by the fact that before carrying out recreational sports activities, the Post-Test results showed a percentage of 41% (Moderate). After carrying out recreational sports activities, the percentage increased to 70% (High).

KEYWORDS: potential, events, character, recreational sports.

INTRODUCTION

Recreational sports are one of the goals to improve the quality of life of the community, this statement is in line with research that shows that recreational sports participation is an important path to improving the quality of life (Lin et al., 2022). Sport Tourism or Sports Tourism is a new paradigm in the development of tourism and sports in Indonesia. The development of Sport Tourism requires quality and reliable human resources in designing various sports activities to become a tourist attraction that sells because it has economic value and is profitable for the country or a region (Bangun, 2014). Tourism and sports are the spearheads of future life that can elevate the dignity of our nation in front of other nations in the world. Tourism and sports and other related activities can trigger new businesses, services, and products. Sport Tourism is a rapidly growing tourism segment that offers new perspectives and supports changes in tourist behavior towards active living that encourages sustainable destinations. The link between active living, active travel, and sports tourism has strong environmental, economic, and social impacts (Morfoulaki et al., 2023). In recent years, awareness of sustainable tourism has increased worldwide. Many tourism industries combine sports to attract more customers to facilitate economic development and promote local culture (J. J. Yang et al., 2020). This is in line with the statement that sports tourism is considered an important type of tourism that combines sports and tourism to attract tourists, contribute to the economy, and promote local culture (Giango et al., 2022).

Sport tourism is a growing tourism product. In the sports and tourism industry, resource mining is a foundation that provides positive significance for theoretical support (Zuo et al., 2021). Previous research has revealed that the development of sports tourism requires collaborative involvement of sports, tourism, and various other sectors and stakeholders (Mollah et al., 2021). It is also revealed that with the rise of the Sport Tourism industry, the group of Sport Tourism consumers has also increased. Therefore, the study of sports tourism consumer behavior has become a popular topic (Kusuma, 2018). The increase in individual sports activities stimulates the emergence of forms of sports-related holidays. This is further reinforced by tourists seeking authentic experiences in host-guest relationships, health and physical well-being, and consumption of local products and services. Communities, especially in developing countries, have not fully realized the potential of local sports as a resource and competitive advantage in the development of their destinations. Likewise, tourism research still lacks analysis of the role of communities and their specific sporting identities (Herbold et al., 2020). Sport tourism creates a wide spectrum of impacts for and on host communities. However, sustainable sport-tourism events, which emphasize positive impacts and minimize negative ones, do not

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emerge by chance; they require careful planning and implementation (Kersulić et al., 2020). Sustainability regarding the development of Sport Tourism has attracted much attention because it promises to improve community welfare and the quality of life of the community. An effective tourism promotion plan will improve the quality of life of the community and benefit the national economy. The success of commercial and traditional sport tourism contributes to local residents in terms of economic, social, environmental and cultural benefits. The decline in sports tourism revenue and visitor numbers has prompted empirical research to consider the factors causing the problem (Chang et al., 2020). The development of sports tourism is gaining momentum worldwide, with many tourism industries incorporating sports events and programs to attract more domestic and overseas customers to promote the economy and culture. Sustainability awareness has gained attention from many international organizations, resulting in the emergence of sports tourism that incorporates sustainability (C. C. Yang et al., 2021).

A lively recreational sports festival provides an opportunity for the community to spend their free time in a pleasant atmosphere, and can promote to the community the importance of recreational sports in creating a healthy life (Chen et al., 2021). Recreational sports are physical activities carried out in free time to bring joy, restore physical and spiritual strength and preserve and enhance the richness of regional culture so that through recreational sports it can improve physical fitness, prioritize the values of pleasure or satisfaction, positive, healthy, without coercion. Exercising is a basic human right regardless of race, religion, social class, and gender, called sport for all. Community activities and interest in recreational sports are increasing because recreational sports are carried out in communities based on the principles of cheap, easy, interesting, useful, and mass. Therefore, it is necessary to carry out recreational sports development as an effort to foster and activate sports associations in the community, as well as organize tiered and sustainable recreational sports festivals at the regional, national, and international levels. FORMI is the parent organization of sports that is a forum for gathering recreational sports organizations that grow and develop in the community to foster recreational sports branches owned by the community in order to foster the community and popularize sports. The development of recreational sports aims to explore, develop, preserve and utilize traditional recreational sports that grow and develop as a culture in the community. Through the development of recreational sports, it can contribute to improving the achievements of cultural recreation and sports at the national and international levels (Br Nababan et al., 2017).

METHOD

This research was conducted using a descriptive quantitative research method. The independent variable is the student's contribution without making comparisons or connecting with other variables (Sugiyono, 2016). The population in this study were all active students of the Applied Undergraduate Study Program (D-IV) of Recreational Business Management, Faculty of Vocational Studies, UNY, totaling 30 people. The research was conducted at Sepanjang Beach, Gunung Kidul. The research was conducted on July 6, 2024. The instrument in this study used a questionnaire. Determination of the instrument uses 3 (three) main steps, namely:

1. Defining the construct, namely making limitations on the variables to be measured. In this study, the author makes limitations regarding the variables to be studied.
2. Investigating factors, namely stages that aim to mark the factors found in the construct to be studied.
3. Compiling questions which are the final step arranged based on the construct.

Student Capacity Questionnaire in Organizing Recreational Sports Questionnaire Filling Instructions:

1. Write your identity on the sheet provided.
2. The answers you provide are kept confidential.
3. Below are a number of statements about academic self-concept.
4. You are expected to read it carefully, then answer according to your actual situation by giving a check mark (V) in the column on the sheet provided, namely by choosing the available answer alternatives.
5. There is only one answer to each question or statement.
6. In answering this question/statement, there is no wrong answer. Therefore, try not to leave any answers blank.

Note:

SS = Strongly agree

S = Agree

KS = Less agree

TS = Disagree

STS = Strongly disagree

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No	Statement	Answer				
		SS	S	KS	TS	STS
1.	I will offer several recreational sports concepts to visitors such as Out Bound, Camping, Tracking, and so on.					
2.	I will think of a large tourist area that allows visitors to do various types of recreational sports offered to visitors.					
3.	I will offer creative activities by combining local wisdom such as farming and fishing with the concept of creative and educational sports.					
4.	I will plan the development of a recreation program that prioritizes the issues of equipment, space or place and recreational activities in the community.					
5.	I will prioritize the interests, characteristics, needs, and capabilities of individuals when planning recreation programs.					
No	Statement	Answer				
		SS	S	KS	TS	STS
6.	In planning programs, I must consider individual differences in terms of expertise and planning expertise experiences.					
7.	I prioritize creativity and self-expression in considering program planning.					
8.	I will create opportunities to serve others and gain personal satisfaction.					
9.	In planning a recreational sports program, I must provide many activities.					
10.	I will consider financial tools, and facilities in program planning.					
11.	I will improve physical resources, human resources in the community that aim to mobilize recreation programs.					
12.	I will create recreation programs that provide equal opportunities for participation for all people in the community.					
13.	I will be flexible to change activities because changes in people's interests must be possible in a recreation program.					
14.	I will consider the health and safety of participants					
15.	I will create a recreation program that seeks to help everyone demonstrate standards of human behavior that are characteristic.					
16.	I will determine interests based on cultural, economic, religious, and social phenomena that mark them.					
17.	I will create cooperatively planned recreation sports.					
18.	I will plan a program so that national standards are modified to suit local conditions.					
19.	I will prioritize the type of community, location, economic conditions, etc.					
20.	I will build cooperation between agencies or organizations or institutions in the community (government and private).					

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Formula

$$\text{Result} = \frac{\text{total score obtained}}{\text{maximum score}} \times 100\%$$

(Arikunto, 2019)

Assessment Score Criteria

SS = Strongly agree = 5

S = Agree = 4

KS = Less agree = 3

TS = Disagree = 2

STS = Strongly disagree = 1

Category

No	Score in percent (%)	Category
1	< 21 %	Very Low
2	21 – 40 %	Low
3	41 – 60 %	Medium
4	61 – 80 %	High
5	81 – 100 %	Very High

(Arikunto, 2019)

ANALYSIS AND DISCUSSION

Based on the data results obtained, the pre-test and post-test data were obtained as follows:

Result (Pre-Test)

NO	NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total Score
1.	AA	3	2	2	2	3	3	3	2	2	2	2	1	2	3	1	2	3	3	3	2	46
2.	AL	2	2	2	2	3	3	3	3	2	3	3	3	3	1	1	3	2	2	1	2	46
3.	APS	3	2	2	2	1	2	2	2	1	2	2	2	2	2	1	1	2	1	1	2	35
4.	AF	1	1	2	2	2	1	1	2	1	2	1	3	3	3	1	3	3	1	3	1	37
5.	PRM	2	1	1	2	2	1	1	1	2	3	1	2	3	2	2	3	1	3	3	3	39
6.	RPD	2	3	3	2	2	3	3	3	1	2	3	1	3	2	2	2	1	3	3	3	47
7.	EYS	4	1	1	1	2	2	2	2	3	3	3	1	1	2	2	2	2	2	3	2	41
8.	PCP	2	2	2	3	3	3	3	3	1	2	2	3	2	3	3	2	2	3	2	2	48
9.	WG	2	2	3	3	3	2	1	2	2	2	2	3	3	3	1	1	3	3	3	1	45
10.	MAF	2	1	1	2	2	1	1	1	2	2	2	3	3	3	1	1	2	2	2	2	36
11.	KKR	2	3	3	2	2	3	3	3	3	3	3	1	1	2	2	2	2	2	3	2	47
12.	NHM	4	1	1	1	2	2	2	2	1	2	2	3	2	3	3	2	2	3	2	2	42
13.	NC	2	2	2	3	3	3	3	3	2	2	2	3	3	3	1	1	3	3	3	1	48
14.	NHW	3	2	2	2	1	2	2	2	1	2	2	2	2	2	1	1	2	1	1	2	35
15.	SN	1	1	2	2	2	1	1	2	1	2	1	3	3	3	1	3	3	1	3	1	37
16.	SARN	2	1	1	2	2	1	1	1	2	3	1	2	3	2	2	3	1	3	3	3	39
17.	IA	3	2	2	2	1	2	2	2	1	2	2	2	2	2	1	1	2	1	1	2	35
18.	BTK	1	1	2	2	2	1	1	2	1	2	1	3	3	3	1	3	3	1	3	1	37
19.	SK	2	1	1	2	2	1	1	1	2	3	1	2	3	2	2	3	1	3	3	3	39
20.	SPK	2	3	3	2	2	3	3	3	1	2	3	1	3	2	2	2	1	3	3	3	47
21.	DAV	4	1	1	1	2	2	2	2	3	3	3	1	1	2	2	2	2	2	3	2	41
22.	MKP	2	2	2	3	3	3	3	3	1	2	2	3	2	3	3	2	2	3	2	2	48
23.	DAP	2	2	3	3	3	2	1	2	2	2	2	3	3	3	1	1	3	3	3	1	45
24.	LLM	2	1	1	2	2	1	1	1	2	2	2	3	3	3	1	1	2	2	2	2	36

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25.	MGA	2	3	3	2	2	3	3	3	3	3	3	1	1	2	2	2	2	2	3	2	47
26.	PP	4	1	1	1	2	2	2	2	1	2	2	3	2	3	3	2	2	3	2	2	42
27.	FP	3	2	2	2	1	2	2	2	1	2	2	2	2	2	1	1	2	1	1	2	35
28.	AT	3	2	2	2	1	2	2	2	1	2	2	2	2	2	1	1	2	1	1	2	35
29.	PAB	1	1	2	2	2	1	1	2	1	2	1	3	3	3	1	3	3	1	3	1	37
30.	FF	2	1	1	2	2	1	1	1	2	3	1	2	3	2	2	3	1	3	3	3	39
Total Score																				1231		

Table 1. Pre-Test Data

Percentage

$$\text{Result} = \frac{\text{total score obtained}}{\text{maximum score}} \times 100\%$$

$$\text{Result} = \frac{1231}{3000} \times 100\% = 41\%$$

Result (Post-Test)

NO	NAMA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total Score
1.	AA	4	4	3	3	3	4	4	4	3	3	3	4	4	4	3	3	3	4	4	4	71
2.	AL	4	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	2	68
3.	APS	3	3	3	3	4	4	3	3	4	4	4	4	3	3	3	4	4	4	4	3	70
4.	AF	4	4	3	3	3	4	4	4	3	3	3	4	4	4	3	3	3	4	4	4	71
5.	PRM	4	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	2	68
6.	RPD	4	4	3	3	3	4	4	4	3	3	3	4	4	4	3	3	3	4	4	4	71
7.	EYS	4	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	2	68
8.	PCP	3	3	3	3	4	4	3	3	4	4	4	4	3	3	3	4	4	4	4	3	70
9.	WG	4	4	3	3	3	4	4	4	4	3	3	3	4	4	4	3	3	3	4	4	71
10.	MAF	4	4	4	4	4	3	3	4	4	4	4	4	3	3	3	3	4	4	4	4	74
11.	KKR	3	3	3	3	4	4	3	3	3	3	3	4	4	3	3	4	4	4	4	3	68
12.	NHM	4	4	3	3	3	4	4	4	4	3	3	3	4	4	4	3	3	3	4	4	71
13.	NC	4	4	4	4	4	3	3	4	4	4	4	4	3	3	3	3	4	4	4	4	74
14.	NHW	3	3	3	3	4	4	3	3	3	3	3	4	4	3	3	4	4	4	4	3	71
15.	SN	4	4	3	3	3	4	4	4	4	3	3	3	4	4	4	3	3	3	4	4	68
16.	SARN	4	4	4	4	4	3	3	4	4	4	4	4	3	3	3	3	4	4	4	4	68
17.	IA	4	4	3	3	3	4	4	4	3	3	3	4	4	4	3	3	3	4	4	4	71
18.	BTK	4	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	2	74
19.	SK	3	3	3	3	4	4	3	3	4	4	4	4	3	3	3	4	4	4	4	3	71
20.	SPK	4	4	3	3	3	4	4	4	3	3	3	4	4	4	3	3	3	4	4	4	68
21.	DAV	4	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	2	70
22.	MKP	3	3	3	3	4	4	3	3	4	4	4	4	3	3	3	4	4	4	4	3	71
23.	DAP	4	4	3	3	3	4	4	4	3	3	3	4	4	4	3	3	3	4	4	4	68
24.	LLM	4	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	2	70
25.	MGA	3	3	3	3	4	4	3	3	4	4	4	4	3	3	3	4	4	4	4	3	71
26.	PP	4	4	3	3	3	4	4	4	3	3	3	4	4	4	3	3	3	4	4	4	68
27.	FP	4	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	2	70
28.	AT	4	4	3	3	3	4	4	4	3	3	3	4	4	4	3	3	3	4	4	4	71

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29.	PAB	4	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	2	68
30.	FF	3	3	3	3	4	4	3	3	4	4	4	4	3	3	3	4	4	4	4	3	71
Total Score																				2103		

Table 2. Post Test Data

Percentage

$$\text{Result} = \frac{\text{total score obtained}}{\text{maximum score}} \times 100\%$$

$$\text{Result} = \frac{2103}{3000} \times 100\% = 70\%$$

PRE TEST POST TEST	Sig. (2-Tailed)
	0,000

It is known that the Sig. (2-tailed) value is $0.000 < 0.05$, so it can be concluded that there is a significant difference between the results of the Pre Test and Post Test. This is reinforced by before carrying out recreational sports activities, the Post Test results showed a percentage of 41% (Moderate). After carrying out recreational sports activities, the percentage increased to 70% (High).

CONCLUSION

Based on the results of the research conducted, the results of the pre-test and post-test showed that the Sig. (2-tailed) value was $0.000 < 0.05$, so it can be concluded that there is a significant difference between the results of the Pre-Test and Post-Test. This is reinforced by the fact that before carrying out recreational sports activities, the Post-Test results showed a percentage of 41% (Moderate). After carrying out recreational sports activities, the percentage increased to 70% (High). Recreational sports are one of the goals to improve the quality of life of the community. Sport Tourism or Sports Tourism is a new paradigm in the development of tourism and sports in Indonesia. The development of Sport Tourism requires quality and reliable human resources in designing various kinds of sports activities to become a tourist attraction that sells because it has economic value and is profitable. The role of students of the Applied Undergraduate Program, Recreational Business Management Study Program, is a solution to developing recreational sports with character. Tourism and sports are the spearheads of future life that can raise the dignity of our nation in front of other nations in the world. Tourism and sports and other related activities can trigger new businesses, services, and products. The importance of increasing student capacity to improve character through recreational sports events is still rarely done.

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The Role of Leadership in Improving Employee Competence (Case Study at PT. Surya Toto Indonesia, Tbk. Serpong Unit - South Tangerang City)



Masruri

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ABSTRACT: This study aims to analyze the role of leadership in improving employee competency at PT. Surya Toto Indonesia, Tbk. Serpong Unit, South Tangerang City. This study uses a qualitative approach with a case study method at PT. Surya Toto Indonesia, Tbk. Serpong Unit to explore the role of leadership in improving employee competency through in-depth interviews, participant observation, and documentation studies. Data were collected, analyzed with data reduction, and presented in narrative form and a conceptual model to understand the relationship between leadership and employee competency development. Data validity and reliability were guaranteed through triangulation and member checks, ensuring strong and accurate conclusions regarding the contribution of leaders to HR development. The results of this work show that leadership plays an important role in improving employee competency at PT. Surya Toto Indonesia, Tbk., but challenges such as lack of training, non-innovative leadership styles, poor communication, and minimal appreciation are major obstacles. Transactional leadership styles that focus on short-term results hinder employee development as a whole. To remain competitive, companies must adopt transformational leadership and provide full support for employee competency development through ongoing training. Competent employees will be better prepared to face industry changes and drive company growth.

KEYWORDS: Employee Competence, Leadership Role, PT. Surya Toto Indonesia

I. INTRODUCTION

Employee competency improvement is a key element that determines a company's success in facing global competition (Assensoh-Kodua, 2019; Nwabueze & Mileski, 2018). In the rapidly developing digital era, employees' ability to continuously adapt to technological changes and market demands is becoming increasingly important. In this context, the role of company leaders is not only focused on achieving operational targets, but also in encouraging the development of employee skills and knowledge. This study aims to analyze the role of leaders in improving employee competency in order to understand how leadership style and company policies affect human resource development in the work environment.

Employee competency development is one of the important factors that determine the success of a company in facing increasingly tight competition in the era of globalization and digitalization (Munirah et al., 2024; Witjaksana et al., 2024). Employee competency includes the skills, knowledge, and attitudes needed to carry out their duties effectively. In many organizations, training and development programs are often key to ensuring that employees continue to develop according to the needs of the company. Through continuous training, employees can improve their technical skills, learn new technologies, and adapt to changes in the workplace. In addition, employee competency development is also closely related to the role of leadership in the organization. Leaders who are able to identify employee development needs, provide motivation, and provide the resources needed for training will be more successful in creating a productive and innovative work environment. Thus, proactive leadership in employee development will increase employee loyalty and engagement, which can ultimately contribute to increased productivity and efficiency of the organization as a whole (Blanka et al., 2022; Dachner et al., 2021). On the other hand, challenges in improving employee competency often come from a lack of management support, limited budget for training, and development programs that are not relevant to employee needs. Therefore, companies need to design development programs that are focused and based on the actual needs of employees so that competency development really has a positive impact. With the right

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investment in employee development, organizations will not only enhance individual capabilities, but also strengthen the company's competitiveness in the long term.

PT. Surya Toto Indonesia, Tbk. is one of the leading companies in the manufacturing of sanitary products and fittings in Indonesia. The company was established in 1977 and has grown into a widely known company, both in the domestic and international markets. With a focus on innovation and quality, PT. Surya Toto Indonesia continues to expand its business and increase production capacity to meet the increasing market needs. The Serpong Unit in South Tangerang City is one of PT. Surya Toto Indonesia's strategic production locations. In this unit, the company carries out the manufacturing process of various high-tech and environmentally friendly sanitary products. The company also prioritizes the use of modern technology in its production process, but still pays attention to the aspect of human resources as the main asset in maintaining productivity and product quality. In an effort to increase competitiveness in the global market, PT. Surya Toto Indonesia, Tbk. is very aware of the importance of developing employee competencies. Therefore, the company is committed to continuing to provide ongoing training and development programs, with the aim of improving employee technical and managerial skills. However, the implementation of this program is still faced with several challenges that require further evaluation related to the role of leadership in supporting this development. In Indonesia, the main challenge faced in developing employee competencies is the lack of investment in training and continuing education. Many companies in Indonesia still view human resource development as a cost burden, not as a long-term investment. In addition, there is also the problem of uneven implementation of training policies across various industrial sectors, so that many employees do not get the opportunity to improve their skills.

According to Soerjono Soekanto (2009), role is a dynamic process of position (status). This role cannot be separated from a person's position in an organization or institution, because the role is a manifestation of the rights and obligations that must be carried out. In the context of leadership in a company, the role of a leader is very important in ensuring that employees can carry out their duties and obligations effectively through adequate competency development. Merton also defines a role as a pattern of behavior expected of a person according to their social status. Leaders in a company have a role to not only lead from a management perspective, but also as mentors who help employees develop their skills and knowledge. Leaders function as facilitators in the process of improving employee competency through the provision of ongoing training and development programs (Rusdiana, 2018).

George Terry emphasized that leadership is the overall activity of influencing others to achieve common goals. Effective leaders are those who are able to motivate employees to actively participate in self-development efforts, so that employee competencies can continue to be improved according to the needs of the company. Harold Koontz stated that leadership involves the process of influencing others to strive enthusiastically to achieve group goals. Leaders at PT. Surya Toto Indonesia, Tbk. must be able to direct employees not only to achieve production targets, but also to improve skills that are relevant to industrial developments (Taufiqurokhman et al., 2022). According to Handoko (2003), the main characteristics of a successful leader include intelligence, maturity, self-motivation, and the ability to empower others. In the context of competency development, a leader must be able to create an environment that supports employee learning and professional growth, while providing the guidance and support needed to overcome the challenges faced in training (Widiastuti, 2018).

Previous research conducted by Alhamidi, (2022) the results of the study showed that inspirational motivation, idealistic influence, individual consideration, and intellectual stimulation all have a positive and significant impact on improving employee performance (Alhamidi, 2022). Effective leadership can act as a catalyst to improve the quality and productivity of human resources, forming a strong foundation for sustainable growth in modern organizations (Muktamar et al., 2024).

Initial observation results at PT. Surya Toto Indonesia, Tbk. Serpong Unit show that although there are several training programs that have been implemented, there are still challenges in terms of implementation and support from leaders. Employees acknowledge the company's efforts to improve their competence, but the existing programs are considered not fully relevant to their needs in the workplace.

Previous studies tend to focus on the role of leadership in increasing productivity, but few have specifically examined how the role of leadership can influence employee competency development in the context of the manufacturing industry such as PT. Surya Toto Indonesia. This gap indicates that more in-depth research is needed on the relationship between leadership style and competency development in the company. The uniqueness of this study lies in its focus on the relationship between the leadership style applied at PT. Surya Toto Indonesia, Tbk. with employee competency development. This study provides a new contribution by identifying leadership factors that directly influence the implementation of training and development programs in manufacturing companies, as well as offering relevant solutions for companies.

This study has significant relevance for companies in the manufacturing sector that seek to improve their employee competency through leadership roles. The results of this study can help other companies understand how leadership can be key

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to maximizing the potential of their employees. In addition, this study also contributes to the literature on human resource management by deepening the understanding of the relationship between leadership and employee competency development. This study aims to analyze the role of leaders in improving employee competency at PT. Surya Toto Indonesia, Tbk. Serpong Unit, South Tangerang City.

II. RESEARCH METHODS

This study uses a qualitative approach with a case study method (L. Haven & Van Grootel, 2019; Lejeune, 2019). The qualitative approach was chosen because it provides flexibility to explore more comprehensively the phenomena that occur in the field. In this context, the study aims to understand how the role of leadership is carried out in improving employee competence, as well as how employees respond to policies and leadership styles implemented by the company.

The case study method was chosen because this study focuses on the specific context that occurs at PT. Surya Toto Indonesia, Tbk. Serpong Unit. This study attempts to explore the challenges faced by the company in developing employee competence and find out the role played by leaders in this regard. Case studies provide a suitable framework for investigating organizations in detail and comprehensively, especially regarding aspects of leadership in a unique context like this. The subjects of this study include leaders and employees at PT. Surya Toto Indonesia, Tbk. Serpong Unit. The selection of subjects was carried out using purposive sampling, which means that subjects were selected based on their involvement and relevance in the process of developing employee competence in the company. The informants included department heads, supervisors, managers, and employees at various levels who had direct interaction with leadership policies related to competency development.

The data collection techniques in this study included three main methods: in-depth interviews, participant observation, and documentation studies. In-depth interviews were conducted in a semi-structured manner to gain a deeper understanding of the role of leaders in employee competency development. These interviews allowed researchers to explore informants' views on the leadership style applied, challenges faced in competency development, and initiatives that had been implemented. Participatory observation was conducted by researchers being directly involved in the field, observing interactions between leaders and employees, and how competency development policies were implemented. By conducting this observation, researchers were able to see firsthand the dynamics in the work environment, such as how communication takes place between leaders and employees and how decisions are made regarding employee skill development. In addition, documentation studies were used to strengthen the results of interviews and observations. Company documents such as training policies, performance evaluation reports, and human resource development strategies were analyzed to obtain a more complete picture. These documents help in understanding the company's approach to employee development and also provide more objective data regarding the effectiveness of existing programs. For data analysis, several steps were taken. First, data reduction was carried out, where data from interviews, observations, and documentation were filtered and summarized to find the main themes that were relevant to the role of leadership in employee competency development. After that, the summarized data is presented in narrative form that describes the relationship between the role of leadership and competency development at PT. Surya Toto. This data presentation is followed by the creation of a diagram or conceptual model to visualize the dynamics that occur. The last step in data analysis is drawing conclusions. Based on the data that has been analyzed, the researcher draws conclusions about how the role of leadership contributes to the development of employee competencies in the company. These results are also used to provide practical recommendations for companies in increasing the effectiveness of employee development programs. To ensure the validity and reliability of the data, this study uses triangulation techniques, namely comparing the results of interviews, observations, and documentation studies. This triangulation ensures that the findings obtained have a strong basis from various data sources. In addition, a member check was carried out, where the results of interviews and observations were confirmed to informants to ensure the accuracy of the data and the researcher's interpretation.

III. RESULTS AND DISCUSSION

In the ever-evolving business world, employee competency is one of the key elements of a company's success. At PT. Surya Toto Indonesia, Tbk., leadership plays an important role in developing this competency. However, there are several challenges faced, including the lack of continuous training, minimal application of a transformational leadership style, ineffective communication, and low management support and employee motivation. Lack of Employee Training and Development is one of the main issues in the company. Many employees feel that they do not get enough opportunities to take part in training that is appropriate to their jobs. Existing training programs are sometimes not relevant to the demands of the era of globalization and digitalization, so that employees have difficulty developing the new skills they need. In addition, the lack of support from leaders in employee development is another obstacle. Company leaders are often too focused on achieving production targets and

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operational efficiency, so that employee development aspects become less of a priority. An unclear vision regarding human resource development results in limited initiatives to create sustainable training programs. The leadership style applied is also in the spotlight. A less innovative leadership style, where leaders are more oriented towards achieving short-term results, makes employees lose their motivation to develop. The implementation of a transactional leadership style that is still dominant is less able to inspire employees to develop their competencies more broadly and innovate.

Furthermore, the company also faces problems with the lack of a reward system for employees who succeed in improving their competencies. Although there are employees who take the initiative to improve their skills through independent training, the company may not have an adequate system to appreciate these efforts. As a result, there is not a strong enough incentive for other employees to do the same, so that motivation to develop is low. No less important, ineffective communication between leaders and employees is a serious obstacle. Leaders who are unable to build an open dialogue with employees can miss the opportunity to understand their development needs. As a result, the training programs held do not always meet the expectations and needs of employees.

Budget constraints are also an important problem in employee development. The limited budget allocation for training programs means that the opportunity to take part in training is only available to a small number of employees. This limits the company's opportunities to bring in professional trainers or send employees to quality external training. Finally, in the context of digitalization, obstacles in implementing new technologies and innovations are also challenges. Employees at PT. Surya Toto Indonesia, Tbk. may not be fully ready to adopt the latest technology, due to the lack of relevant training. This can slow down the adoption of technology and potentially hamper the company's productivity, which in turn has a negative impact on the company's competitiveness in the global market. By facing and overcoming these challenges, PT. Surya Toto Indonesia, Tbk. can strengthen its employees' competencies and increase productivity and innovation amidst increasingly fierce competition. Company leaders need to be aware of the importance of adequate training, communication, management support, and incentives in creating a work environment that supports the continuous development of employee competencies.

Soerjono Soekanto (2009:212-213) defines a role as "a dynamic process of status." According to him, when someone exercises their rights and obligations according to their position, they are playing a role. The difference between position and role is important for science, but the two cannot be separated, because they are interdependent (Rusdiana, 2018). Merton defines a role as a pattern of behavior that society expects from people who occupy a certain status. He also introduced the term "role-set", which refers to a set of roles that a person has because they occupy a special social status (Rusdiana, 2018). George Terry states that leadership is the whole activity of influencing the will of others to achieve common goals. According to Terry, leadership involves motivating people to work voluntarily to achieve mutually agreed goals (Taufiqurokhman et al., 2022). Harold Koontz describes leadership as the process of influencing others so that they are willing to work wholeheartedly and enthusiastically in achieving group goals (Pali'pangan, 2024). R.D. Agarwal emphasizes that leadership is the art of influencing others to direct their will, abilities, and efforts to achieve the leader's goals (Latifah & Kurniawan, 2023). Odway Tead argues that a leader must have several main characteristics, such as physical strength, high loyalty, clear goals and directions, good communication skills, and the ability to make decisions and develop technical skills (Basri et al., 2023). Handoko (2003) mentions ten main characteristics of a leader, including intelligence, maturity, broad social relationships, self-motivation, drive to achieve, strong influence, and the ability to empower (Sentosa, 2018; Wartono & Suyadi, 2020).

Putra et al. (2013) emphasized the importance of a leader's role in achieving the company's vision and mission. Leaders who are able to foster work enthusiasm, carry out good coordination, and create harmony in the work environment will help the company achieve common goals. Nawawi (2006) defines leadership style as behavior that reflects the feelings, attitudes, and actions of members of the organization or their subordinates. Each leader can have a better or worse leadership style than others (Indahsari & Manafe, 2022). Henry Mintzberg explains that the role of a leader consists of three main categories: (a) interpersonal roles, which involve interactions with subordinates and other leaders, (b) informational roles, where the leader acts as a monitor and distributor of information, and (c) decisional roles, which include making strategic decisions in the organization (NIM et al., 2019; Nurhayati, 2023; Sanusi, 2020). Sedarmayanti (2007) states that competence is a basic characteristic of a person that is closely related to the effectiveness of individual performance. Employees with high competence are easier to develop because they already have good abilities to carry out the tasks assigned (Liana et al., 2023). Spencer and Signe (1993) define competence as the characteristics that underlie skills and expertise that reflect employee performance in their work. This competence involves elements such as skills, knowledge, and experience (Beram et al., 2020). Darmawan (2014) stated that an employee's basic skills and experience affect their effectiveness in carrying out tasks according to the standards set by the company (Arifin et al., 2019). Fadude et al. (2019) emphasized that competence includes knowledge, skills, and attitudes that support professional behavior in a profession (Juniawati & Tarmizi, 2021). Siagian (2018) mentions five main indicators for measuring employee competence,

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namely knowledge, skills, self-concept, traits, and motives (Siagian, 2018). Wirata et al. (2021) emphasized that competency development efforts are an important part of human resource management, which is carried out through education and training led by organizational leaders (Wirata et al., 2021).

From the data and theory above, it is very suitable, namely Soerjono Soekanto's Theory (2009) about the role as a dynamic process of position is relevant to the situation at PT. Surya Toto Indonesia, where leaders play an important role in carrying out their duties and responsibilities. Company leaders act as directors for employees, ensuring that employee rights and obligations are met, especially in terms of competency development. Merton (Raho, 2007) stated that a role is a pattern of behavior expected of a person according to their social status. At PT. Surya Toto, the role of leaders is expected to not only focus on production targets, but also develop employee competencies to match the company's expectations in the era of globalization. George Terry considers leadership as an activity to influence others to achieve common goals. This is in accordance with field data at PT. Surya Toto, where leadership is expected to be able to motivate employees through continuous training and development programs. Harold Koontz identified leadership as the process of influencing others so that they are willing to try wholeheartedly. At PT. Surya Toto, the lack of motivation and support from leaders indicates challenges in implementing leadership that can motivate employees to continue to develop. R.D. Agarwal defines leadership as the art of directing the will and efforts of employees. In the context of PT. Surya Toto, leaders who lack innovation and focus too much on short-term results cause weak employee competency development.

Odway Tead emphasized the importance of leadership traits such as physical strength, good communication, and decision-making ability. Leaders at PT. Surya Toto who do not implement effective communication face difficulties in building relationships that support employee competency improvement. Handoko (2003) emphasized intelligence and interaction skills as important leadership traits. The lack of open interaction between leaders and employees at PT. Surya Toto indicates a deficiency in the role of communication which plays an important role in improving employee skills. Putra et al. (2013) emphasized the role of leaders in creating work enthusiasm and harmony. At PT. Surya Toto, leadership that focuses more on production than on employee welfare causes a decrease in employee enthusiasm and initiative to improve their skills.

Nawawi (2006) stated that leadership style reflects the behavior of leaders in directing subordinates. The transactional leadership style applied at PT. Surya Toto tends to inhibit innovation and employee skill development because it focuses more on short-term results. Henry Mintzberg divides the role of leaders into interpersonal, informational, and decisional roles. At PT. Surya Toto, interpersonal and informational roles are not fully implemented, resulting in obstacles in the distribution of relevant information for employee training and development. Sedarmayanti (2007) stated that competence is directly related to performance effectiveness. At PT. Surya Toto, the lack of continuous training causes a decrease in employee competence which ultimately impacts the company's productivity. Spencer and Signe (1993) define competence as the skills that underlie an employee's performance. Data at PT. Surya Toto shows that without relevant training, employee skills do not develop according to job demands in the digitalization era. Darmawan (2014) stated that basic skills and experience affect employee work effectiveness. At PT. Surya Toto, the lack of experience related to the latest technology is an obstacle for employees in facing industry changes. Fadude et al. (2019) emphasize the importance of knowledge, skills, and professional attitudes in competence. Employees at PT. Surya Toto are poorly trained to develop the attitudes and skills needed to compete in an ever-changing global market.

Siagian (2018) mentioned five main indicators for measuring competence, namely knowledge, skills, self-concept, traits, and motives. These indicators have not been fully developed at PT. Surya Toto, especially in terms of employee motivation to improve their competence. Wirata et al. (2021) emphasize the importance of education and training as part of human resource management. At PT. Surya Toto, limited budget for training hampers efforts to develop employees comprehensively. Other leadership theories such as George Terry and Koontz suggest that leadership must be able to influence employees to achieve common goals. At PT. Surya Toto, excessive focus on production leads to failure in carrying out a holistic leadership role. Mintzberg emphasizes the importance of leaders as innovators and decision makers. At PT. Surya Toto, limitations in adopting new technologies indicate a lack of leadership as innovators who are able to lead change. Spencer and Signe (1993) are again relevant to the situation at PT. Surya Toto, where employee competence is highly dependent on the training provided by the company. Handoko (2003) states that leaders who are able to empower employees will achieve better results. At PT. Surya Toto, lack of employee empowerment through training and development hampers the company's ability to compete in the global market.

The results of the study show that PT. Surya Toto Indonesia, Tbk. faces various challenges in improving employee competency. One of the biggest challenges is the lack of relevant and sustainable training programs. Many employees feel that the training provided does not match their needs, especially in facing the demands of technology and globalization. Lack of support from leaders in terms of employee development is also a major obstacle. Leaders focus too much on short-term results and production

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targets, ignoring aspects of competency development. The dominant leadership style in this company tends to be transactional, which focuses on achieving targets without providing space for employee innovation and development. Although there are independent training initiatives from some employees, the lack of a reward system results in no incentive for other employees to do the same.

Communication between leaders and employees is also not going well, so that employee needs are not conveyed effectively. The limited budget for employee development worsens the situation, where only a small number of employees get the opportunity to take part in quality training. Digital competency development is also a major challenge. Employees are not fully ready to adopt new technologies due to the lack of adequate training. The data shows that companies have a great opportunity to increase their competitiveness if they are able to overcome these obstacles in employee development. Employees who have high competence are better able to face industry changes and make greater contributions to the company. However, without full support from the leadership, employee competence development efforts are difficult to implement effectively.

There is an urgent need to adopt a more transformational leadership style, where leaders focus not only on results but also on the development of individual employees. Rewards for employees who succeed in improving their competence are also important to implement, in order to encourage other employees to develop themselves. In addition, there needs to be an increase in communication between leaders and employees, so that employee development needs can be met properly. Investment in employee training and development is an important step for PT. Surya Toto to maintain its competitiveness in the global market.

Leaders must be able to adopt the role of innovators who are able to lead the company through changes that occur in the industry. Well-designed training programs, as well as more open communication between leaders and employees, will improve employee competence and productivity. The data also shows that companies have great potential to grow faster if they are able to improve employee competence as a whole. Technology-based training and innovation need to be widely adopted to prepare employees for future industry changes. The results of this study suggest that improvements in human resource management, especially in terms of competency development, will have a significant positive impact on the company.

This study implies that the importance of the role of leadership in improving employee competency should not be ignored. Leaders who play an active role in employee development will have a positive impact on productivity and innovation in the company. Improving the communication system and rewards for employees who succeed in improving their competency will also help in creating a more productive and competitive work environment.

V. CONCLUSIONS

The results of this study indicate that leadership plays a very important role in improving employee competency at PT. Surya Toto Indonesia, Tbk. However, the challenges faced, such as lack of relevant training, non-innovative leadership style, ineffective communication, and minimal reward system, are the main obstacles in developing employee competency. Transactional leadership style that is oriented towards short-term results hinders the overall development of employees. In order for the company to remain competitive, leaders must be able to adopt a more transformational approach and provide full support for employee competency development through relevant and ongoing training. Employees who have high competence are not only able to face the challenges of the ever-changing industry but also contribute more to the growth of the company. The implications of this study emphasize the importance of adopting a transformational leadership style and improving the employee training system at PT. Surya Toto Indonesia, Tbk. The recommendation for the company is to increase the allocation of training budget and develop a reward system that motivates employees. The limitation of this study is the lack of focus on the differences in the influence of leadership styles in various work units within the company.

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“Sorry, We Rejected Your Application”: A Study on the Age Limit of Job Seekers in Indonesia from a Human Rights Perspective



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ABSTRACT: Age restrictions in the job recruitment process are an increasingly relevant issue in many countries, causing discrimination against job applicants who meet the qualifications but are considered unsuitable simply because of their age. This study examines the application of age restrictions in job applications from the perspective of human rights, as well as its impact on equal employment opportunities, social welfare, and economic productivity. Through literature studies, it was found that age discrimination, both against young and elderly age groups, is still rampant in Indonesia, even though it contradicts the principles of equality in the Universal Declaration of Human Rights and the International Covenant on Economic, Social, and Cultural Rights (ICESCR). While regulations such as the Age Discrimination in Employment Act in the U.S., the Employment Equality Directive in the European Union, and Law No. 13 of 2003 on Employment have been implemented, weaknesses in law enforcement and strong age stereotypes remain major obstacles. This study emphasizes that the age limit in job applications is a violation of the right to decent work and recommends the implementation of competency-based recruitment policies, strengthening anti-discrimination regulations, and raising awareness of the importance of creating an inclusive work environment. This step is important for building a fairer, more dynamic, and sustainable labor market in the era of industrial transformation.

KEYWORDS: Age Restrictions, Discrimination, Human Rights, Equal Work, Labor Policy.

I. INTRODUCTION

The phenomenon of age restrictions in employment has become an increasingly relevant issue in various industrial sectors worldwide. Many companies implement age restrictions in their recruitment process, which ultimately leads to discrimination against applicants outside the desired age range. This practice indirectly closes opportunities for individuals who may have adequate experience, skills, and qualifications but are judged inappropriate simply because of their age.

This age discrimination often occurs, both against young age groups who are considered to have insufficient experience and against elderly workers who are considered less productive or too old to adapt to constantly changing technology and industry dynamics. In a study conducted by Mulders (2019), 54% of Dutch employers hired older workers beyond their normal retirement age, largely due to their unique knowledge and experience, but they see this as a limited phenomenon and not a solution to the labor shortage. This phenomenon is increasingly evident in various field reports and statistical data, which reveals how the practice of age restriction has been widely implemented in several sectors, both in developing and developed countries.

Along with changes in the structure of the global labor market, the issue of age restrictions in recruitment is increasingly relevant to be studied in depth. The increase in life expectancy and the increasingly delayed retirement trend have made more elderly workers active in the labor market. However, they often face great difficulty in obtaining a job because of the age limit set by the company. This may be relevant for jobs that require modern skills or abilities. As expressed by Sulistyanto (2021), modern industry-based competencies, such as problem solving, critical thinking, and human management, are needed to keep up with the labor market in Industry 4.0. This opinion is not entirely wrong, but it is not entirely true. This is because the work experience and skills that a person possesses are important assets for a company facing competition in the global market.

In another study, Loughlin et al. (2017) revealed that there are negative stereotypes about age restrictions. Loughlin revealed that age restrictions are necessary because older workers are often perceived as slower, less creative, less flexible, more

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resistant to change, less interested in training, and more prone to illnesses and accidents. On the other hand, young age groups who are not considered experienced are also often constrained in getting jobs, even though they have the potential and skills needed by the modern world of work. In this context, the issue of age restrictions not only impacts older individuals but also affects the balance in the labor market as a whole.

Age discrimination is a form of injustice that negatively affects many workers worldwide. This discrimination can occur in various forms, including recruitment, promotion, and termination. Both young and elderly workers face the challenge of discrimination. According to Stypinska and Turek (2017), age discrimination in the labor market can occur in two forms: hard (legally prohibited behaviors and decisions that affect career development) and soft (discrimination based on the interpersonal environment with negative consequences). Companies often argue that age limits are needed to maintain productivity and work efficiency, but on the other hand, they lead to structural injustices that perpetuate stereotypes based on age.

From an ethical and philosophical perspective, all of the above raises the question of whether this age limit is really necessary to maintain the productivity of the company or whether this practice is just a form of discrimination that ignores human potential that should be judged based on ability and qualifications.

To better understand this issue, researchers consider it necessary to examine it through the framework of human rights. The principles of non-discrimination and the right to decent work have been clearly regulated in various international instruments, such as the Universal Declaration of Human Rights and the International Covenant on Economic, Social, and Cultural Rights. Every individual has the right to equal employment opportunities, regardless of age.

This principle should ensure that all people, regardless of whether they are in the young or elderly age group, have equal access to decent work, as long as they have the necessary qualifications and abilities. Kaya and Yilmazer (2019) revealed that the right to work is a basic human right. By ensuring that individuals have jobs and income, this will protect their dignity and allow for personal development and freedom. Thus, the application of age restrictions in the recruitment process can be considered a form of violation of human rights, especially when restrictions are applied without a clear and objective reason.

Various countries have attempted to address the problem of age discrimination in employment through legal regulations and policies. The right to work is a fundamental human right recognized in the UDHR (Article 23), in ICESCR (Article 6), and in several regional human rights instruments, including the ACHPR (Article 15), the Additional Protocol to the American Convention on Human Rights in the Field of Economic, Social, and Cultural Rights (Article 6), and the European Social Charter (Part II, Article 1).

In the United States, the Age Discrimination in Employment Act (ADEA) prohibits age discrimination against workers aged 40 years or older, and the European Union also has similar regulations that prohibit age discrimination in various aspects of employment. Nevertheless, despite the existence of these laws, effective implementation remains a major challenge. Many workers still face age discrimination, especially when it comes to recruitment and promotion, despite the laws protecting them.

In Indonesia, regulations regarding age discrimination are not sufficiently clear or comprehensive. Indonesia's Constitutional Court recently rejected an application for judicial review related to the removal of the working-age limit in job vacancies. In its ruling, the court affirmed that age restrictions in employee recruitment are still necessary as part of the company's policy to ensure a match between the positions offered and the required qualifications. In addition, the court held that age restrictions are part of reasonable considerations in various types of work, especially those that require certain physical strength and endurance. However, the Court also reminded that this policy must be implemented proportionately and non-discriminatory in accordance with the principles of human rights protection and equal employment opportunities.

Age restrictions in job applications also have a significant social and economic impact. Unemployment caused by age discrimination for both young and elderly workers creates a serious social problem. Individuals who experience age discrimination often experience a loss of confidence, stress, and, in some cases, depression.

This psychological impact not only affects their personal lives but also reduces their productivity and participation in the labor market. From an economic perspective, age discrimination leads to the loss of valuable workforce potential, especially in older age groups with deep experience and skills. As a result, age discrimination not only has a negative impact on the individuals who experience it, but also on the economy as a whole, as the experienced and productive workforce becomes marginalized.

This is reinforced by the results of a study by Roscigno et al. (2022), which stated that age discrimination in the workplace has a clear socio-psychological cost that affects job insecurity, job-specific stress, and overall self-reported mental health for workers aged 40 years and older.

Looking at the various problems described above, the urgency of this research becomes even clearer. Age discrimination in job applications is an issue that has not received enough attention, both in academic research and policy formulation. There are

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still many gaps in the research on the long-term impact of age restrictions on employment, especially in the context of human rights.

This study seeks to fill this gap by conducting an in-depth literature review of age limits in job applications from a human rights perspective. In addition, this research also aims to provide more inclusive and equitable policy recommendations to create equal employment opportunities for all age groups.

The formulation of the problem in this study includes several important aspects related to the application of age restrictions in job applications. First, the implementation of the age limit in various countries is the main focus of understanding the differences in policies implemented globally. Second, it is important to explore human rights perspectives in assessing these age limits, especially whether they are in line with the principles of justice and equality. Thus, the formulation of this problem will provide a basis for an in-depth analysis of the issue of age restrictions and their relationship with human rights in the world.

II. LITERATURE REVIEW

A. *Discrimination in Employment*

Discrimination in employment includes various forms of unfair treatment experienced by workers based on characteristics that are irrelevant to their employability, including age. Age discrimination is a form of discrimination that is increasingly gaining attention in the world of work. According to recent research, age discrimination in employee recruitment or promotion not only limits individual opportunities but also harms the economy as a whole by reducing the participation of experienced workers (Sargeant, 2013).

In many countries, age discrimination remains a significant problem, especially in sectors that demand new physical skills or technologies. A study by van Dalen and Henkens (2017) showed that companies often prefer young workers because of stereotypes that associate old age with decreased productivity and adaptability to technological change.

B. *Regulations and Laws on Age Discrimination*

Many countries have adopted laws prohibiting age discrimination in employment through both local regulations and international legal frameworks. For example, in the European Union, age discrimination is prohibited under the EU Employment Equality Directive 2000/78/EC, which ensures that no age limit can be imposed without objective justification (European Commission, 2019).

In Indonesia, although there are no specific regulations that address age discrimination, employment-related regulations such as Law No. 13 of 2003 on manpower regulate workers' rights without considering age as the main factor. A study by Fredman (2016) also emphasized that the application of anti-discrimination laws needs to be balanced with broader affirmative measures to prevent systemic age discrimination.

C. *Human Rights and Employment*

The human rights perspective places freedom from discrimination as the fundamental right of every individual. The International Labor Organization (ILO) emphasizes that the right to work without discrimination is part of the human rights that must be protected by the state. The violation of these rights can result in social injustice and widen the gap in access to decent work.

According to Frey and MacNaughton (2016), age restrictions in job openings are often incompatible with human rights principles because they exclude certain groups from equal opportunities to work, which is contrary to the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights (ICESCR). Protection against age discrimination is relevant to maintaining the principles of justice and equality in the world of work.

D. *Philosophical Perspectives on Age in the World of Work*

Age in the world of work is not only a legal or policy issue but can also be seen through a philosophical perspective. For example, the concept of distributive justice emphasizes that economic resources, including jobs, must be distributed equitably among all age groups.

According to Bae and Choi (2022), age should not be a discriminatory factor from participation in the world of work, because each individual, regardless of age, has different potentials to contribute to society. Roscigno et al. (2022), Negative age stereotypes often create unnecessary social barriers and can reduce the intrinsic value of older workers. In this view, age discrimination is considered a form of moral injustice that is detrimental to human values.

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III. RESEARCH METHODS

The methodology used in this study is a literature review that aims to comprehensively analyze various studies, legal documents, and scientific publications relevant to age restrictions in job applications from a human rights perspective. The data collection process was carried out through a search for literature sourced from academic journals, books, reports of international organizations, and related legal regulations from various countries.

The inclusion criteria in the selection of literature were based on the relevance of the topic, geographical coverage, and credibility of the source. Data analysis was conducted using a qualitative method, identifying and grouping the main themes related to age restrictions, discrimination, and human rights principles. With this approach, this study is expected to provide a comprehensive overview of the implications of age restrictions in job applications from the perspective of human rights in various countries.

IV. RESULT AND DISCUSSION

A. Age Restrictions in Job Applications in Different Countries

Policies regarding age restrictions in work requirements vary in different countries and are influenced by the legal, social, and economic factors of each country. Each country has a different approach to addressing age discrimination in the workplace for both young and older workers. According to Lahey (2010), the United States has implemented the Age Discrimination in Employment Act (ADEA) since 1967. This law aims to protect older workers from negative stereotypes and discrimination in the workplace, especially regarding hiring, termination, and other working conditions. Changes to the law, such as the removal of the mandatory retirement age limit, have increased protection for older workers but have also decreased hiring opportunities for them.

In contrast, in Europe, the age discrimination policy only began to be applied more widely after the introduction of *Framework Directive 2000/78/EC* by the European Union. This policy provides guidance for member states to set their own anti-discrimination laws, including bans on discrimination based on age. However, as revealed by Adnett and Hardy (2007), many European countries have chosen to provide more exemptions and lighter enforcement than the United States, so the impact of these laws on the employment of older workers varies.

According to research conducted by Steinau-Steinrück and Vernuft (2009), in Germany, laws on age discrimination tend to be less stringent when it comes to hiring, but are more focused on the protection of older workers who are already employed. This is different from the approach in France; in his research, Sands et al. (2009) revealed that where the law not only prohibits age discrimination in job advertisements, but also provides harsher penalties for violators.

In addition, according to Radoccia (2009), although age discrimination laws were implemented earlier in countries such as Italy and Spain, their implementation is often weak due to a lack of law enforcement and public awareness. This has led to age discrimination remaining common in certain sectors despite regulations prohibiting it.

Policies in Australia have also advanced in terms of protection against age discrimination. According to Duncan (2018), the Age Discrimination Act of 2004 expanded the scope of protection for workers from various sectors, including public and private.

Similar discrimination was also found in Japan, where Zvedelikova (2024) noted that although the law prohibits age discrimination, about 24% of job ads explicitly include a maximum age limit of 35 years, specifically in mid-career job ads. This age restriction is often used by companies to screen applicants who do not meet the desired age criteria.

Meanwhile, Nimanandh et al. (2018) examined a slightly different context in Thailand, where young managers in multinational companies often experience discrimination based on their age. In Asian cultures, which traditionally prioritize seniority, age is often used as a benchmark for managerial legitimacy. Young managers strive to negotiate their identities to be accepted in a work environment that places great importance on seniority.

Meanwhile, in Asia, a different case occurred. According to Awaliyah (2016), age discrimination in the recruitment process is still rampant in Indonesia, even though Law No. 13 of 2003 prohibits such discrimination. This law guarantees equal opportunities for jobseekers regardless of age. However, practice on the ground shows that the maximum age limit, usually between 24 and 35 years, is often set in job advertisements, especially those disseminated at job fairs, print media, and the Internet. The following are the age limits for several professions in Indonesia that researchers have obtained from various sources.

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Table 1. Maximum Age Limits for Job Applicants in Indonesia

No	Profession	Maximum Age Limit When Applying for a Job
1	State Civil Apparatus	35 Years (PNS) and 40 Years (Certain Positions in PPPK)
2	SOE Employees	25 Years (High School), 27 Years (D3), 30 Years (S1/D4), 35 Years (S2)
3	TNI	22 Years (Enlisted), 22 – 26 Years (Non-commissioned Officer), 26 Years (Officer)
4	Doctors (Civil Servants and Private)	35 years for general positions, 40 years for specialists
5	Teachers and Lecturers (ASN and PPPK)	35 years old (general), 40-45 years old for certain positions
6	Private Employees	Varies (Generally from 25 – 35 years old depending on job level)

Source : Data Processed by Researchers

B. Factors Driving the Implementation of Age Restrictions

Research has identified various factors that drive the implementation of age restrictions during the hiring process. According to Heyma et al. (2014), one of the main reasons for this is the uncertainty regarding the productivity level of older workers. Companies tend to prefer younger applicants because their productivity is considered more certain than that of older workers, especially after the age of 58 years.

Another significant factor is the increase in labor costs as workers age, while productivity levels tend to stabilize or decrease. In addition, companies with older managers or workforces are more likely to hire older workers, which suggests that demographic factors in the workforce also play a role in determining the age limit for hiring.

Zvedelikova (2024) also found that in Japan, despite laws prohibiting age discrimination, companies often set explicit age limits in job advertisements, usually under 35 years old. Smaller companies, domestic companies, and those located in urban centers tend to apply this age restriction more frequently. In addition, companies that take advantage of the probationary period for new employees are more likely to set an age limit.

Furthermore, Van Borm and Baert (2021) found that one of the main reasons older candidates tend to be discriminated against in the hiring process is the perception that they have lower tech skills, are less flexible, and are less trainable compared to younger candidates. This perception explains approximately 41% of the effects of age on the chances of being invited to a job interview.

Wu and Sun (2021) showed that age discrimination in the Chinese labor market is greatly influenced by the complexity of work. This study found that the higher the complexity of the job, the less impact it has on the lower age limit, whereas the upper age limit tends to converge across various jobs. This reduces the effective job-search period for high-skilled talent.

Burn et al. (2022) identified that language related to age stereotypes in job advertisements can reduce older workers' interest in applying for jobs. Even if the language used does not explicitly indicate age bias, implicit messages related to such stereotypes can significantly lower the number of older applicants

Based on a comparison of policies in different countries, it can be concluded that the effectiveness of the age restriction policy in work requirements is highly dependent on law enforcement, exemptions given, and public awareness of the law. While countries such as the United States have stronger enforcement and a more visible impact, countries in Europe tend to be more flexible in their implementation, which in turn affects the opportunities of older workers in the job market.

C. Age Discrimination in Human Rights Perspectives

Age discrimination in employment is a form of unfair treatment of a person based on age. Although not explicitly mentioned in some major human rights instruments, the concept is covered by the broader principle of non-discrimination. ILO Convention

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No. 111 on Discrimination (Employment and Position) of 1958 does not explicitly mention age, but prohibits discrimination on the basis of race, color, sex, religion, political opinion, national descent, or social origin.

Some countries have interpreted this as including age discrimination. International Covenant on Economic, Social, and Cultural Rights: Articles 6 and 7 guarantee the right to fair and favorable work and working conditions for all people. Although age discrimination is not always explicitly mentioned, modern interpretations of these instruments tend to include age as one of the bases for prohibited discrimination in the context of work.

However, according to Spiro (2014), age discrimination in job search is often not taken seriously by courts and human rights courts, despite the clear legal protections in the statute. Courts and stands tend to downplay age discrimination claims, and applicants rarely win in such cases. Spiro suggested a stricter approach to enforce a fair evaluation of job applicants based on individual ability, not age.

D. Principles of Non-Discrimination and Equality in Employment

The Universal Declaration of Human Rights (UDHR) affirms everyone is right to work without discrimination. Although age was not explicitly mentioned, the spirit of DUHAM is clearly opposed to any form of unfair treatment. Age discrimination in the workplace can take the form of stereotypes against older workers who are considered less adaptive or prejudice against young workers who are seen as less experienced. These practices not only harm individuals but also inhibit the potential for diversity in organizations.

The International Labour Organization (ILO) has long fought discrimination through Convention No. 111. Although it did not initially specifically mention age, many countries are now expanding their interpretations to include age discrimination. In line with this, the UN Principles for Older Persons and the Madrid International Plan of Action on Aging emphasize the importance of the active participation of senior workers in society.

Addressing age discrimination requires a holistic approach. Governments must enforce anti-discrimination laws, whereas companies must create an inclusive work environment. Cross-generational mentoring programs and HR policies that support lifelong career development are concrete steps that should be taken. Trade unions and civil society organizations also play an important role in advocacy and education. They can help shape inclusive policies and practices in the workplace.

E. Analysis from the Perspective of Human Rights on Age Restrictions in Job Applications

When we apply the concept of Human Rights to the context of the world of work, especially in relation to the treatment of workers of various age groups, we find ourselves confronted with complex moral and practical dilemmas. According to Taufik (2013), the principle of justice, as outlined by philosophers such as John Rawls, demands that every individual should have an equal opportunity to achieve success and well-being. Thus, access to job opportunities and career development should not be limited by factors beyond the control of the individual, including age. However, reality is often far from this ideal.

Age restrictions in job searches, both explicitly and implicitly, reflect the biases and stereotypes deeply ingrained in society. Basically, every individual should have the freedom to develop and use their abilities throughout their lives. Age restrictions on employment are directly contrary to this principle, limiting an individual's potential to contribute and develop based on arbitrary numbers.

From a utilitarian perspective, Taufik (2013) corroborates the opinion of John Stuart Mill, who revealed that age discrimination in employment is detrimental to not only individuals but also society as a whole. By excluding certain age groups from the labor market, we are missing out on the wealth of experience, skills, and perspectives that can contribute to collective productivity and innovation.

Age restrictions in job searches also raise questions about the nature of human values and dignity. The philosopher Immanuel Kant argued that every human being has an intrinsic value that does not depend on utility or productivity. Excluding a person from employment opportunities solely based on their age could be considered a violation of this Kantian principle, reducing individuals to mere numbers and ignoring their unique potential. By limiting employment opportunities based on age, we are not only limiting economic access but also shaping social narratives that can influence how individuals see themselves and their potential.

V. CONCLUSIONS

This study comprehensively examines the application of age restrictions in the recruitment and employment process from a human rights perspective, as well as its implications for equal employment opportunities, productivity, and social welfare. Based on the analysis of the literature and regulations that exist in various countries, it is found that the age limit in employment is still widely applied even though it is contrary to the basic principles of equality stipulated in the Universal Declaration of Human

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Rights, the International Covenant on Economic, Social, and Cultural Rights (ICESCR), as well as various other human rights instruments. This practice not only harms individuals from young and elderly age groups but also creates structural injustices that can hinder economic and social growth in the long run.

From a legal and policy perspective, regulations prohibiting age discrimination are often not implemented effectively, especially in developing countries, including Indonesia, where legal loopholes allow the implementation of age restrictions in job vacancies. On the other hand, although developed countries such as the United States and the European Union have stricter regulations, negative age stereotypes are still a major obstacle for workers to obtain fair employment opportunities. This study highlights that differences in law enforcement, policy implementation, and public awareness of age discrimination contribute to the variation in the impact of age restrictions across different geographic and cultural contexts.

This study confirms that age restrictions in employment need to be seen as a form of violation of the right to work and the right to human dignity, where every individual, regardless of age, must be judged based on his or her abilities, qualifications, and potential contributions. Rejecting job candidates based solely on age is a practice that not only violates the principle of distributive justice but also limits access to economic resources that should be distributed equally to all groups. In this context, negative stereotypes about the productivity and adaptability of older workers or the assumption that younger workers are less experienced need to be deconstructed, considering that the contribution that can be made by all age groups is very important in facing the dynamics of accelerating industrial change, especially in the digital era and Industrial Revolution 4.0.

Practically, this study recommends a competency-based recruitment policy that emphasizes individual abilities and qualifications, regardless of age. The implementation of this policy included changes in the design of job advertisements, cross-generational training, and inclusive career development policies. Additionally, companies need to build a work culture that encourages intergenerational collaboration, where workers of different age groups can learn from each other and contribute to achieving organizational goals. Cross-generational mentoring programs, where senior workers can mentor younger workers, as well as tech skills training for older workers, are concrete steps that can be taken to create a more equitable and inclusive work environment.

From a public policy perspective, the government should strengthen regulations that prohibit age discrimination in the workplace through more effective enforcement mechanisms. This includes strict oversight of job ads that list age restrictions, as well as the provision of legal aid for victims of age discrimination. Affirmative policies that support career development for all age groups, both through modern skills training and re-skilling and up-skilling programs, need to be implemented to ensure that every worker can adapt to technological changes and industry demands without being hampered by age-based stereotypes.

Overall, the elimination of age restrictions in job applications and the creation of an inclusive work environment is not only an important step towards social justice but also contributes to the optimization of the overall potential of the workforce. This transformation will provide long-term benefits for the economy and social stability, as well as create a more adaptive, dynamic, and sustainable labor market. By ensuring that every individual, both young and old, has equal access to decent work, we not only respect human rights but also strengthen the resilience of the workforce in the future.

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The Prevalent Skills and Competencies of Emotional Intelligence for Effective Educational Leadership: A Systematic Review of Literature



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ABSTRACT: This systematic review of literature examines the prevalent skills and competencies of emotional intelligence for effective educational leadership. It explores the significance of emotional intelligence in building connections, managing conflicts, and creating a supportive school atmosphere. The review analyzes 16 research articles published between 2016 and 2024, focusing on the five components of emotional intelligence: self-awareness, self-regulation, motivation, empathy, and social skills (Goleman, 1995). The study identifies self-awareness, social skills, and empathy as the most prevalent emotional intelligence components among education administrators. It concludes that emotional intelligence is critical for effective educational leadership, enabling leaders to navigate complex relationships, manage conflicts effectively, and create a positive and supportive school environment.

KEYWORDS: emotional intelligence, school leadership, emotional skills, effective leadership, leadership

I. INTRODUCTION

Emotional intelligence (EI) plays an important leadership role, a quality that all leaders should possess (Landry, 2019). Educational leaders who exhibit intelligence skills are better equipped to manage complex relationships, resolve conflicts, and create a positive learning environment within schools (Gómez Leal et al., 2021). It involves recognizing and understanding one's emotions and those of others. Emotional intelligence encompasses self-awareness, self-control, empathy, social skills, and self-motivation (Goleman, 1995). Leaders with intelligence can leverage these abilities to communicate efficiently, establish trust, and cultivate collaborative atmospheres in educational settings.

In school leadership, emotional intelligence is significant in establishing connections with stakeholders such as teachers, students, parents, and community members. Leaders with emotional intelligence can nurture feelings of inclusiveness, trustworthiness, and mutual respect within the school community. This fosters levels among individuals involved and promotes engagement and overall well-being (Bower et al., 2018). Furthermore, emotional intelligence equips leaders to handle conflicts and obstacles gracefully while demonstrating empathy. This approach encourages resolutions to sustain a positive school climate.

This systematic review of existing literature delves into the role of prevalent skills or competencies of Emotional Intelligence for effective educational leadership.

The goal is to explore the studies, theories, and real-world data on the emotional intelligence of educational leaders' abilities and qualities that help build connections, manage conflicts, and create a supportive school atmosphere.

By reviewing and analyzing research, this overview will offer perspectives on the crucial significance of emotional intelligence in effective educational management.

II. METHODOLOGY

This systematic review of literature explores the existing research, theories, and empirical evidence on the prevalent skills and competencies of Emotional intelligence skills for effective educational leadership.

Comprehensive searches were conducted across multiple databases, including Google Scholar, EBSCO, JSTOR, and other relevant sources. The following keywords were used to identify relevant studies: emotional intelligence, school leadership, emotional skills, leadership, and related terms. Only peer-reviewed journal articles and conference papers published in English

The Prevalent Skills and Competencies of Emotional Intelligence for Effective Educational Leadership: A Systematic Review of Literature

between 2016 and 2024 were included. The screening process involved reviewing titles, abstracts, and full-text articles to ensure they met the eligibility criteria.

Critical data was extracted from the selected studies, including research objectives, theoretical frameworks, methodologies, and key findings related to the topic. A thematic analysis was conducted to identify and synthesize the major themes and trends emerging from the literature. The methodological quality of the included studies was assessed using established criteria to ensure the reliability and validity of the review findings (Dewey et al., 2016). The extracted data was organized and synthesized to provide a comprehensive overview of the current state of research on emotional intelligence in educational leadership. This systematic approach enabled a rigorous and comprehensive examination of the existing literature, providing insight and ensuring an extensive review process for the 16 articles examining the prevalent skills and competencies of emotional intelligence in educational leadership.

III. RESEARCH FINDINGS AND INTERPRETATION

A. Table 1 below shows the research articles included in the systematic review of literature, their publication date, and the corresponding author/s.

Table 1. Research articles included in the systematic review of literature

Research No.	Author/s	Research Title	Date of Publication
1	Dumitru Valeriu	The Significance of Emotional Intelligence in Transformational Leadership for Public Universities	2017
2	Bower, G., O'connor, J., Harris, S., & Frick, E.	The Influence of Emotional Intelligence on the Overall Success of Campus Leaders as Perceived by Veteran Teachers in a Rural mid-sized East Texas Public School District	2018
3	McClellan, J., Levitt, K., & DiClementi, G.	Emotional Intelligence and Positive Organizational Leadership: A Conceptual Model for Positive Emotional Influence.	2017
4	Munir, S., Shakeel, M., & Waheed, K. Z.	<i>View of The Importance of Emotional Intelligence for 2024 Transformational Leaders: A Critical Analysis</i>	
5	Hikmet Ulutas.	Systematic Review of Studies on The Emotional Intelligence of School Principals.	2024
6	Mohammed Issah	Change Leadership: The Role of Emotional Intelligence	2018
7	Xiaoqing Yuan	Exploring the Role of Emotional Intelligence in Effective School Leadership	2024
8	Gomez-Leal, R., Holzer, A., Bradley, C., Fernandez-Berrocal, P., & Patti, J.	The relationship between emotional intelligence and leadership in school leaders: a systematic review.	2021
9	Wei Guo, et al	Emotional intelligence can make a difference: The impact of principals' emotional intelligence on teaching strategy mediated by instructional leadership	2020
10	John Pellitteri	Emotional Intelligence and Leadership Styles in Education	2022
11	Jenny Ramirez	The Relationship of Emotional Intelligence on Leadership Style of Academic Administrators in Selected HEIs	2023
12	Abdullah Faisal Bahshwan	The Role of Emotional Intelligence in Effective Leadership	2024

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13	Liberty Abdon , Elizabeth N. Farin , Anniebeth N. Farin	Abdon, L., Farin, E., & Farin, A. (2017). Emotional Intelligence, 2017 Leadership Qualities and Decision-Making Practices Of Female Administrators In Selected Secondary Schools in Region III, Philippines. <i>Asian Journal of Management Sciences & Education</i> , 6(1). Http://www.ajmse.leena-luna.co.jp/ajmsepdfs/Vol.6(1)/AJMSE2017(6.1-05).Pdf	
14	Edward Castro Jimenez	Adversity and emotional quotients of public elementary school 2021 heads amidst the COVID-19.	
15	M.Y Kamal, et.al	Emotional Intelligence and Leadership Style	2017
16	Jiban Khadka	Effect of Principals' Emotional Intelligence on Schools' Academic Performance: A Survey of Nepali Institutional School	2019

B. Goleman (1995) introduced the five components of emotional intelligence: self-awareness, self-regulation, motivation, empathy, and social skills. During a systematic literature review, multiple findings related to emotional intelligence appeared, but only the top three results from the reviewed literature were highlighted.

Table 2. Listed are the following Emotional Intelligence components of the top three results from the reviewed literature on educational leaders' emotional skills and competencies.

<i>Emotional Skills</i>	<i>Research Article/s</i>
Self-awareness	1, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
Self-regulation	2, 4, 6, 8, 9, 10, 13
Motivation	2, 3, 4, 7, 14, 15, 16
Empathy	2, 3, 5, 6, 8, 9, 11, 15
Social skills	1, 2, 5, 6, 7, 10, 12, 14, 16

The table above describes the prevalent emotional intelligence features found in educational leaders in terms of top three results from the literature reviewed.

Self-awareness: emphasized in articles 1, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, and 15. It stresses on the significance of leaders' recognition of their emotions and how they impact on others.

Self-regulation: These are also discussed in articles 2, 4, 6, 8, 9, 10 and 13 indicating the importance of effective management and control over emotions by leaders.

Motivation: Studies 2, 3, 4, 7, 14, 15, and 16 have addressed this aspect which highlights how motivation as a factor drives educational leaders towards desired goals.

Empathy: These were highlighted in articles such as Articles 2, 3, 5, 6, 8, 9, 11, and 15. It is shown to be essential for leaders to understand and connect with others emotionally.

Social skills: as found in research papers titled 1, 2, 5, 6, 7, 10, 12, and 14-16, emphasize the significance of effective interpersonal skills in educational leadership.

From this data self-awareness, social skills, and empathy becomes the prevalent emotional intelligence components among education administrators.

These emotional intelligence components have profound implications for educational leadership. Leaders with high emotional intelligence can make well-informed decisions, maintain their composure in challenging situations, and serve as positive role models (Asmamaw, 2023). Furthermore, they can inspire and motivate their teams, fostering a culture of growth, resilience, and achievement.

V. CONCLUSIONS

Emotional intelligence helps education leaders do their jobs better by letting them stay relaxed when things get tough, solve disagreements well, show understanding to others, and feel connected to the people they work with. Leaders who are good

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with their emotions can handle relationships wisely and motivate their teams, which makes everyone work better and feel happier at their jobs. Also, emotional intelligence is very important when making changes, as it helps leaders know how to deal with people who do not like change and how to handle feelings. Research has found that how good leaders are with their emotions greatly affects how well they can reach their goals (Landry, 2019).

Educational leaders can demonstrate emotional intelligence by promoting a culture of ongoing learning and using skills such as understanding oneself, managing emotions, being motivated, having good social skills, and showing empathy. They should also participate in emotional intelligence training, create a positive atmosphere in the organization, and use emotional intelligence models in different programs and training sessions.

This systematic review of the literature on emotional intelligence in educational leadership has yielded valuable insights into its impact on building relationships, managing conflicts, and fostering a positive school climate. The research consistently indicates that emotional intelligence is critical to effective educational leadership. Leaders with high emotional intelligence are better equipped to navigate complex interpersonal relationships, manage conflicts effectively, and create a positive and supportive school environment (Amisha, 2024). The review highlights the importance of emotional intelligence competencies such as self-awareness, self-management, empathy, and social skills in promoting successful educational leadership practices.

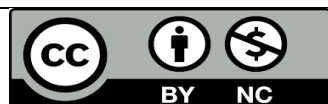
Integrating emotional intelligence (EI) into leadership styles can significantly boost school leaders' effectiveness and transformative potential. By focusing on the emotional aspects of each style, EI can help leaders better understand and manage the emotional dynamics inherent in their approach, leading to more nuanced and impactful leadership (Ramirez, 2023). Emotional intelligence is a beneficial attribute for leaders and a fundamental cornerstone that can greatly enhance leadership effectiveness (Bashswan, 2024).

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The Influence of Internet-Based Learning Media and Learning Facilities on the Learning Achievement of MA Mambaul Ulum Students



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ABSTRACT: This study aims to find out how student learning achievement at MA Mambaul Ulum is influenced by learning resources and online learning environment. This study uses a sample of 104 respondents and is quantitative. The Likert scale is included in the data collection questionnaire. Multiple linear regression analysis is a technique used for analysis. The results showed that although the Learning Facilities variable ($0.018 < 0.05$) affected learning achievement, the Internet-Based Learning Media variable did not affect (significance value = $0.247 > 0.05$). The findings of the simultaneous test show that, with significance values of less than 0.001 and less than 0.05, Internet-Based Learning Media and Learning Facilities have a simultaneous impact on Learning Achievement.

KEYWORDS: Internet-Based Media, Learning Facilities, Learning Achievement

I. INTRODUCTION

The purpose of education is to provide students with the tools and environment they need to actively develop their moral character, intelligence, self-control, spiritual power, and other skills they need for society and themselves. One of the elements of the learning system that is very crucial in the learning process is the learning medium. Today's students who use learning media need to be independent and engaged. Finding educational resources is much easier with easy internet access. The internet provides resources for learning resources other than books, although there are many books available today. (Simamora, 2019). One of the elements of the learning system is learning media which is very important in the learning process. The purpose of using learning media is to increase students' understanding of the subjects they are learning. Once the chosen material has been selected, we must help students understand what is being taught. (Susanto, 2019).

According to Solihatin (2017) the learning process will be easier with the use of online resources in educational institutions; The internet is a better medium to overcome the problem of lack of books in libraries. Therefore, internet-based educational materials can be used to save time, cost, effort, and other resources while improving the quality and equitable distribution of education if designed and used appropriately. as a medium that is expected to play a role in a procedure. The implementation of interactive contact between teachers and students required in a learning activity is expected to be supported by the internet in the context of teaching and learning in schools. Because learning is essentially a communication process, the delivery of messages from the sender media to the recipient is very crucial for the learning process. Rich in content and teachings, communicated through verbal and nonverbal communication cues. (Susanto, 2019).

The most important element in the educational process is school infrastructure, which contains various needs to carry out daily activities. One of the prerequisites for education to run efficiently is infrastructure. (Azma, 2019). The quality of education must continue to be improved because it is the main factor that determines the competitiveness of a country and the source of national growth. The state of education in the country is still diverse, according to the latest data. Factors that cause gaps in the quality of education include inadequate infrastructure and facilities, lack of human resources, and a curriculum that is not ready for further learning. (Damanik, 2019).

The implementation of the teaching and learning process is greatly helped by the role of infrastructure and teaching and learning facilities. Although the field of education has great aspirations, there are also several problems that hinder the implementation of teaching and learning activities in the classroom. The problem of infrastructure and educational facilities is one of the problems

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faced by schools. (Munthe, 2019).

The government has made a number of efforts to improve the standard of education in the country. The National Education Standards Agency (BSNP) was established as part of this effort, and many regulations have been issued, one of which addresses the standards of educational facilities. Schools must be able to provide facilities that are in accordance with national education standards so that these standard facility regulations can apply. In an effort to improve teaching standards, instructors must also become more skilled in a variety of educational settings. (BNSP, 2006).

Changes in the method of using internet-based learning media were carried out by teachers at MA Mambaul ulum who previously only used books, books and LKS as learning media and there was an improvement in the quality of learning facilities carried out by the Madrasah such as improvements to the learning room, equipping learning equipment and using the right learning resources. The use of internet-based learning media began with a pandemic that resulted in teaching and learning activities using an online system. Until now, students are looking for additional learning references apart from the material provided by the teacher with the aim of adding insight and strengthening student understanding.

The researcher conducted a study entitled "The Influence of Internet-Based Learning Media and Learning Facilities on the Learning Achievement of MA Mambaul Ulum Students" based on the background of the above information.

RESEARCH METHODS

The purpose of this study is to find the partial and simultaneous impact of independent factors on dependent variables. This study uses a quantitative methodology, where Internet-Based Learning Media is represented by X1. X2 represents Learning Facilities and Y represents Learning Achievement. The complete population, or up to 104 respondents, all of whom were students of MA Mambaul Ulum, were sampled for this study. The data collection approach includes questionnaires, interviews, documentation, and observations. Before being disseminated, to ensure the questionnaire is suitable for use in the study, the questionnaire is initially validated using validity and reliability tests. Among the methods for analyzing data are multiple linear regression analysis, hypothesis testing, and traditional assumption testing.

RESEARCH RESULTS AND DISCUSSIONRESEARCH RESULTS

Description of Respondent Characteristics

The sample in the study was as many as 104 respondents of MA Mambaul Ulum Class X and XI students with the following details:

Table 1 Respondent Data by Class

It	Class	Number of Students	Percentage
1	X	51	49,1%
2	XI	53	50,9%
Sum		104	100%

Classical Assumption TestNormality Test

Table 2 Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardize d Residual	
N		104	
Normal Parameters ^{a,b}	Mean	.0000000	
	Std. Deviation	3.13784861	
Most Extreme Differences	Absolute	.053	
	Positive	.053	
	Negative	-.044	
Test Statistic		.053	
Asymp. Sig. (2-tailed) ^c		.200 ^d	
Monte Carlo Sig. (2-tailed) ^e	Sig.	.673	
	99% Confidence Interval	Lower Bound	.661
		Upper Bound	.685

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 334431365.

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If the value of Asymp. Sig (2-tailed) >0.05, residual data is consistently distributed, as indicated by the Asymp value. Sig (2-tailed) of 0.200 in the previous table.

Multicolonality Test

Table 3 Multicolonality Test Coefficients^a

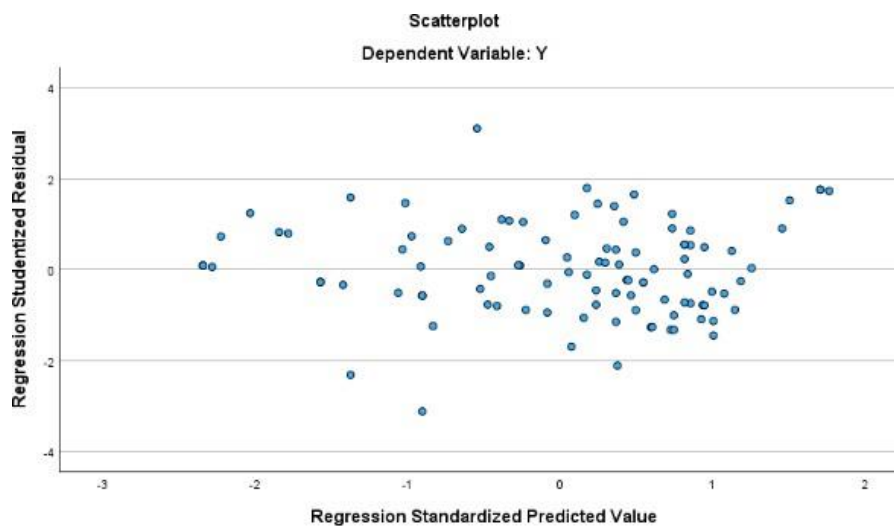
Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	13.767	1.648		8.351	<.001		
Media Pembelajaran Berbasis Internet	.086	.074	.146	1.164	.247	.522	1.917
Fasilitas Belajar	.187	.077	.302	2.413	.018	.522	1.917

a. Dependent Variable: Prestasi Belajar

The Internet-Based Learning Media variable and the Learning Facilities variable both have a VIF value of 1.917, as seen in the previous table. Each independent variable had a tolerance value higher than or equal to 0.52 and a VIF value of less than 10. This suggests that there is no multicollinearity or noncollinearity among the independent variables in the regression model.

Heteroscedasticity Test

Table 4 Heteroscedasticity Test



There is no pattern seen in the point distribution on the Scatterplot chart above, therefore no heteroscedasticity occurs, as indicated by the distribution above and below the zero point of the Y-axis.

Multiple Linear Analysis

Table 5 Multiple Linear Regression Analysis Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	13.767	1.648		8.351	<.001		
Media Pembelajaran Berbasis Internet	.086	.074	.146	1.164	.247	.522	1.917
Fasilitas Belajar	.187	.077	.302	2.413	.018	.522	1.917

a. Dependent Variable: Prestasi Belajar

In the table above, the regression equation from the results of statistical calculations is obtained as follows:

$$Y = a + b_1X_1 + b_2X_2 + e$$

The Influence of Internet-Based Learning Media and Learning Facilities on the Learning Achievement of MA Mambaul Ulum Students

Learning achievement = 13,767 + 0.086 X1 + 0,187 X2 + e

The results of multiple linear regression analysis show that elements of learning facilities and internet-based learning resources have a linear influence on student learning achievement.

Hypothesis Test Test T (partial)

Table 6 Test T (partial) Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	13.767	1.648		8.351	<.001		
Media Pembelajaran Berbasis Internet	.086	.074	.146	1.164	.247	.522	1.917
Fasilitas Belajar	.187	.077	.302	2.413	.018	.522	1.917

a. Dependent Variable: Prestasi Belajar

The internet-based learning media variable had a sig value of 0.247 > 0.05 based on the results of the t-test, which showed that the variable had no effect on the learning achievement variable. With a sig value of 0.018 < 0.05, the variable of learning facilities was significant to the variable of learning achievement.

Test F (Simultaneous)

Table 7 Test F (Simultaneous)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	212.891	2	106.445	10.601	<.001 ^b
	Residual	1014.148	101	10.041		
	Total	1227.038	103			

a. Dependent Variable: Y

b. Predictors: (Constant), X2, X1

Based on the results of the F test, Ha can be accepted if the sig value is less than 0.001 and less than 0.05. This shows that the dependent variable, learning achievement, is influenced both simultaneously and jointly by independent variables, Internet- Based Learning Media and Learning Facilities.

DISCUSSION

Based on the results of the research, the academic achievement of MA Mambaul Ulum students is not affected by online learning resources. This study supports the research of Simamora (2019) which did not find a relationship between online media consumption and academic achievement. The results of the interviews showed that a number of respondents had obstacles in terms of having gadgets or devices, so that the internet-based learning materials in this study had no effect on achievement. The use of internet-based learning media is only used at certain times, for example when learning online or when there is material or questions that are poorly understood, so it can be concluded that internet-based learning media is not the main medium in the learning process.

Students still depend on conventional learning media, for example, the use of LKS books and books provided by the school or the existence of other platforms other than the Ruang Guru application such as *google* and *youtube*. There are limitations in the devices used by students, not all students have adequate *mobile phones* to carry out internet-based learning and the number of computers or PCs owned by schools is also limited. However, the internet network provided by the school is quite adequate. The educational resources available to students at MA Mambaul Ulum affect their academic performance. The findings of Setyorini (2021) research which shows that the learning environment has a positive influence on students' academic progress, are strengthened by this study. The availability of adequate learning facilities during educational activities can have an impact on student academic achievement. Students can better understand the learning materials if they have access to a library that supports their knowledge, have a fun and conducive learning environment, have all the necessary equipment to study, and use

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appropriate learning resources. The school also provides a very complete range of learning resources, ranging from well-maintained whiteboards, desks, and classroom chairs. A friendly and supportive learning environment with teachers and students who can communicate effectively.

The learning outcomes of MA Mambaul Ulum students are influenced, either simultaneously or together, by internet-based learning resources and learning environments. Learning facilities and internet-based learning materials are interrelated, and if both are used to the fullest, learning achievement will increase. This research supports the research of Setyorini (2021) which found that student learning achievement is influenced by learning facilities and learning media. Student learning achievement is undoubtedly influenced by the use of quality learning resources and the availability of appropriate learning spaces. Academic grades are not the only indicator of learning achievement; Students' talents and skills can also be used to measure how well they learn new material and how they respond to their environment.

Internet-based learning media is not only useful for students in finding material or questions, but can help students in adapting to technology so that they can train students' abilities or skills in the digital era. The learning facilities provided by the school make students enthusiastic in learning. All educational buildings have the potential to facilitate learning for students, so that the use of online learning resources and learning environments can have an impact on student learning outcomes.

CONCLUSION

The following hypothesis has been proposed in this study and can be concluded based on the findings of the research and testing mentioned: The absence of a correlation between internet-based learning facilities and the learning achievement of MA Mambaul Ulum students is shown by a sig t value of $0.247 > 0.05$. There is a correlation between learning facilities and the learning achievement of MA Mambaul Ulum students, shown by a sig t value of $0.018 < 0.05$. (3) The combined use of online learning resources and learning environments has an impact on the academic performance of MA Mambaul Ulum students.

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The Influence of Sharia Financial Literacy and The Use of Digital Finance On Financial Inclusion with Financial Behavior as an Intervening Variable in Halal Food MSMEs in Palembang City



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ABSTRACT: This research aims to analyze the influence of Sharia Financial Literacy and the Use of Digital Finance on Financial Inclusion with Financial Behavior as an Intervening Variable in Halal Food MSMEs in Palembang City. This research uses a quantitative approach method. The population in this research is Halal Food Business Actors in Palembang City with a sample size of 121 respondents. The data collection technique uses primary in the form of distributing questionnaires using a Likert scale. The data analysis technique in this research uses Outer Model Analysis, Inner Model Analysis, Bootstrapping, Path Coefficient. The results of this research show that: (1) Sharia Financial Literacy has a significant positive effect on Financial Inclusion, (2) Use of Digital Finance does not have a significant positive effect on Financial Inclusion, (3) Sharia Financial Literacy has a significant positive effect on Financial Behavior (4) Use of Finance Digital has a significant positive effect on Financial Inclusion 5) Financial Inclusion has a significant positive effect on Financial Behavior, (6) Financial Behavior is able to mediate Sharia Financial Literacy on Financial Inclusion as shown by the Indirect Effect calculation, (7) Financial Behavior is able to mediate the Use of Digital Finance on Financial Inclusion as shown Indirect Effect calculation.

KEYWORDS: Sharia Financial Literacy, Use of Digital Finance, Financial Inclusion, Financial Behavior

I. INTRODUCTION

The influence of sharia financial literacy and the use of digital finance on financial inclusion is a very relevant topic in the context of sharia economics, especially for halal food culinary MSMEs in Palembang City. In recent years, the halal culinary industry in Indonesia has experienced significant growth, but still faces challenges in increasing financial access and improving economic prosperity for micro, small and medium enterprises (MSMEs).

Sharia financial literacy is knowledge and skills that enable individuals to make better financial decisions, including in managing sharia finances. By increasing sharia financial literacy, halal culinary MSMEs can better manage finances, reduce risks and improve business performance. Apart from that, sharia financial literacy can also influence more balanced and sustainable financial behavior.

The use of digital finance, such as information and communication technology (ICT) in financial services, also has an important role in increasing financial inclusion. This technology allows wider and easier access for MSMEs to use financial services, such as cash management, payments and loans. In this way, halal culinary MSMEs in Palembang City can more easily access the financial resources needed to expand their business and improve economic prosperity.

Financial behavior as an intervening variable plays a key role in linking Islamic financial literacy and the use of digital finance with financial inclusion. Balanced and sustainable financial behavior can be influenced by sharia financial knowledge and skills, as well as the ability to use financial technology. With better financial behavior, halal culinary MSMEs can be more effective in managing finances, reducing costs and increasing income.

In the context of Palembang City, which is one of the big cities in South Sumatra with great potential in the halal culinary industry, it is important to understand how sharia financial literacy and the use of digital finance can increase financial inclusion and financial behavior of halal culinary MSMEs. In this way, the government and financial institutions can develop more effective strategies to support the growth of halal culinary MSMEs in Palembang City.

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II. LITERATURE REVIEW

A. Theory of Planned Behavior (TPB)

Theory of Planned Behavior is a development of Ajzen and Fishbein's Theory of Reasoned-Action which adds a construct that is not yet contained in the Theory of Reasoned-Action, namely behavioural control. Theory of Planned Behavior is used to understand the relationship between intention to perform specific individual behaviours. An individual's performance of a particular behaviour is influenced by his intention to perform that behaviour. Intention influences attitude towards behaviour, subjective norm, and behavioural control.

B. Sharia Financial Literacy

Literacy from English literacy which means literate. Meanwhile, finance is the art of managing money that affects the lives of every person and every organisation.

Financial literacy or in English financial literacy is a person's ability to fully understand finance. Kiyosaki in Nina Septiani states that financial management requires financial knowledge (financial literacy).

C. The Use of Digital Finance

According to Bank Indonesia, financial technology is a breakthrough in technological advances with the use of technology in the financial system, where this use is able to produce new products, services, technologies, and business models that can have an impact on financial system stability, monetary stability, and related to the smoothness, reliability, efficiency, and security of the payment system.

D. Financial Inclusion

Financial inclusion is defined by Sarma as a process that ensures easy access, availability and utilisation of the formal financial system for all economic actors. According to Allen, the influence of financial inclusion can bring many welfare benefits to individuals. Governments that have policies to develop financial inclusion can increase the perception of people who feel that financial services (banking) are within their reach.

E. Financial Behavior

According to Ricciardi, financial behaviour is a discipline in which the interaction of various disciplines is inherent and continuously integrates so that the discussion is not carried out in isolation. The three aspects that influence a person's financial behaviour are psychology, sociology, and finance.

III. RESEARCH METHODS

This research is about the influence of sharia financial literacy and the use of digital finance on financial inclusion with financial behavior as an intervening variable in Halal Food MSMEs in Palembang City. In field research, this means carrying out a survey or going into the research object. The location chosen is very strategic and easy to reach. The object of this research is Halal Food MSME Entrepreneurs in Palembang City.

The data collection technique in this research uses a questionnaire distribution technique. A questionnaire is a data collection technique by giving questions or written statements to respondents to answer. The respondents in this research are Halal food MSME entrepreneurs in Palembang City.

Questionnaires are researchers collecting data indirectly with respondents. Questionnaires are used for respondents to answer questions without help from researchers. This research used a closed questionnaire. A closed questionnaire means that there is already an answer to the question that the respondent just has to select by ticking it.

IV. RESULTS

Setting and participants Setting, population and sample

This research design was prepared to determine the background, problem formulation, objectives, benefits, literature review, and research hypothesis. The next stage carried out in the research is preparing research data and testing hypotheses so that conclusions can be drawn according to the results obtained, problems and research hypotheses.

The analytical method used in this research is the Structural Equation Model (SEM) with the Partial Least Square (PLS) approach used in this research to test the existing research hypothesis. Structural Equation Model (SEM) is a statistical technique used to build and test statistical models in the form of cause and effect models. Structural Equation Model (SEM) is a technique that includes confirmation aspects of factor analysis, path analysis, and regression analysis as cases in the Structural Equation Model (SEM). Taking the researchers into consideration, this research used a Structural Equation Model (SEM) based on Partial Least Square Modeling (PLS-SEM) with the help of statistical tools, namely SmartPLS 3.0.

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Data collection and analysis Data collection

This research uses the number of indicators multiplied by 7. So the number of indicators in this research is 16 indicators. So the number of indicators is 16 times 7, namely 112 people. Of the 112 people divided into 12 sub-districts consisting of Ilir Barat II, Gandus, Seberang Ulu 1, Kertapati, Jakabaring, Seberang Ulu II, Plaju, Ilir Barat I, Bukit Kecil, Ilir Timur I, Kemuning, Ilir Timur II, Kalidoni, Ilir Timur Tiga, Sako, Sematang Borang, Sukarami, and Alang-alanglebar. The researchers stated the criteria for the minimum sample size in this study as follows:

1. Respondents are Halal Food MSMEs in Palembang City who have used a financial digital marketing system for at least 1 year.
2. Respondents are Halal Food MSMEs in Palembang City who have been running their businesses for at least the last 5 years

Data analysis SEM-PLS Data Analysis

Data processing techniques using Partial Least Square (PLS) which require the following stages of a research model:

1. Outer Model Analysis Convergent Validity

Convergent Validity assessment is based on the correlation between item scores or component scores estimated with PLS software. An individual reflexive measure is said to be high if it correlates >0.70 with the construct being measured. However, for research in the initial stages of developing a measurement scale, a loading value of 0.5-0.6 is considered sufficient. This research will use a loading factor limit of >0.70 .

Convergent Validity Value			
Variable	Indicator	loading Factor	Information
Sharia Financial Literacy (X1)	X1.1	0.706	Valid
	X1.2	0.840	Valid
	X1.3	0.839	Valid
	X1.4	0.875	Valid
	X1.5	0.857	Valid
	X1.6	0.827	Valid
	X1.7	0.834	Valid
	X1.8	0.841 0.756	Valid
Use of Digital Finance (X2)	X2.1		Valid
	X2.2	0.851	Valid
	X2.3	0.813	Valid
	X2.4	0.875	Valid
	X2.5	0.722	Valid
	X2.6	0.808	Valid
	X2.7	0.878	Valid
	X.8	0.836	Valid
Financial Inclusion (Y)	Y.1	0.776	Valid
	Y.2	0.830	Valid
	Y.3	0.879	Valid
	Y.4	0.838	Valid
	Y.6	0.822	Valid
	Y.7	0.830	Valid
	Y.8	0.823	Valid
Financial Behavior (Z)	Z.1	0.853	Valid
	Z.2	0.786	Valid
	Z.3	0.858	Valid
	Z.4	0.884	Valid

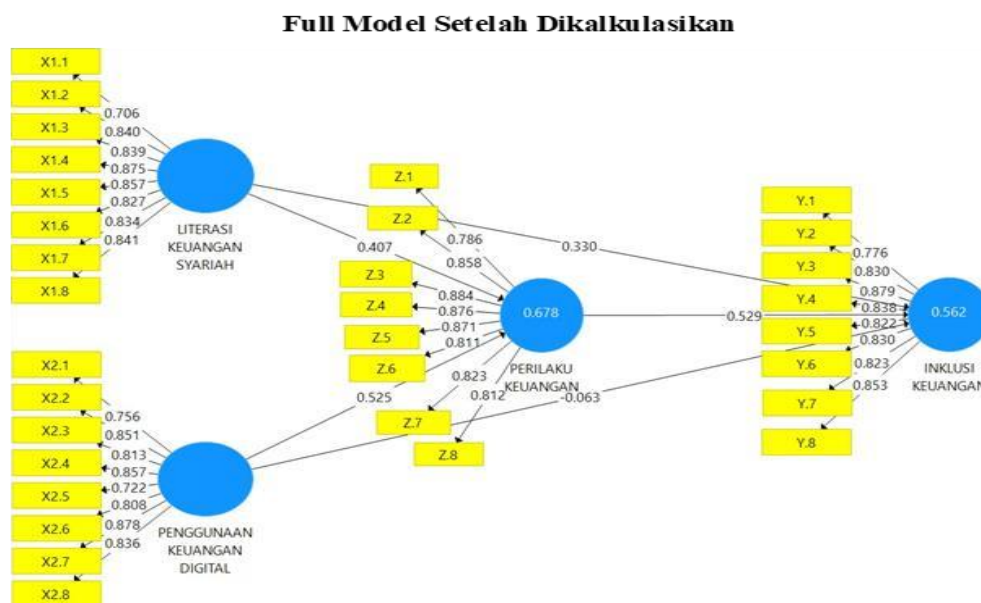
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Z.5	0.876	Valid
Z.6	0.871	Valid
Z.7	0.811	Valid
Z.8	0.823	Valid

Source: SmartPLS 3.0 Output, 2024

Based on table , it is concluded that the results of data processing with a loading factor value >0.70, this shows that the Outer Model value or correlation between constructs and variables has Convergent Validity because the value loading factor >0.70.

The following is a picture of the test results of the SmartPLS output measurement model as follows:



Based on Figure 1.2, it shows that it can be seen that all loading factor data has a value of more than 0.5 so it can meet validity. b. Discriminant Validity

The discriminant validity value is the cross loading factor value which is used if a variable is discriminant with compare the loading value on a variable which must be greater than the loading value of other variables.

Average Variance Extracted (AVE) Value

	Average Variance Extracted (AVE)	Criteria	Information
Financial Behavior (Z)	0.707	>0.50	Valid
Financial Inclusion (Y)	0.692	>0.50	Valid
Sharia Financial Literacy (X1)	0.687	>0.50	Valid
Use of Digital Finance (X2)	0.667	>0.50	Valid

Source: SmartPLS 3.0 Output, 2024

Composite Reliability

Composite Reliability meets the requirements if the composite reliability value is >0.70 and for Explanatory Research >0.60-0.70 is still acceptable.

Composite Reliability Value

	Composite Reliability	Criteria	Information
Financial Behavior (Z)	0.951	>0.70	Valid
Financial Inclusion (Y)	0.947	>0.70	Valid
Sharia Financial Literacy (X1)	0.946	>0.70	Valid
Use of Digital Finance (X2)	0.941	>0.70	Valid

Source: SmartPLS 3.0 Output, 2024

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Based on the table, it shows that all variables have a composite reliability value of >0.70 . These results indicate that each variable has met composite reliability so it can be concluded that all variables have a high level of reliability.

Cronbach's Alpha

Cronbach's Alpha is used to test reliability where good results have a Cronbach's Alpha value greater than 0.70 so you can see the table as follows:

Cronbach's Alpha value

	<i>Cronbach's Alpha</i>	Criteria	Information
Financial Behavior (Z)	0.941	>0.70	Valid
Financial Inclusion (Y)	0.936	>0.70	Valid
Sharia Financial Literacy (X1)	0.934	>0.70	Valid
Use of Digital Finance (X2)	0.928	>0.70	Valid

Source: SmartPLS 3.0 Output, 2024

Based on table 4.20, it shows that the Cronbach's Alpha value of each research variable is >0.70 , so it can be concluded that each variable has a high level of reliability.

2. Inner Model Analysis

a. R-Square (R^2) Testing

The R-Square value is used to explain whether latent endogenous effects have a substantive effect. R-Square values of 0.67, 0.33, and 0.19 indicate a strong, medium, and weak model. The higher the R^2 value means the better the prediction model of the proposed research model. However, R^2 is not an absolute parameter in measuring the accuracy of the prediction model because the basic theoretical relationship is the most important parameter to explain the causal relationship. As in table 4.24 as follows:

R-Square Value

	<i>R-Square</i>	Model Power
Financial Behavior (Z)	0.678	Currently
Financial Inclusion (Y)	0.562	Currently

Source: SmartPLS 3.0 Output, 2024

Based on the table, it shows that the R-Square value of Trust (Z) is $0.613 < 0.67$, meaning it has a moderate coefficient of determination and Consumer Behavior can be explained by Sharia Financial Literacy, Use of Digital Finance, and Financial Inclusion and the rest can be explained by other factors. Meanwhile, Financial Inclusion (Y) is $0.562 > 0.67$, meaning that the moderate coefficient of determination can be explained by Sharia Financial Literacy, Use of Digital Finance, and Financial Behavior and the remaining amount can be explained by other factors.

Findings

Based on data from 121 respondents from Halal Food MSME Entrepreneurs in Palembang City, using a statement (questionnaire) the condition of the respondents was obtained based on gender, age, highest level of education, number of employees, annual income and length of business since its founding. This classification was carried out on respondents in this research with the aim of knowing clearly the categories of respondents as research objects.

A description of the specific data in this study is presented based on the characteristics of the respondents. The description of the respondent's general data is presented based on the respondent's characteristics.

V. DISCUSSION

The Influence of Sharia Financial Literacy on Financial Inclusion in Halal Food Culinary MSMEs in Palembang City

The research results obtained a t-statistic value of $3.275 < t$ table of 1.98 and a p-value of $0.001 > 0.05$, then the t statistic value $< t$ table then with a significance level > 0.05 , namely 0.330, it was decided to reject H_1 and accept H_0 , then Based on test results, it shows that Sharia Financial Literacy has an effect on Financial Inclusion in Halal Food MSMEs in Palembang City.

The Influence of Using Digital Finance on Financial Inclusion in Halal Food Culinary MSMEs in Palembang City

The research results obtained a tstatistic value of $0.538 > t$ table of 1.98 and a p-value of $0.591 < 0.05$, so the tstatistic value was $< t$ table, so with a significance level < 0.05 , namely -0.063, it was decided to accept H_2 and reject H_0 , So based on the test results, it shows that the use of digital finance has no effect on financial inclusion.

The Influence of Sharia Financial Literacy on Financial Inclusion in Halal Food Culinary MSMEs in Palembang City

Based on the research results, the tstatistic value is $5.462 < t$ table, it is 1.98 and the p-value is $0.000 > 0.05$, then the

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tstatistic value is $< t_{table}$, so with a significance level > 0.05 , namely 0.407, it is decided to reject H3 and accept H0, then Based on test results, it shows that Sharia Financial Literacy has an effect on Financial Behavior.

The Influence of Using Digital Finance on Financial Behavior in Halal Food Culinary MSMEs in Palembang City

The research results obtained a tstatistic value of 6.123 $< t_{table}$ of 1.98 and a p-value of 0.000 > 0.05 , so the tstatistic value $< t_{table}$ then with a significance level > 0.05 , namely 0.000, it was decided to reject H4 and accept H0, then Based on test results, it shows that the use of digital finance has an effect on financial behavior.

The Influence of Financial Inclusion on Financial Behavior in Halal Food Culinary MSMEs in Palembang City

The results of the research obtained a tstatistic value of 3.471 $< t_{table}$ of 1.98 and a p-value of 0.001 > 0.05 , then the tstatistic value $< t_{table}$ then with a significance level > 0.05 , namely 0.001, it was decided to reject H5 and accept H0, then based on test results, it shows that Financial Behavior has an effect on Financial Inclusion.

The Influence of Sharia Financial Literacy on Financial Inclusion through Financial Behavior as an Intervening Variable in Food Culinary MSMEs in Palembang City

The results of the research obtained a tstatistic value of 3.408 $> t_{table}$ of 1.98 and a p-value of 0.001 < 0.05 , then the tstatistic value $< t_{table}$ then with a significance level < 0.05 , namely 0.001, it was decided to accept H8 and reject H0, then based on the test results, it shows that Sharia Financial Literacy indirectly through Financial Behavior as a mediating variable has a significant effect on Financial Inclusion. This model is included in "Partial Mediation" or mediation occurs, where the Sharia Financial Literacy variable is able to influence Financial Inclusion through Financial Behavior, then Financial Behavior mediates the relationship between Sharia Financial Literacy and Financial Inclusion

The Influence of Using Digital Finance on Financial Inclusion through Financial Behavior as an Intervening Variable in Food Culinary MSMEs in Palembang City

Based on the research results, the tstatistic value was 3.155 $> t_{table}$ of 1.98 and the p-value was 0.001 < 0.05 , so the tstatistic value was $< t_{table}$, so with a significance level of < 0.05 , namely 0.002, it was decided to accept H8 and reject H0. So, based on the test results, it shows that the use of Digital Finance indirectly through the use of Digital Finance as a mediating variable has a significant effect on Financial Inclusion. This model is included in "Partial Mediation" or mediation occurs, where the variable Use of Digital Finance is able to influence Financial Inclusion through Financial Behavior. , then Financial Behavior mediates the relationship between the Use of Digital Finance and Financial Inclusion.

VI. CONCLUSIONS

Sharia Financial Literacy has a significant positive effect on Financial Inclusion in Halal Food MSMEs in Palembang City, the use of Digital Finance has no significant positive effect on Financial Inclusion in Halal Food MSMEs in Palembang City, Sharia Financial Literacy has a significant positive effect on Financial Behavior in Halal Food MSMEs in the City Palembang, Use of Digital Finance has a significant positive effect on Financial Behavior in Halal Food MSMEs in Palembang City, Financial Behavior has a significant positive effect on Financial Inclusion in Halal Food MSMEs in Palembang City, Financial Behavior mediates the relationship between Sharia Financial Literacy and Financial Inclusion in Halal Food MSMEs in Palembang City,

Financial Behavior mediates the relationship between the Use of Digital Finance and Financial Inclusion in Halal Food MSMEs in Palembang City. Based on the results that the use of digital finance has no effect on financial inclusion, it is hoped that we will provide and develop digital financial products that are tailored. the characteristics of MSMEs in the halal food sector, such as online payment systems, digital cash management and digital financing. Based on the researcher's direct experience in this research process, there were several limitations experienced and there could be several factors that future researchers could pay more attention to in further perfecting their research because this research itself certainly has shortcomings that need to continue to be corrected in future research. Several limitations in this research include: The number of respondents was only 121 people and only Halal Food MSMEs in Palembang City, of course this is still insufficient to describe the real situation.

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Quality of Life of Vietnam People through Education and Health Index



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ABSTRACT: The quality of life of the population is a measure of the sustainable development of the country, in which education and health care play an important role. In Vietnam, education and health care have made important strides in improving people's lives, helping to improve the level of education and public health care. The education system is expanding with many good improvement policies, while the health sector is also developing strongly through strengthening facilities and wider access to health services. However, there are still many challenges, quality disparities between regions and overload in hospitals... The article focuses on studying the current status of education, health care, and its impact on the quality of life of the population.

KEYWORDS: Quality of life, education, health, Vietnam.

1. PROBLEM STATEMENT

In the context of globalization and increasingly deep international integration, people's quality of life has become an important criterion to evaluate the sustainable development of countries. In the world, developed countries always prioritize improving the quality of life, focusing on improving core areas such as education and health. These are factors that directly affect the prosperity of the country, not only in ensuring the basic rights of the people but also creating momentum for economic and social development.

In the Southeast Asian region, many countries such as Singapore, Malaysia and Thailand have made significant achievements in improving education and health indicators, contributing to improving people's lives and enhancing the country's position in the international arena. These countries are all deeply aware of the importance of investing in education to develop high-quality human resources, while building advanced health systems to ensure health for the entire population. The experience of these countries shows that the quality of life of the population is closely linked to the progress in education and health, which is the foundation for sustainable development and successful integration in the region and internationally.

In Vietnam, after decades of socio-economic development, the government has been making continuous efforts to improve the quality of life for the people through education and health policies. Improving the education system, strengthening health facilities and expanding universal health insurance are strategic steps to improve the quality of human resources and public health care. However, Vietnam still faces many challenges, such as quality gaps between regions, hospital overload in big cities, and the need to improve the quality of education in rural areas. Therefore, the issue of people's quality of life through education and health needs to be thoroughly researched and evaluated in order to come up with effective policy solutions.

Researching education and health in relation to quality of life is an important task, not only to assess current real prices but also to propose issues for improvement, building a solid and prosperous society for the future of the country.

2. RESEARCH CONTENT

2.1. Quality of life

Quality of life is a feeling of satisfaction or well-being when the elements of life meet important personal needs; it is the agreement, satisfaction with what people achieve (Thoa, 2003) . The Treasury Board of the Secretariat of Canada (1999) believes that quality of life, in a subjective perspective, is expressed through positive feelings and satisfaction with the overall life. In terms of

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customers, quality of life should fully meet cultural and social needs, including material assets, social status and physical health (Treasury Board of the Secretariat of Canada, 1999).

Boehnke (2003) stated that: quality of life is related to personal happiness, including many multidimensional emotional aspects. This definition is based on common social goals in Europe, such as ensuring a minimum standard of living, creating employment opportunities and social support. Therefore, quality of life is not only based on factors such as income, education or assets, but also must pay attention to health, family relationships (Boehnke, 2003).

The World Health Organization (WHO, 1997) defines quality of life as the way individuals evaluate their place in the society and culture in which they live, through values such as goals, expectations and standards. This concept is influenced by many factors, such as physical and mental health, independence, social relationships, beliefs and living environment (WHO, (1997).

Thus, quality of life is a broad and highly personal concept, each person will have a way of feeling and choosing for their life to bring the most happiness. However, quality of life is also affected by the community, society and surrounding living environment. To improve the quality of life, it is necessary to pay attention to developing its constituent elements, ensuring to meet the increasing needs of people in a positive direction, from increasing income and reducing poverty, to improving education, education and creating the environment. Currently, the Mercer Company's criteria for assessing urban quality of life are very popular in the world, based on 39 criteria, divided into 10 groups:

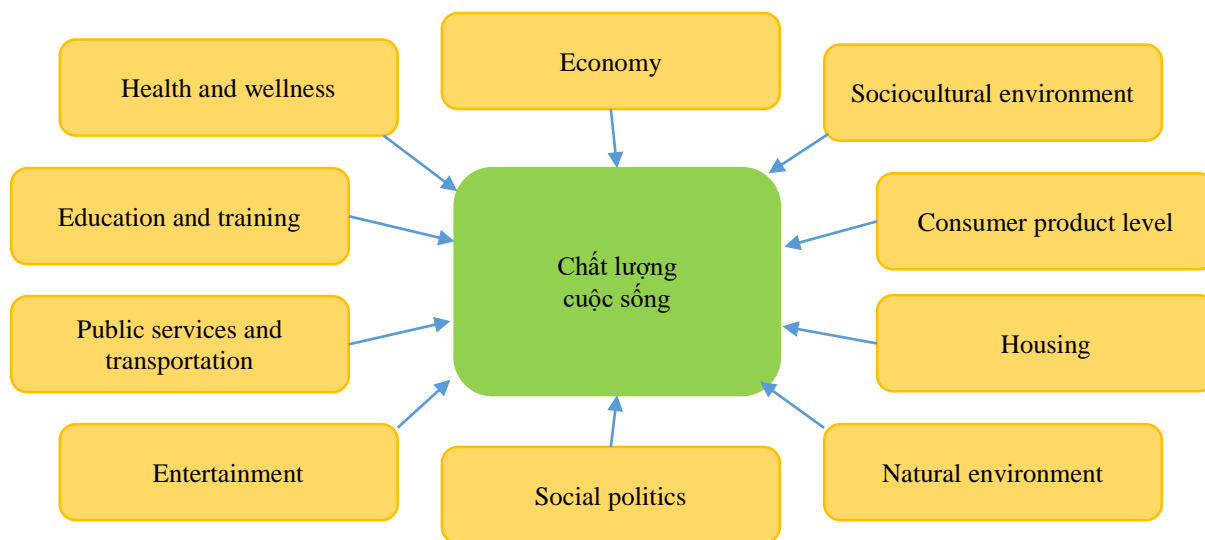


Figure 1: Groups of criteria for assessing quality of life

Source: (Ha, 2013).

Quality of life is the sum of people's satisfaction and fulfillment in many different areas. Each aspect not only directly affects the individual but also interacts with each other, creating an overall picture of the ability to live, happiness and development of society.

2.2. Education, health care and impact on quality of life of residents

Education, health and quality of life of the population are a closely interacting chain, confirmed in many previous studies, with an important role in the sustainable development of society. Becker (1964) argued that education is an important form of "human capital", helping to increase labor productivity, thereby improving income and quality of life. When people are equipped with better knowledge and skills through education, they are able to be more aware of the factors affecting health, from disease prevention to maintaining a healthy lifestyle, as Lucas (1988) mentioned in the endogenous growth theory.

Education has a profound impact on the quality of life by equipping individuals with the skills and knowledge needed to participate effectively in the labor market and society. Education not only improves economic capacity but also has a positive impact on other social factors such as health and participation in community activities. Cutler and Lleras-Muney (2006) also found that people with higher levels of education tend to have better health and longer life expectancy. This shows that education not only increases income but also contributes to improving the overall quality of life, through improving human awareness and skills. Education and health are closely related, in which people with higher levels of education tend to have better health, creating conditions for individual

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and community development. Furthermore, according to Schultz, education also reflects a country's concern for human development, through indicators of literacy rates, cultural levels, and educational infrastructure.

Along with education, health is a core factor in improving the quality of life through protecting and improving people's health. Good health is the basis for people to participate effectively in economic and social activities. According to Grossman (1972), health is not only an input factor in the economic production process but also an important form of "human capital". A good health system helps reduce disease rates, increase labor productivity and increase life expectancy, thereby directly improving the quality of life. WHO (2008) emphasizes that good health is a fundamental factor for sustainable development and for people to enjoy life to the fullest.

The development of education and health contributes to a healthy, well-educated population, and thus improves the overall quality of life. Inequalities in education and health often lead to inequalities in the quality of life. Therefore, when both systems are improved, it will create a more equitable living environment, reduce poverty and improve human development indicators (UNDP, 2010).

2.3. Quality of life of Vietnamese people through education and health index

2.3.1. Education

The quality of life in Vietnam has seen many positive changes in recent years thanks to sustainable economic growth, improved infrastructure and improved quality of health and social services. Increasing per capita income, along with the development of social security programs, has helped improve the living standards of the majority of the population. However, some challenges such as environmental pollution and inequality still exist, requiring more comprehensive solutions. In the overall picture of quality of life, education is one of the factors that plays an important role, not only improving the skills, knowledge and values necessary for personal development but also contributing to promoting economic and social development.

2.3.1.1. General education stage

In recent years, the general education system has made great strides, with an increase in both the quantity and quality of schools, facilities and teaching staff. This development not only reflects the efforts of the Vietnamese Party and State in improving learning conditions but also contributes to creating a new generation of intellectuals capable of meeting the needs of the modern labor market.

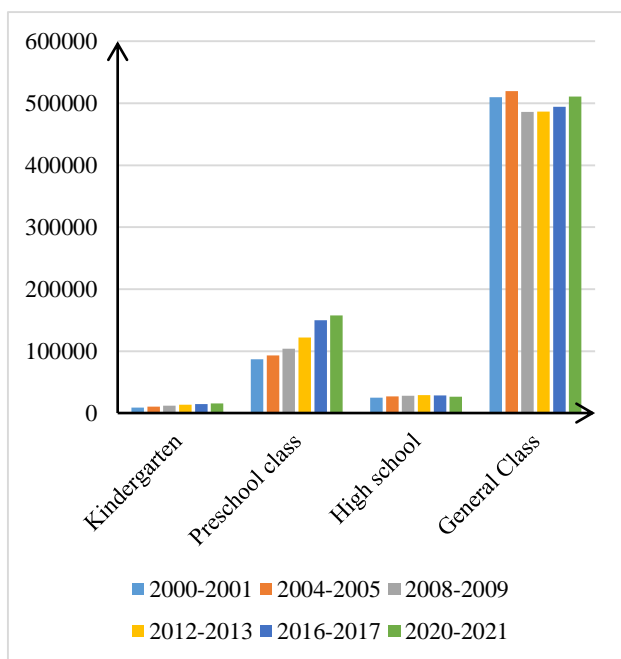


Figure 2. Number of schools and classes at preschool and general education levels in Vietnam

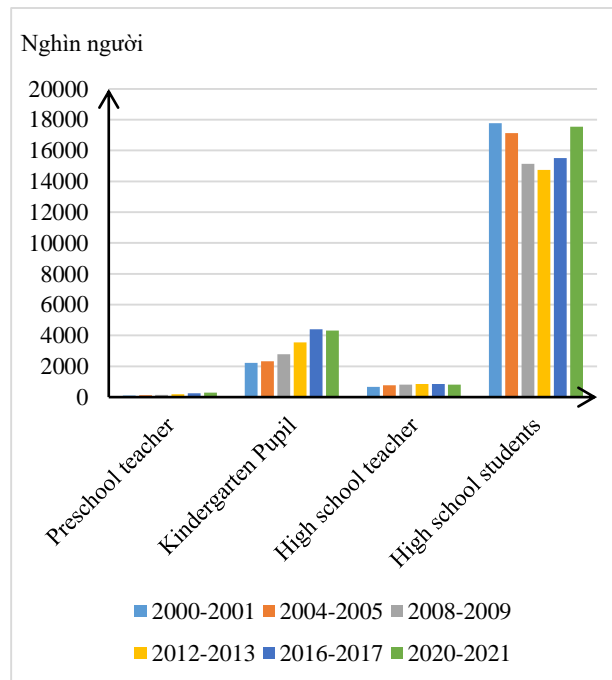


Figure 3. Number of teachers and students in Vietnam

Source: General Statistics Office of Vietnam

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Facilities for the preschool and general education system are increasingly being improved. The number of schools and classes at all levels tends to increase, especially clearly at the preschool level. This reflects more careful preparation for receiving children to preschool. For the general education level, the number of classes has changed unsteadily, in the 2008-2009 school year there was a significant decrease compared to 2004-2005, then increased slightly again in the following years. The decrease in the number of classes, while the number of schools still increased, is due to some previous classes being put into use for other functions, such as libraries, team activity rooms, etc.

Preschool level, along with the increase in school facilities, the number of teachers and students tends to increase significantly. In the 2020-2021 school year, compared to the 2000-2001 school year, the number of preschool teachers increased by 272%, the number of students increased by 196%. Thus, the number of teachers increased faster than the number of students. That proves that child care will be more attentive, the quality of life in this indicator will be improved. If in the 2000-2001 school year, the average number of students per teacher was 21.4, then in the 2020-2021 school year it was only 15.4. The average number of children per teacher decreased, which is a good opportunity for teachers to take better care of children, creating conditions for children to develop comprehensively in terms of physical, intellectual and spiritual aspects.

For general education, from the 2000-2001 school year to the 2020-2021 school year, the number of general education teachers was relatively stable, but the number of students fluctuated strongly: from 2000-2001 to 2012-2013, there was a sharp decrease, then a sharp increase in the following years (this increase and decrease is a result of the population growth rate). However, the average number of students per teacher still shows a positive trend: in the 2000-2001 school year it was 26.9, then in 2020-2021 it decreased to 21.5. This once again reflects that student care tends to be more positive, and the quality of life in education indicators tends to improve. That is also what made the high school graduation rate in Vietnam increase sharply from 2000 to 2020, from 89.84% to 97.94%.

As the quality of life improves, the number of years of schooling of the population also increases.

Table 1. Average years of schooling in Vietnam

	2012	2014	2016	2018	2020	2021
Average years of schooling	7.45	8.3	8.49	8.64	9.1	9.2

Source: General Statistics Office of Vietnam

Thanks to the increase in the number of years of schooling, combined with the implementation of the literacy strategy in remote areas, in 2020, the literacy rate for people aged 15-60 in Vietnam reached 97.85%, of which the age group from 15-35 reached 99.3%. The literacy rate is an important indicator to assess the accessibility and quality of basic education in a country. It shows the percentage of the population that can read and write, thereby reflecting the level of cultural and economic development of a society. With these achievements, Vietnam's general education is equivalent to the OECD group of developed countries, in the top 40 (Center for Educational Communication, 2021).

2.3.1.2. Higher education

Higher education is a level of education that aims to provide in-depth knowledge and practical skills in various fields, from natural sciences, engineering, social sciences, to arts, medicine and management. The goal of higher education is not only to develop knowledge but also to train high-quality human resources, meeting the needs of specialized labor in the market, contributing to economic development. Along with general education, Vietnamese higher education has achieved remarkable achievements, contributing greatly to socio-economic development.

Table 2. Number of schools, lecturers and students of Vietnamese higher education

	2000	2004	2008	2012	2016	2020
School	178	230	393	421	235	242
Lecturer	32,300	47,600	60,700	87,700	72,790	76,580
Student	899,500	1,319,800	1,719,500	2,178,600	1,767,880	1,905,960
Graduates	162,500	195,600	222,700	425,200	318,070	242,380

Source: General Statistics Office of Vietnam

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The table shows that Vietnam's higher education has grown strongly in scale, with the number of universities, students, and lecturers constantly increasing over the past two decades. From 2000 to 2012, the number of schools, lecturers, and students all increased significantly, reflecting the increasing demand for high-quality human resources in society. The number of university students increased from nearly 900,000 (in 2000) to more than 2.1 million (in 2012). The number of schools also increased from 178 (in 2000) to more than 421 (in 2012), demonstrating strong investment in infrastructure and education.

Along with the expansion, the quality of teaching and research has also improved. Many universities in Vietnam have made significant investments in research staff, equipment, and training programs. Many lecturers have achieved doctoral degrees or higher in countries with developed education systems, contributing to improving the quality of education. In addition to improving content, universities have begun to apply many advanced technologies and teaching methods such as online learning (e-learning), learning management systems (LMS), and artificial intelligence (AI) in teaching. In particular, the trend of using technology in education has increased sharply in the context of the COVID-19 pandemic, opening up many new facilities to access and improve the quality of teaching and training.

Along with advanced learning, universities have been perfecting scientific research, international cooperation and innovation activities. Some universities have published international scientific publications, helping to enhance the position of Vietnamese education in the international arena. Many universities in Vietnam have promoted international cooperation programs, linking with prestigious universities in the world to offer high-quality training programs, attracting students. These joint programs not only help improve the quality of training but also create opportunities for students to access advanced global education and improve foreign language skills. With these changes, Vietnamese higher education has contributed significantly to training high-quality human resources for the economic, technological and social sectors. Supporting this development, graduates from Vietnamese universities have been actively participating in important fields such as information technology, engineering, medicine, education, business management, and social sciences. The number of graduates increased significantly from 2000 to 2012, with more than 425,200 students graduating in 2012, reflecting the efforts of the education system in providing human resources for society.

Thus, the period from 2000 to 2012 was a period of strong growth in the number of schools, students, and graduates. Then, from 2012 to 2020, there was a significant decline in these numbers. This decline is related to education and admissions policies, vocational training trends, and international education.

Despite many achievements, Vietnamese higher education still faces a number of major challenges such as: uneven training quality among universities; international competition and integration, requiring the education system to improve quality and competitiveness.

Thus, it can be seen that Vietnamese education has achieved many significant successes in improving and ensuring the quality of life for the people. However, in order to continue to contribute more effectively to social development, education needs to continue to innovate, improve the quality of training and ensure equal learning opportunities for all classes. At the same time, the education system needs to adapt to changes in the labor market and society to create high-quality human resources, contributing to improving the quality of life and sustainable development.

2.3.2. Health

Health is one of the important criteria reflecting the quality of life of the people, because it is directly related to health, life expectancy and people's access to health care services. Good health is the foundation for people to participate in all economic and social activities and improve the quality of life of individuals as well as the community.

Along with socio-economic development, the Party and State's deep concern for people's lives, especially in the field of health care, medical facilities are constantly invested and expanded.

Table 3. Number of medical examination and treatment facilities

	2000	2004	2008	2012	2017
Total	13117	13149	13460	13523	13583
Hospital	835	856	974	1042	1085
Nursing and rehabilitation hospital	92	53	40	59	60
Regional clinic	936	881	781	631	579
Commune and ward health stations	10271	10516	10917	11049	11120

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Medical station of agencies and enterprises	918	789	710	710	710
Other facilities	65	54	38	32	29

Source: General Statistics Office of Vietnam

The data table shows that the medical facilities are very diverse and rich, including specialized medical facilities such as hospitals, or supporting medical facilities such as clinics, health stations, etc. This reflects that the medical system is moving towards specialization, focusing on providing medical services at many levels, from emergency treatment to post-treatment care, helping to increase the effectiveness of health care and improve the quality of life. The diversity of the medical system aims to ensure that people have better access to medical services, helping to reduce the burden on large hospitals and improve medical care.

The table also shows that the total number of medical examination and treatment facilities in Vietnam has continuously increased from 2000 to 2017, from 13,117 to 13,583 (an increase of 466 facilities, an average increase of 27.4 facilities per year). Among the medical facilities, the number of commune and ward health stations accounts for the largest number (in 2017, the number of commune and ward health stations accounted for 81.9% of the total number of medical facilities). Following the number of commune and ward health facilities is the number of hospitals (in 2017, the number of hospitals accounted for 8.0% of the total number of medical facilities). Although only behind the number of commune and ward health stations, the number of hospitals tends to increase faster: the growth rate of the number of hospitals from 2000 to 2017 was 129.9%, while commune and ward health stations increased by 108.3%. This proves that the State has paid more attention to developing more specialized medical facilities, and the quality of medical care for the people is focused on with better quality. The number of remaining medical facilities accounts for a smaller proportion, and tends to shrink and decrease gradually. This shrinking and decreasing is due to the fact that these facilities have been upgraded to a higher level of expertise, that is, upgraded to hospitals (for example, general clinics, nursing and rehabilitation hospitals upgraded to general or specialized hospitals).

Health care for the people has also gradually improved, clearly reflected in the average number of hospital beds per ten thousand people and the average number of doctors per ten thousand people.

Table 4. Number of hospital beds and number of doctors per 10,000 people

	2015	2016	2017	2018	2019	2020	2021	2022
Average hospital beds per 10,000 people (Beds)	26.5	27	27.5	28	28.5	31	31.2	31.7
Average doctor per 10,000 people (People)	8.0	8.2	8.4	8.6	8.8	8.6	11.1	10.0
Average number of doctors per hospital bed (people)	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3

Source: Author's calculation

From 2015 to 2022, the indicators of the average number of hospital beds per 10,000 people, the average number of doctors per 10,000 people, and the average number of doctors per hospital bed all increased continuously. In 2022, the average number of hospital beds per 10,000 people increased by 5.2 beds compared to 2015, the average number of doctors per 10,000 people increased by 2, and the average number of doctors per hospital bed increased by 0.1. Although the increases are very small, they are also manifestations of progress in people's health care and an improvement in quality of life.

Improvements in healthcare have led to health indicators showing increasing progress: average life expectancy has increased; child mortality has tended to decrease.

Table 5. Average life expectancy and child mortality rate in Vietnam

Year	2012	2014	2016	2018	2020	2022	2023
Average life expectancy (years)	73.05	73.23	73.39	73.49	73.7	73.64	74.5
Child mortality rate (%)	23.2	22.4	21.8	21.4	22.3	18.93	17.35

Source: Vietnam Statistical Yearbook

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Average life expectancy has a steady increase, from 73.05 years (2012) to 74.5 years (2023), while the child mortality rate has decreased significantly, from 23.2% (2012) to 17.35% (2023). This change reflects the clear effectiveness of investment and development in health care and community health care.

Thus, in recent years, Vietnam's healthcare has made remarkable progress, gradually improving the quality of service and enhancing the quality of healthcare for the people. However, there are still some limitations such as:

- There is a clear difference in the quality of health services between urban and rural areas. In remote areas, the health system lacks facilities, equipment and skilled human resources, making it difficult for people in these areas to access high-quality health services.

- Overcrowding in major hospitals, especially in big cities like Hanoi and Ho Chi Minh City, remains a serious problem. Patients often have to wait long to be examined and treated, leading to reduced quality of care and increased risk of cross-infection in the hospital environment.

- The number of highly qualified doctors, nurses, and medical staff is limited, especially in medical facilities outside of major cities. This leads to a shortage of care and treatment capacity, especially for complex and high-tech diseases.

- Although health insurance has covered the majority of the population, the cost of specialized medical services, herbal medicine and long-term treatment is still quite high for a segment of the low-income population. This makes it difficult for many people to access good health care services, causing delays in treatment.

Thus, to improve the overall quality of health care, it is necessary to improve management, resource allocation and quality of health services.

3. CONCLUSION

The quality of life of Vietnamese people has improved significantly in recent years, especially through education and health indicators. The education system has developed in scale and quality, contributing to improving the intellectual level of the people, meeting the needs of modern society. However, there are still major challenges, especially in the era of integration and digital technology, that require efforts to overcome.

In the health sector, the health care system has made significant progress, with an increase in the number of hospitals and improvements in medical services. However, overcrowding in major hospitals, a shortage of highly skilled medical personnel, and disparities in facilities between regions remain issues that need to be addressed.

Thus, to achieve sustainable development goals, Vietnam needs to continue to improve and perfect its education and health systems, promoting protection so that all people have access to education and care services.

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An Introduction to the Development and Protection of Tourism Resources in China



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ABSTRACT: Introduction: Tourism resources provide great potential for tourism development, but at the same time, they also face problems such as over-exploitation and environmental damage, so it is crucial to achieve a balance between development and conservation. This study explores the development and protection of tourism resources in China.

Background: Since the reform and opening up of China more than 30 years ago, China's tourism industry has rapidly developed into one of the important pillar industries of the national economy. At the same time, the destruction of tourism resources has also become more and more prominent, therefore, we must correctly deal with the relationship between the development and protection of tourism resources, to ensure the economic benefits while achieving the sustainable development of tourism resources.

Novelty: Many studies in China currently focus on either tourism development or conservation, but this study endeavours to consider the relationship between the two in an integrated manner, providing a comprehensive approach to effectively develop and conserve China's rich tourism resources, while at the same time obtaining economic benefits.

Research Methods: This study adopts the methods of literature review and qualitative analysis to review the research results on the development and protection of China's tourism resources by collecting relevant literature and summarising and analysing the ideas in the literature to conclude the development and protection of China's tourism resources. Finally, corresponding management suggestions and policy measures are proposed based on the conclusions.

Results: To promote the sustainable use and protection of tourism resources, and to ensure the long-term stability and sustainability of the resources

Conclusions: To solve this problem, this study puts forward the following suggestions: (1) to formulate strict laws and regulations; (2) to raise the overall awareness of environmental protection; (3) to promote the corresponding scientific research and technological support; (4) to strengthen tourism planning and management. (5) Establishment of funds for the protection of tourism resources; (6) Strengthening of cooperation and exchanges.

KEYWORDS: sustainable tourism development, China's tourism resources, development of tourism resources, protection of tourism resources

INTRODUCTION

Tourism resources are the cornerstone of tourism development and a crucial part of the tourism product. As one of the three pillars of the tourism industry, tourism resources are crucial to the realisation of sustainable tourism development, while the type, quantity, scale, characteristics and protection status of tourism resources determine to a large extent the overall tourism development level of a country or region. Therefore, the protection of tourism resources should not only focus on the protection of the resources themselves to prevent them from being damaged or destroyed, but also consider the protection of the surrounding environment. The importance of protecting tourism resources lies not only in maintaining the existing economic benefits, but also in passing on these precious resources to future generations. Therefore, the concept of sustainable development requires us to improve the efficiency of tourism. China is blessed with rich and diverse tourism resources, including magnificent natural landscapes, rich cultural heritage and diverse folklore, which have attracted countless tourists to explore. Tourism has become an attractive economic pillar in a country that is both ancient in civilisation and modern in prosperity. However, the rapid

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growth of tourism has also brought about a number of challenges, one of which is how to promote tourism while at the same time conserve and sustainably utilise these valuable resources. However, over-exploitation and improper management may lead to destruction and damage of resources, posing a potential threat to China's valuable natural and cultural heritage. In this issue, we focus on the development and conservation of tourism resources in China, responding to the key question: how can the development and conservation of tourism resources be balanced to ensure sustainable tourism development? Through this study, we aim to make a useful contribution to the future of tourism in China and to provide other countries and regions with useful lessons on tourism resource development and conservation.

LITERATURE REVIEW

With the rapid development of tourism, the development and protection of China's tourism resources has become a hot research topic in recent years. Scholars generally agree that China has rich tourism resources, but also faces a series of protection problems in the process of development. The topic of tourism resources development and protection has gone through a process of theoretical research, policy formulation and practical exploration.

In terms of conceptual development, the development and conservation of tourism resources involves research and theoretical frameworks from several disciplines. On the one hand, some researchers regard it as a concept of sustainable development and believe that the development and protection of tourism resources should follow the principle of sustainable development of economy, society and environment. For example, Zhao Xixi (2022) in "Development and Protection of Tourism Resources in the Perspective of Circular Economy" pointed out that the development and protection of tourism resources has become an urgent problem for the current tourism industry. In order to achieve sustainable development of tourism resources, it is necessary to carry out scientific and reasonable development and protection based on the principle of circular economy. Feng Limei (2017) wrote in China's Tourism Resource Development Model and the Concept of Sustainable Development of Tourism Regions that in the context of building a resource-saving and environmentally friendly society, sustainable development has become an inevitable trend in the development of tourism attractions. It also emphasises the rapid development of China's tourism industry, but also points out the need to manage and develop tourist attractions within the framework of sustainable development in order to meet growing cultural demands while protecting the environment and resources.

On the other hand, some scholars have also studied the development and protection of tourism resources from the perspectives of regional economics, resource economics and environmental economics. For example, Ping Zhang (2018) wrote in Tourism Resource Development and Protection in the Perspective of Circular Economy that rational development and protection of tourism resources can not only avoid waste and overconsumption of resources, but also enhance resource utilisation efficiency and reduce production costs, thus creating economic value. In 2007, Siswanto, in his research paper Tourism and Cultural Heritage Preservation, explored the important direction of tourism as a service and industrial sector in many countries. He suggested that tourism not only boosts foreign exchange reserves, but also increasing people's incomes. This view emphasises the importance of tourism in economic development.

According to the existing studies, the studies on the development and protection of tourism resources in China can be divided into the following categories: The first type of research focuses on the development and use of tourism resources. One viewpoint is that the development of tourism resources should focus on economic benefits and promote local economic development by increasing income and employment in the tourism industry. In contrast, another viewpoint argues that the development of tourism resources should take into account their impact on the environment in order to avoid environmental damage and ecological imbalance. These studies reveal some basic consensus that the development of tourism resources should balance economic benefits and environmental protection, and ensure the participation and interests of local communities.

The second type of research focuses on the protection of the tourism environment. One view is that the protection of the tourism environment should focus on the protection of the natural ecological environment and cultural heritage. At the same time, some scholars have also studied the protection of tourism resources from the perspectives of law, policy and management, emphasising the development and implementation of effective management measures to protect the sustainable use of tourism resources. These studies show that the protection of tourism resources requires comprehensive consideration of the value of the natural environment and cultural heritage, and effective management and regulation of tourism activities.

There is also a third category of studies that focus on the development of the tourism industry. This type of research examines the development strategies of the tourism industry from the perspective of marketing and innovation management. These studies show how the tourism industry can meet the needs of tourists and promote the sustainable development of the tourism industry by providing quality tourism products and services. Meanwhile, other scholars have studied the impact of tourism on the local economy and society from the perspectives of regional economics and urban planning.

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All of the above studies have made important recommendations for the study of tourism resource development and conservation in China, which are important for understanding the issues of tourism resource development and conservation. However, there are studies that still have some limitations in some areas.

METHODS

This study adopts the methods of literature review and qualitative analysis. Firstly, literature research results on the development and protection of tourism resources in China are reviewed by collecting relevant literature. Secondly, opinions, cases and data in the literature are summarised and analysed so as to draw conclusions about the development and protection of tourism resources in China. Finally, corresponding management suggestions and policy measures are proposed based on the conclusions.

DISCUSSION

4.1 Definition and classification of tourism resources

Tourism resources are a prerequisite for the development of tourism and are the basis of tourism. Tourism resources refer to the natural existence and historical and cultural heritage that are attractive to tourists, as well as artificial creations that can be directly useful for tourism purposes. Classification can be made in terms of attributes (natural, humanistic, other), utilisation perspectives (renewable, non-renewable), state of existence and use (actual, potential), and quality and level (world to city and county level). Their attraction function enables them to meet the interests and needs of different tourists, and their effective development and utilisation can create great tourism value and economic benefits.

4.2 Relationship between tourism resource development and tourism resource protection

The development of tourism resources and the protection of tourism resources are two inseparable aspects of tourism development, which are interrelated and mutually reinforcing, but also mutually constraining and balancing. Firstly, there is a mutually promoting relationship between the development of tourism resources and the protection of tourism resources. Through effective development, the popularity and brand value of tourism resources can be enhanced, thus increasing the investment in resource protection. In the process of resource development, factors such as ecological environment and cultural heritage must also be taken into account to ensure the sustainable use of resources and promote the implementation of resource protection. Secondly, tourism resources. there is a relationship of mutual constraints between the development of resources and the protection of tourism resources. Development of tourism resources. the process will inevitably cause a certain degree of damage to the ecological environment. In the process of development, the remodelling of scenic spots, the renovation of the original environment, and the construction of roads, water and electricity, houses and other infrastructures will all have an impact on the original ecological environment, and this kind of inadvertent damage leads to the tension between the development and protection of tourism resources. If the development is not subject to scientific planning and management, it may lead to excessive resource development, which in turn endangers the natural environment and the original landscape, thus threatening the sustainable use of resources. Therefore, it is necessary to pay attention to ecological environmental protection and avoid over-exploitation in the course of development, so as to ensure the stability and sustainability of the resources. Again, there is a need to achieve a mutual balance between the development of tourism resources and their protection. Development relies on the existence and protection of resources, while protection also needs to obtain economic and social benefits through development in order to be invested in the protection of resources. Only by achieving a balance between the two can the value of the resources be maximised and the sustainable development of tourism be promoted. In the process of development, it is necessary to recognise the importance of resource protection and to strengthen scientific planning and management in order to promote the sustainable use of resources. At the same time, resource protection also needs to give full consideration to the needs of development, and improve the efficiency of resource utilisation through innovative ways, so as to realise a virtuous cycle of development and protection. This balanced relationship will help to achieve sustainable development of the tourism industry.

4.3 Importance of sustainable development of tourism resources

At present, globally, many regions have problems in the development, use and protection of tourism resources due to limitations in their understanding of the role of tourism resources. Some places have even spared no effort in developing various types of tourism resources through various means, thus leading to an imbalance in the ecological environment or the destruction of historical and cultural heritage. These regions have a one-sided understanding of the role of tourism resources in tourism development, and have yet to fully realise that tourism resources are the basis of tourism. the prerequisite for development is the foundation of tourism. the sustainable development of tourism resources is one of the major trends in the development of tourism in the world today and a key factor in protecting the natural environment, preserving cultural heritage and promoting economic growth. Sustainable development is a development approach that ensures the long-term prosperity of tourism and the

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sustainability of the planet by meeting the needs of the present while ensuring that the needs of future generations are not compromised.

First, tourism, as a highly resource-dependent industry, is extremely dependent on the quality of the natural and human environment. The relationship between human beings and nature, and between nature and values, has become an important challenge. The natural environment provides mankind with a variety of essential resources that are vital to the survival and development of human society. However, we are facing a global problem, namely the gradual deterioration of the natural environment, which is one of the most serious challenges facing the world today. The natural environment is an essential part of human society and was formed on the basis of nature. However, with the emergence of human beings, the natural environment is no longer purely natural, but is subject to profound human influence. Despite the continuous development of society and the enormous progress made, human beings will never be able to free themselves from their dependence on nature. We must therefore take action to protect the natural environment, achieve interdependence and co-development with nature, adopt a scientific approach to understanding nature and live in harmony with it. With the boom in tourism, the scope of artificial intervention in nature has been expanding. Each expansion represents a further intrusion of our activities into the realm of nature. In the process, we must carefully assess the potential impact of various behaviours on the balance of nature, in order to make the best choices that are in the interest of mankind without endangering nature, while ensuring human production and development. Tourism must preserve the relationship between human beings and nature while protecting the natural environment and human heritage. This involves balancing resource use and conservation to ensure the sustainable development of tourism while preserving our common home on Earth.

Secondly, tourism has enormous potential for economic growth. It creates jobs and provides tax revenues, promote infrastructure development and foster the growth of small businesses and supply chains. Sustainable tourism development helps to maximise this potential and ensure the long-term stability and prosperity of the tourism industry. By reducing overexploitation of the environment and resources, the sustainability of the tourism industry can be maintained, thereby safeguarding long-term economic benefits.

4.4 Overview of China's Tourism Resources

4.4.1 Overview of China's Tourism Resources Classification As a country with a vast territory and a long history, China possesses rich and colourful tourism resources. these resources include magnificent and varied natural landscapes, rich historical and cultural heritage, famous historical sites, and diverse folklore with distinctive characteristics. According to the National Standard of the People's Republic of China (GB/T 18972-2003), China's tourism resources can be classified into 8 main categories, 31 subcategories and 155 basic types. In terms of natural landscapes, China has world-famous natural heritage, such as several famous mountain ranges in China, such as the Himalayas, the Hengduan Mountains, and the Qinling Mountains, which provide abundant opportunities for mountaineering and hiking tours; and many famous rivers and lakes, such as the Yellow River, the Yangtze River, the West Lake, and Poyang Lake, which provide water sports and scenic tours. These scenic spots attract a large number of tourists with their unique landforms and beautiful scenery. In addition, China has numerous other beautiful natural landscapes, such as the Shennongjia and the Four Famous Buddhist Mountains, which are not only of great ornamental value, but also carry rich historical and cultural connotations. In terms of historical and cultural heritage, China has many world-famous monuments, such as the Great Wall, the Forbidden City, and the Terracotta Army of Qin Shi Huang. These monuments demonstrate the long history and splendid culture of the Chinese nation, attracting a large number of domestic and foreign tourists to visit. In terms of historical attractions, China has many monuments of historical importance, such as the Forbidden City,

The Summer Palace and the Temple of Heaven, which have witnessed the development and change of China's history and attracted many tourists. Come and explore the footprints of history. In addition, there are many scenic spots and monuments related to historical figures in China, such as Du Fu Cao Tang, Zhuge Liang Ancestral Hall, and White Deer Cave Academy, etc., which carry a wealth of historical stories and folk legends. In terms of folk culture, the folk customs of various regions in China are unique. For example, the Dai Water Festival in Yunnan, the Naadam Conference in Inner Mongolia, the Snowdon Festival in Tibet, etc. These folk activities attract a large number of tourists to participate, enabling tourists to experience China's diversified ethnic cultures first-hand. In short, China has rich and colourful tourism resources, which provide domestic and foreign tourists with rich tourism experience and also create good conditions for the development of tourism.

4.4.2 Characteristics of China's tourism resources

① Abundant native tourism resources and remarkable world status.

China is regarded as one of the richest countries in the world in terms of primary tourism resources, which are very diverse in kind and type, and have a variety of functions. Among them, tourism resources such as landscapes, cultural relics and monuments are particularly noteworthy. In terms of landscape, from the bottom of Lake Aydin in the Turpan Basin, which is 15

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metres below sea level, to Mount Everest, which is 8,848.13 metres above sea level, China boasts a diversity of landscapes and landscapes of different scales that are unique in the world. China's tourism climate resources are also very diverse, not only latitudinal climate zones, but also distinctive three-dimensional climate effects, especially in the Hengduan Mountains region, showing "a mountain has four seasons, ten miles of different days" characteristics. China's northern and southern regions have the beauty of four seasons like spring, but also the seaside, mountains, plateaus and high latitudes of the summer resort, as well as the world of snow and ice and Hainan Island and other climatic resources. This variety of landscapes and multi-functional climate resources provide a unique living environment for all kinds of organisms, making the natural landscape more colourful.

China's tourism resources are rich and strong, and the degree of exploitation is very high. Taking granite mountains for example, China has various types of granite mountains, such as Huangshan Mountain with its strange peaks and rocks, cleaved China is famous for its Tianmodi, Mount Hua is known as the most dangerous mountain because of its fault development, and there are also various small-scale landscapes with spherical weathering geomorphology due to the characteristics of granite fractions. In addition, China is rich in ancient city ruins, imperial tombs, Zen forests and Taoist temples, ancient architecture, garden art and diverse folk customs, which are countless and colourful enough to rank among the top countries in the world.

② Tourism resources are widely distributed and relatively concentrated, with the law of geographical differentiation.

China's tourism resources are mainly concentrated in the following areas: the Bohai Rim, the middle and lower reaches of the Yellow River, the middle and lower reaches of the Yangtze River, the coastal areas of Zhejiang and Fujian, the Pearl River Delta, the central and western regions of Sichuan, the Yunnan-Gui Plateau and the Hengduan Mountains, and the areas along the Ancient Silk Road in the northwestern part of the country.

③ The integration of humanities and natural tourism resources and rich cultural deposits.

China is one of the birthplaces of the world's civilisations and has created brilliant historical achievements, and these valuable legacies passed down to the present day constitute extremely precious tourism resources. The ancient Chinese civilisation represents the common spiritual wealth of all the peoples of the Chinese nation. This civilisation has blended the cultures of various brotherly peoples and drawn on the essence of the cultures of the world's ethnic groups to form a unique and rich cultural tradition, in addition to religious culture, which has also had a profound impact on Chinese history.

China's cultural heritage includes not only ancient architecture, artefacts and handicrafts, but also the best of literature, philosophy, religion and traditional medicine. For example, the Great Wall of China, the Forbidden City and the Terracotta Warriors and Horses and other world-famous attractions are masterpieces of ancient Chinese civilisation, attracting tourists from all over the world. Chinese literary works, such as *Dream of the Red Chamber* and *The Analects of Confucius*, have also contributed valuable wisdom and art to world culture. Religious culture also occupies an important place in Chinese history. Buddhism, Taoism, and Islam, Christianity and other religious beliefs have had a wide spread and influence in China, leaving behind many temples and monasteries. Religious buildings such as temples, mosques and churches become part of cultural tourism.

④ Complementary tourism resources in various places with outstanding geographical combinations.

Firstly, the natural tourism resources of different regions are very complementary. Some places are blessed with magnificent mountains and rich forests, while others are known for their beautiful lakes and seaside beaches. This allows tourists to choose suitable destinations according to their preferences and needs. For example, tourists who love outdoor adventures can head to the mountains for trekking and hiking, while those who prefer beaches and water activities can choose seaside resorts. This diversity of natural resources allows tourists to find a destination that suits them in different seasons and climatic conditions.

Secondly, different regions also have complementary human tourism resources. Some places have a long history and cultural heritage, with ancient buildings, museums and artefacts. Other places attract tourists with colourful folklore and traditional activities, enabling them to gain a deeper understanding of the local culture and way of life. In this way, tourists can experience different cultures and histories in different places, enriching their travel experience.

Last but not least, the cuisines and specialties of different regions also add a unique charm to the complementary nature of tourism resources. Different regions have distinctive cuisines and handicrafts, and tourists can taste a variety of cuisines with different flavours and buy unique souvenirs and gifts. This not only enriches the tourists' travel experience, but also provides economic support to local farmers and artisans.

The complementary nature of tourism resources in different regions provides tourists with a rich variety of travel choices. The development of this geographical combination of characteristics has enabled each region to play to its own strengths and attract more tourists to the region, contributing to the prosperity of the tourism industry and the development of the regional economy. At the same time.

4.5 Current Situation and Problems of China's Tourism Resource Development

4.5.1. Over-exploitation and blind utilisation of tourism resources

First, the issue of over-exploitation is explored. In China, some popular tourist attractions face serious challenges from commercialisation and overdevelopment. These scenic spots continue to attract large numbers of tourists and are forced to rush into large-scale construction of skyscrapers, roads and other tourist facilities without adequate consideration for environmental protection and ecological conservation. This not only damages the environment and changes the original appearance of the natural landscape, but also threatens the survival of wildlife. For example, some famous mountain ranges and lakes have been damaged by tourism development and have lost their former natural beauty.

Regions that are overly dependent on tourism also face serious environmental problems. The situation is particularly serious in areas with a single economic base and a fragile ecology, such as highlands, wetlands and nature reserves. The influx of tourists is often accompanied by uncivilised behaviour such as felling of trees, destruction of flowers and plants, littering and graffiti, which not only damages the natural landscape but can also cause soil erosion, water pollution and the destruction of wildlife habitats. In addition, the excessive number of tourists has also led to an increase in the "three wastes" - sewage, exhaust fumes and solid waste - and a large number of tourists congregate in a limited area, discharging sewage and exhaust fumes that adversely affect the quality of nearby water bodies and the atmosphere, thereby threatening the stability of the ecosystem and the health of local residents. the stability of the ecosystem and the health of local residents.

These overexploitation and environmental problems have had a profound impact on China's tourism industry. Overexploitation can reduce the attractiveness of scenic spots, as tourists are more inclined to seek out the original flavour of natural landscapes and culture rather than excessive artificial construction and commercialisation. In the process, some historical and cultural sites and folk customs may be subject to erosion and commercialisation, resulting in damage to the image of historical and cultural heritage and threats to the transmission of traditional culture. Ultimately, this may disappoint tourists, lower their appraisal of the scenic spots and even affect their willingness to visit again.

4.5.2 Dysfunctions in the ecosystem

The impact of human activities on the ecological environment in nature reserves cannot be ignored. Specifically, the construction and operation of service facilities, such as hotels, will inevitably cause a certain degree of damage to the neighbouring ecological environment due to their huge scale of construction and land area. Such damage may be manifested in changes to the unique scenery and landforms in the protected areas, and may even lead to the degradation of their ecological functions. It is worth noting that this impact is not limited to a single factor, but involves a number of aspects, such as land use changes, vegetation destruction, landscape changes, etc. In addition, the construction of roads in protected areas will likewise have a significant impact on the ecological environment. Road construction often requires a large amount of earth and stone, a process that inevitably destroys the vegetation on both sides of the road, leading to the deterioration of the ecological environment. More importantly, once the road is opened, the original natural landscape with winding paths and full of wild interest may be replaced by a bustling city scene with vehicles, thus making it impossible for tourists to enjoy a peaceful and beautiful viewing environment. This phenomenon is known as "disorder" in the ecological environment system of the scenic area, which reveals the impact of human activities on the natural environment and the feedback of the natural environment to human activities.

4.5.3 Inadequate planning of tourism resources development

Tourism development planning is the basic plan related to the development prospect of tourism, which is formulated by a country or region for its tourism development. However, in some regions, there are cases of irrationality in the development of tourism resources, which leads to the problems of duplicated construction and uncoordinated planning. For example, some regions do not conduct effective market analyses before developing their tourism resources and do not fully understand their own characteristics. As a result, it is difficult for the developed resources to establish themselves in the market. adequate, resulting in the waste and abandonment of tourism resources. At the same time, it also creates a negative impact on the built environment of the development site. The pollution, which is not effectively treated, may also cause contamination of water bodies and vegetation, thus affecting the stability of local ecosystems to varying degrees.

4.5.4 Lack of technical capacity and insufficient financial investment

Tourism development requires more resources, and the Government's limited funds make it difficult to invest heavily in the development of tourism resources. Although some enterprises are interested in investing in tourism development, the scale of their investment is small. In addition, it is not easy to obtain corresponding economic benefits from the initial investment in tourism, which leads to the slow progress of tourism development in China. In the development and construction of tourism resources, due to the lack of funds, the investment in subsequent technical treatment is relatively small, resulting in technical means that fail to meet certain standards, thus causing damage to China's tourism resources and wasting ecological resources.

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4.6 Status and Problems of Conservation of Tourism Resources in China

4.6.1 Lack of conservation awareness, some attractions are fading away

Some local governments and tourism practitioners ignore the importance of resource conservation in favour of economic benefits. This phenomenon may be due to their belief that economic benefits can bring greater well-being to society. However, this short-term economic pursuit often sacrifices the long-term sustainability of the resources, resulting in some of China's attractions being gradually disappeared, e.g., the Dongchuan Red Land, located in the Dongchuan District of Kunming City, China, is one of China's few remaining topographical features with special characteristics. However, due to man-made and weather natural factors, a large area of red earth is sanding, local soil erosion caused by indiscriminate logging is very serious, the red earth is also facing the point of disappearance; Crescent Moon Spring is located in Dunhuang, Gansu Province, China, by the spring water curved like a crescent moon and the name, "the first spring in the desert", or Dunhuang City, "three wonders". It is also one of the "Three Wonders" of Dunhuang, attracting many tourists from home and abroad. However, due to its location in the desert, the arid climate and harsh environment, coupled with the recent human Various unreasonable production activities have caused the water level of the Moon Spring to fall rapidly, and the water area has been substantially reduced. It has been reduced and can only be sustained by an annual "infusion" of 6 million cubic metres.

4.6.2 Poor tourism management in some areas leads to environmental damage

The lack of scientific evidence and planning in some places may result in inadequate conditions for pollution control and waste management. First, in terms of pollution management, some areas may lack the capacity to conduct scientific assessments of the potential environmental impacts of tourism activities. The lack of adequate scientific evidence and environmental impact assessment may lead to insufficient awareness of the pollution and environmental damage caused by tourism activities. This may lead to inappropriate or inadequate formulation and implementation of pollution management measures and policies. Secondly, in terms of litter and forestry management, some places may not have established effective litter and forestry management systems. Tourism activities generate large quantities of litter and waste which, if not properly managed, may cause serious damage to the environment. Similarly, failure to effectively manage and protect forest resources may lead to problems such as indiscriminate logging and forest degradation.

4.6.3 The poor environmental awareness of some tourists has become a factor of human destruction in tourist attractions. The environmental awareness of tourists influences the anthropogenic destructive factors of tourist attractions. Some tourists' lack of attention to and awareness of environmental protection leads to a certain degree of environmental damage in the course of tourism. For example, the irresponsible behaviour of tourists can lead to pollution and destruction of natural resources in scenic areas. For example, uncivilised behaviour such as littering, spitting and scribbling has a negative impact on the environment of scenic spots. In addition, some tourists may touch and destroy flora and fauna, pile up stones, etc., causing damage to the ecosystem. Second, over-commercialisation and overcrowding are also related to the behaviour of tourists. Tourists' demand for low prices and thrill-seeking can lead to overuse and overcrowding in scenic spots, destroying their natural state and ecological balance. In addition, some tourists may also be involved in activities such as illegal gathering and illegal fishing, which further aggravate the human destruction of scenic spots.

4.6.4 Inadequate legal system for the tourism industry and lack of a corresponding law on the protection of tourism resources

Since 1 October 2013, the Tourism Law of the People's Republic of China has come into effect. As a high-level regulation of the tourism industry, the Act clearly stipulates the principles and general requirements for tourism environmental protection, and provides principles for the articulation of various types of tourism regulations, in order to guide the revision and improvement of local regulations. However, the provisions on environmental protection only account for 7% of the entire Act. Specifically, the requirements on environmental protection facilities account for 1.8%, and the protection of resources and the regulation of tourists' behaviour account for about 2.7 respectively. Nevertheless, there are obvious inadequacies in the tourism law in terms of the provisions on the environmental protection of tourism resources, which are unable to comprehensively cover all aspects of the tourism industry. Lagging and imperfect legislation refers to the fact that laws and regulations on the protection of tourism resources cannot keep up with the development needs of the tourism industry, and there is a lack of special laws on the protection of tourism resources. Existing laws and regulations are mostly scattered documents and regulations in different fields, which are unable to protect tourism resources in a comprehensive and systematic way.

Secondly, the existing laws and regulations have the problems of overlapping, compartmentalisation and multiple management. Different departments and units have some requirements for managing tourism resources, resulting in unclear competence and unclear responsibilities. The lack of synergy and integration hinders the protection of tourism resources. In addition, the penalties for illegal destruction of tourism resources are not strong enough. Existing penalties and means may not be effective in deterring those who destroy, pollute and plunder tourism resources, and there is a need to strengthen the penalties and punishments for offences.

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4.7 Countermeasures and Suggestions for the Development and Protection of Tourism Resources in China

4.7.1 Establishment of strict laws and regulations

First, a comprehensive system of laws and regulations should be established, covering all aspects of classification, licensing, protection, management and penalties, to ensure the rational development and effective protection of tourism resources. Second, laws and regulations must clarify the responsibilities of various sectors and individuals in the development and protection of tourism resources. In addition, the rights and obligations of resource managers and users need to be clearly defined to promote synergy and cooperation. It is also necessary to formulate rational resource use plans and to encourage the establishment of plans and targets for resource development and use to prevent overexploitation and waste of resources. Strengthened regulation and enforcement is essential, including the establishment of dedicated enforcement and regulatory agencies to strengthen the monitoring and management of tourism resource development and conservation, and to strengthen enforcement and sanctions to address non-compliance. To motivate individuals and organisations actively involved in tourism resource protection, a reward and incentive mechanism should be established to encourage active public participation and commitment to resource protection. In addition, the establishment of a sound reporting and complaint mechanism for tourism resource development and protection will help to safeguard the legitimate rights and interests of the public. Laws and regulations must establish clear and dissuasive penalties for non-compliance to severely punish violations of the exploitation and destruction of tourism resources, to ensure that the law is enforced, and to maintain social equity.

4.7.2 Raising overall environmental awareness

In order to enhance the environmental awareness of the tourism industry, first of all, it is necessary to strengthen the education and training on environmental protection for tourism practitioners, including tour operators, tourist guides, hotel managers, and so on. They should have a deep understanding of the sustainable use of resources and the urgency of environmental protection, and learn and master the knowledge and skills of green tourism and low-carbon tourism, so as to enhance their sense of responsibility and code of conduct. Secondly, tourist attractions and relevant state departments can issue guidelines on environmental protection in tourism through advertisements, brochures and recommendations on tourist routes, clarifying the environmental protection guidelines that tourists should observe in the course of their tourism and providing specific suggestions and demonstrations of environmentally friendly behaviours. This will help convey the concept of environmental protection to tourists, remind and guide them to pay attention to environmental protection, and encourage their participation in activities for the protection of tourism resources, such as environmental clean-up and environmental volunteering, so as to enhance their awareness of environmental protection and their sense of responsibility, and to reduce the damage done to tourism resources. In addition, the relevant state departments should establish a tourism environmental standards and certification systems, and encourage active participation of tourism operators in certification to enhance environmental protection implementation and monitoring of protective measures.

4.7.3 Promote appropriate scientific and technical support

First, we need to emphasise the importance of scientific research in the development and conservation of tourism resources. Scientific research can thoroughly investigate the impact of tourism activities on the environment and actively seek innovative solutions to provide technical support to reduce negative impacts. This includes providing guidance on the implementation of ecological restoration and conservation measures, such as the restoration of degraded ecosystems, the protection of wildlife and rare species, and ways to reduce pollution and ecosystem degradation. Improved scientific research can help better manage tourism resources, understand sustainable supply and demand for resources, and develop plans that balance the relationship between tourism activities and resource sustainability to ensure that resources are not overexploited or wasted. Scientific research drives technological innovation, including clean technologies, renewable energy and low-carbon transport. The application of these technologies can reduce the environmental footprint of tourism, minimise the waste of energy and water resources and reduce carbon emissions. Scientific research can also help to increase public awareness and understanding of sustainable tourism. Research findings can be used for education and outreach to inform the public about how their tourism behaviour affects the environment and to raise environmental awareness. This can help foster more responsible attitudes towards tourism and promote the practice of sustainable tourism. Through scientific research, we can better understand the impact of tourism activities on the natural environment and how to maintain the ecological balance, ensuring that tourism does not cause irreversible damage to the ecosystem in the long term and preserving natural resources for the enjoyment of future generations.

4.7.4 Strengthening tourism planning and management

The importance of strengthening tourism planning and management is to ensure the healthy development of the tourism industry while protecting the sustainability of natural resources and ecosystems. In the context of the rapid growth of tourism, scientific and rational planning plays a crucial role. Firstly, tourism planning requires a comprehensive

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of the natural environment, cultural heritage and social characteristics of the destination. Such integrated planning not only helps to ensure that tourists are able to appreciate the uniqueness of the destination in a complete tourism experience, but also improves the quality of life of local communities. Rationalising the layout of tourist attractions and routes can also help to avoid over-exploitation of resources and prevent environmental damage. This can be achieved by controlling tourist flows, establishing protected areas to limit tourist access to sensitive ecological areas, and adopting sustainable tourism practices. This not only helps to protect the integrity of the natural environment, but also helps to maintain the reputation of the destination and attract more tourists. In addition, planning can take into account the ecological vulnerability of the area to ensure that tourism activities are developed in harmony with the natural environment. This includes monitoring and assessing the impact of tourism activities on the ecosystem, taking measures to minimise negative impacts, and promoting sustainable tourism practices such as low-carbon travel and resource conservation. Through these efforts, the environmental sustainability of tourism can be achieved while preserving the natural and cultural heritage of the destination.

Ultimately, effective tourism planning not only balances the economic benefits and environmental sustainability of tourism, but also meets the needs of tourists. It also helps to create a sustainable tourism industry that provides employment opportunities and economic benefits to local communities, while protecting and conserving tourism resources to ensure future generations. Enhanced tourism planning and management is therefore a necessary measure to maintain the prosperity and environmental health of the region.

4.7.5 Establishment of the Tourism Resources Protection Fund

The establishment of a tourism resources protection fund is a key strategy to ensure the sustainable management and conservation of tourism resources. A tourism resources protection fund raises funds through a variety of channels, such as tourism tax revenue, admission fee income and donations, to provide a stable and reliable source of funding for the maintenance, protection and restoration of resources. This helps to alleviate the financial burden on the Government and safeguard the sustainable conservation of resources. The Fund may be used to support the maintenance, protection and restoration of resources, including the prevention of overexploitation, Ecosystem restoration and cultural heritage preservation. This helps to ensure the long-term sustainability of the resource, providing an enriching experience for current visitors while preserving valuable resources for future visitors.

4.7.6 Strengthening cooperation and exchanges

Strengthening cooperation and exchange is crucial for the development and conservation of tourism resources, not only in the national context but also in the international arena. Such cooperation and exchange can effectively address the multiple challenges of tourism, promote sustainable development and foster win-win situations for all.

At the domestic level, it is important to strengthen cooperation between different regions and government departments. The scope of cooperation should cover a wide range of aspects in the development and management of tourism resources, including scenic spot planning, infrastructure construction and tourism product development. Through close cooperation between the government, industry and various sectors of the community, we can effectively integrate resources and avoid waste and conflict, thereby greatly increasing overall effectiveness. In addition, cooperation will help preserve cultural and historical heritage, promote the prosperity of local communities and provide tourists with a more colourful tourism experience.

In the international arena, the importance of cooperation and exchange cannot be overemphasised. Successful experiences and best practices should be shared between countries and regions to address global challenges such as environmental conservation, cultural heritage and visitor management. This can be achieved through bilateral or multilateral agreements, international organisations, tourism associations and other channels. The development of cross-border tourism routes and the promotion of cultural exchanges will not only provide tourists with a more varied travel experience, but also help to strengthen international friendship and understanding.

At the same time, the protection of natural resources across borders also requires the power of international cooperation. Ecosystems, wildlife and plants often cross-national boundaries, so only through cross-border cooperation can we effectively protect these valuable resources. Joint efforts to reduce ecological damage, curb illegal wildlife trade and prevent transboundary pollution are the only way to maintain the global ecological balance and promote harmonious coexistence between people and nature.

CONCLUSION

In this thesis on the development and conservation of China's tourism resources, I believe that socio-economic development is the most important factor affecting the development and conservation of China's tourism resources. In the past decades, China's economy has been growing rapidly and people's living standards have been significantly improved. This has led to an increasing demand for tourism activities, thus promoting the development of tourism resources. According to China's national conditions,

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the primary goal of the sustainable development of China's tourism industry is development, based on the sustainable use of tourism resources and environmental protection, and the key is to coordinate the relationship between tourism development and resource environmental protection, to realise the virtuous cycle of the tourism ecosystem, and to avoid the destruction and depletion of tourism resources. The purpose of development is to utilise, and the purpose of protection is also to utilise, and there should be no fundamental conflict between the two. Tourism is no longer a so-called "smokeless industry", and it also affects the ecological balance and the quality of the environment. Whether from the ecological aspect or from the economic aspect, we should not take the old road of "polluting first and then treating", and we should make efforts to promote environmental protection and the sustainable development of tourism from now on. "Tourism development is hard, hard development of tourism is unreasonable". While developing China's tourism resources and tourism industry, we must pay attention to the protection of the environment, so that the limited tourism resources can be permanently utilised to meet the ever-increasing needs of the material and cultural life of the people, and to make due contribution to welcoming more international tourists and enhancing the friendship between the people of our country and the people of other countries in the world.

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Participatory Approach in The Development of Ai-Based E-Proposals: A Case Study of the Collaborative Process Between Village Youth and Local Government



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ABSTRACT: This study examines the collaborative process between the youth of Dukuhipicung Village and the local government in the development of AI-based e-proposals as part of the village infrastructure development. The research was conducted in Dukuhipicung Village, Luragung District, Kuningan Regency, West Java Province. Using a descriptive qualitative approach, the study explores how the active participation of youth in the e-proposal training program enhanced their digital skills and strengthened synergy with the local government. The results show that the use of AI and audiovisual technology not only accelerated the planning process but also improved the effectiveness of communication through more interactive and persuasive proposals. This training successfully empowered the youth to take an active role in village development, enhancing their capacity to access funding opportunities and facilitating improvements in local infrastructure quality. These findings provide guidance for policymakers and development practitioners to support the implementation of digital technology at the village level and encourage closer collaboration between the community and the government in community-based participatory development.

KEYWORDS: Participatory Approach, Artificial Intelligence, E-Proposal, Youth Empowerment, Local Government Collaboration

I. INTRODUCTION

In recent years, digital technology, particularly artificial intelligence (AI), has become one of the key instruments in accelerating development across various sectors, including rural areas. In Indonesia, digital transformation has begun to penetrate various villages with the hope of enhancing government efficiency and strengthening community participation in development. One emerging approach is the use of digital technology in the planning and proposal-making process, such as the implementation of AI-based e-proposals. Amid the rapid adoption of this technology, this research focuses on analyzing how village youth can utilize AI technology in the creation of e-proposals to support village infrastructure development, especially in Dukuhipicung Village, Luragung District, Kuningan Regency, West Java.

Previous studies have shown that community involvement in village development is often limited by a lack of access to technology and low digital literacy. For instance, Noviar & Priyanti (2023), revealed that community participation in village development planning is often hampered by limited technical skills and inadequate access to information. Furthermore, Wiyanto et al., (2023), highlighted that the implementation of e-government technology in villages still faces various challenges, such as limited infrastructure and weak synergy between the community and the government in the planning process. Additionally, Fahmi and Arifianto (2021) explained that digitalization can promote innovative practices that address local issues and contribute to social cohesion and community resilience. Therefore, this research aims to address these gaps by exploring how AI-based training can enhance youth participation in village development.

A participatory approach in development planning is the main focus of this research. Community participation, particularly from youth, in the village planning process is crucial to ensuring the sustainability and relevance of the development itself. This initiative demonstrates how digital tools can facilitate knowledge transfer and empower local communities to take an active role in their community's development (Reina-Usuga et al., 2022). This research will discuss how the youth of Dukuhipicung Village, through AI-based e-proposal training, were able to produce more interactive and persuasive proposals. Their participation not only improved their digital skills but also built stronger synergy with the local government to support village infrastructure

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development. In this context, the study offers new perspectives on how AI can serve as a tool to empower communities at the village level, encourage active participation, and accelerate more inclusive development.

Additionally, existing literature shows that the use of audiovisual technology and AI in digital content development can accelerate the planning and decision-making process. For example, Army Chella Pusfitasyari *et al.*, (2023) study revealed that AI-based platforms integrated with e-government services can improve efficiency and effectiveness at the village level. However, studies on how AI can be utilized in village development proposals are still limited, making this research a significant contribution to the growing literature on the use of digital technology for rural development.

This study aims to provide strategic insights for governments and development practitioners regarding the importance of applying AI technology in participatory village development planning processes. The findings of this research are expected to serve as a foundation for the development of training programs and the implementation of technology in other villages, particularly those facing challenges in the preparation of development proposals.

II. METHODS

This research is designed as a descriptive qualitative study aimed at exploring the collaborative process between the youth of Dukuhpicung Village and the local government in the development of AI-based e-proposals. The focus of this research is on how the e-proposal training can improve digital skills and strengthen the synergy between village youth and the government in infrastructure development.

The main sources of information in this study include the village youth who participated in the training, local government officials involved in development decision-making, and training facilitators from the field of digital technology. The active participation of the youth and the perspectives of local policymakers will serve as a foundation for gaining a comprehensive understanding of the effectiveness of using AI in village development planning.

Data collection techniques are carried out through in-depth interviews using semi-structured interview guidelines. These guidelines are designed to keep the interviews focused on the main topic while allowing flexibility to explore participants' experiences and perspectives. The interviews will facilitate the extraction of context-rich information, especially regarding the dynamics of collaboration in the e-proposal creation process.

The data obtained will be analyzed using content analysis methods, aiming to identify key themes, interaction patterns, and relationships between youth participation, local government, and the effectiveness of AI application in e-proposal development.

III. RESULTS OF RESEARCH AND DISCUSSION

In recent years, digital technology, including artificial intelligence (AI), has been widely applied in various development sectors, including rural areas. This transformation is evident in developing countries, where information and communication technology (ICT) initiatives help address existing geographical and social challenges (Onitsuka *et al.*, 2018). AI has great potential in accelerating planning and decision-making processes, particularly in creating more effective and efficient development proposals. In Indonesia, many villages have begun to utilize this technology to strengthen community participation, especially among the youth, in the planning and development of local infrastructure. The application of AI not only streamlines administrative processes but also allows for more structured and persuasive presentation of ideas to stakeholders, such as local governments and funders. This technology provides a more efficient way of communicating while also improving the quality of development planning outcomes at the village level.

This research was conducted in Dukuhpicung Village, Luragung District, Kuningan Regency, to analyze how the application of AI and audiovisual technology in e-proposal creation can empower village youth and enhance collaboration with local governments. With a participatory approach that emphasizes youth involvement in the development proposal drafting process, this study demonstrates how digital technology can overcome resource and digital literacy limitations in the village. Through intensive training, village youth are trained to utilize AI to develop more interactive and persuasive proposals, which have a direct impact on increasing access to funding for village infrastructure projects.

3.1 Improvement of Village Youth's Digital Skills

This research found that the application of artificial intelligence (AI) in the e-proposal creation process by the youth of Dukuhpicung Village has proven effective in improving the digital skills of the local youth. One of the main objectives of this training is to empower youth to actively participate in village development, especially in more structured and professional infrastructure planning. This training also emphasizes the importance of digital technology in increasing planning efficiency and accelerating communication processes between the youth, the village government, and other stakeholders. The research results show that the

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youth who participated in the training were able to understand AI concepts well and use this technology to strengthen arguments in the proposals they drafted.

In line with Gefner (2022) research, which shows that rural youth often lag behind their urban counterparts in mastering modern competencies crucial for professional identity and self-actualization in the digital economy, community involvement in village development planning is often hampered by a lack of technical skills and inadequate access to information. However, through AI-based training, these barriers can be overcome. The youth of Dukuhpicung Village have successfully created more interactive and persuasive e-proposals, a significant achievement compared to previous traditional methods. The use of AI in this process has enhanced the quality of the content produced, making the e-proposals more easily accepted by the local government and potential funders.

From the local government's perspective, the application of digital technology, particularly AI, is seen as a strategic step to accelerate decision-making processes related to village development. The Dukuhpicung Village government highly appreciates the results of this training, where the e-proposals produced were able to convey the village's infrastructure needs more clearly and in a structured manner. This aligns with Setiadi *et al.*, (2023) research, which highlights the role of digital literacy in community organizations, showing that skill enhancement can strengthen youth development and economic opportunities. Moreover, active youth participation is essential in creating stronger synergy with the village government. Prior to this training, many youths were not involved in the village planning process, largely due to a lack of knowledge and technical skills. However, after the training, their involvement increased significantly, both in drafting proposals and in discussions with the government regarding infrastructure development priorities. This success demonstrates the importance of the participatory approach applied in the training, which effectively increased the youth's involvement and contribution to village development.

The improvement in youth digital skills was also accompanied by a deeper understanding of audiovisual technology, which is a crucial component in e-proposal creation. Through the use of AI, the training participants were able to create more engaging and informative audiovisual content. This is in line with the findings of Martens and Hobbs (2015), who argue that media literacy education supports community participation by equipping young people with skills to critically analyze information and participate in public discourse. Thus, AI plays a role in improving the quality of presentations and the youth's ability to convey their ideas more effectively.

3.2 Building Synergy Between Youth and Local Government

Moreover, the results of this research show that AI not only helps in creating better proposals but also improves the effectiveness of communication between the youth and the local government. The village government reported that the proposals produced by the training participants were easier to understand and more convincing compared to previous proposals. This indicates that AI and audiovisual technology can enhance the effectiveness of communication among the parties involved in the village development planning process.

The collaboration between the youth and the local government during this training successfully created an inclusive environment where each party could express their views and ideas equally. This aligns with the research of Bennett and Hays (2022), which emphasizes the importance of innovative engagement methods, including the use of digital platforms, that should be integrated with traditional local governance processes to prepare youth for more effective civic engagement. The village government recognized that this participatory approach not only opened up more productive discussion spaces but also resulted in solutions that were more targeted and aligned with the actual needs of the village. Thus, this collaboration successfully strengthened the synergy between the community and the government in decision-making related to village development.

One of the indicators of the success of this training is the ability of the youth to access funding opportunities. Before the training, many of them did not know how to create proposals that met the funding standards of the government or external organizations. However, after the training, they were able to draft proposals that not only met the requirements but also successfully attracted the attention of potential funders. This proves that the improvement in their digital skills has a direct impact on their capacity to support the development of village infrastructure.

3.3 Increasing Efficiency and Access to Funding

The results of this research also revealed that the application of AI in the creation of e-proposals has added value in terms of time efficiency. Before the training, the proposal drafting process was time-consuming because it had to be done manually. However, with the help of AI, this process became faster without compromising the quality of the content. This efficiency allows the youth and the village government to focus on other aspects of development, such as the implementation of planned projects.

Additionally, the results of this research show that the application of AI not only helps in creating better proposals but also strengthens communication between the youth and the local government. The village government reported that the proposals

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drafted by the training participants were easier to understand and more convincing compared to previous traditional methods. This demonstrates that the use of AI and audiovisual technology can enhance the effectiveness of communication between the parties involved in the village development planning process. This aligns with Nguyen (2022) view that effective communication between local governments and citizens is crucial for raising public awareness of their rights and responsibilities, especially in the context of the Fourth Industrial Revolution.

This training also created momentum for village youth to become more involved in the development of their communities. Previously, many of them felt that they did not have a significant role in the village planning process. However, after the training, they felt more motivated to contribute, as they saw that their involvement had a direct impact on the outcomes of village development.

Thus, this research proves that the participatory approach and the application of AI in e-proposal creation have a positive impact on village infrastructure development. Active youth participation, enhanced digital skills, and closer synergy with the local government are some of the significant outcomes of this research. These findings are expected to serve as a foundation for the development of similar programs in other villages facing similar challenges in drafting development proposals.

IV. CONCLUSIONS

The participatory approach research in the creation of AI-based e-proposals in rural areas shows that the application of artificial intelligence (AI) in drafting e-proposals has significantly improved the digital skills of the youth in Dukuhpicung Village. Youth who were previously less involved in village planning are now able to create more professional and persuasive proposals. The participatory approach applied during the training also successfully strengthened the synergy between the youth and the village government, creating more productive and inclusive collaboration. Additionally, AI helped accelerate the planning and decision-making process, providing benefits in terms of time efficiency and effective communication between the various parties involved.

The application of AI technology has also proven capable of expanding access to potential funding opportunities, with better proposals attracting the attention of potential funders. This training has created momentum for village youth to become more actively involved in their community's development, motivating them to continue contributing to future development projects. The conclusion of this research emphasizes the importance of integrating digital technology into the village development planning process, and encourages the development of similar training programs in other villages to improve the quality of local infrastructure.

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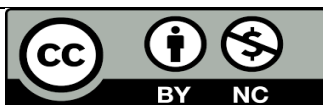
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Traditional Games as a Means of Cognitive Stimulation: An Analysis of Child Development: A Systematic Review



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ABSTRACT: This study aims to analyze the impact of traditional games on children's cognitive development. In the midst of the rise of digital games, traditional games are often neglected even though they have great potential as an educational tool. Through a systematic review of various relevant studies, this study found that traditional games such as Sundanese Manda, Gobak Sodor, Congklak, and Dakon can provide significant cognitive stimuli for children. The game helps improve children's problem-solving, logic, and social comprehension skills. In addition, traditional games also play a role in strengthening social interaction and cultural values. Although many studies have focused on digital games, the results of this study highlight the importance of integrating traditional games in formal education to maximize children's cognitive development. Therefore, it is recommended that traditional games be recognized and applied more widely in the early childhood education curriculum.

KEYWORDS: traditional games, cognitive development, Stimulus, children, Culture.

I. INTRODUCTION

Traditional games are a rich cultural heritage of Indonesia, so many contain educational and social values that are important for children's development (Iswinarti & Suminar, 2019; Munir & Awiria, 2020; Regiana et al., 2020). In the midst of the rise of digital games that dominate children's attention today, traditional games are often overlooked, even though they have great potential as a learning tool. With a variety of interesting forms and rules, traditional games are not only entertaining, but also stimulating the cognitive, emotional, and social aspects of children (Suherman et al., 2019; Yilmaz et al., 2022).

Although many studies show the educational benefits of traditional games (Tan et al., 2018; Yuxuan et al., 2021), but there are still few studies that specifically analyze the impact of traditional games on children's cognitive development (Estrada-Plana et al. 2019) Often, the focus of research is more on modern or digital games, while traditional games receive less of the same attention. This creates a knowledge gap on how traditional games can be integrated into children's education, as well as their potential benefits that have not been fully revealed.

On the other hand, the social and cultural context of traditional games is also often overlooked (Komariah dan Salim 2019) The various types of traditional games that exist in each region have unique values that can contribute to the way children learn to interact with their social environment (Cornejo et al. 2021; Morelli, Henry, dan Spielvogel 2019) so that without a deep understanding of this context, of course, there is a great risk of missing out on the opportunity to utilize cultural richness as a valuable source of learning. This study aims to explore how traditional games can function as an effective cognitive stimulus.

By conducting this research, it is hoped that it can provide new and in-depth insights into the role of traditional games in children's cognitive development. This research will not only fill in the gaps that exist in the literature, but also encourage the integration of traditional games in educational practices, so that children can experience the full benefits of games that have existed for centuries.

II. MATERIALS AND METHODS

Search Strategy

This research is at the data collection stage, the author collects national articles through google Scholar, PubMed and scopus with the "Publish or Perish" application, the author collects articles published in 2019-2024, in the journal update the

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author searches for journal articles on a scale of the last 5 (five) years, using the PICO method is the method that the author applies in the search for articles to get new findings (Cumpston et al., 2021).

Selecting Studies

In this study, the author collects the necessary articles, then the author extracts the data. The author uses a reference in this method is to use the Inclusion and Exclusion criteria so that the data becomes more specific, and if the author finds an article that is not suitable, the data will be extracted (Pustejovsky, Swan, dan English 2023) with criteria that will then be canceled the description of the exclusion method: (a) Research report (thesis, thesis, dissertation) and book; (b) In the last 5 years (<2019); (c) Outside of Indonesian; (d) Not traditional games; (e) Not traditional play against child stimulus; (f) Do not have a DOI. Furthermore, the inclusion criteria used are: (a) Research articles in the last 5 years (2019-2024); (b) Indonesian; (C). Traditional games; (d) traditional games on children's cognition; (e) Have a DOI; (F). Increasing the stimulus of children with traditional dressing.

Procedure

In Search, use the Publish or Perish application by selecting the Google Scholar, PubMed, and Scopus databases. The author found articles from Scopus 200 articles, PubMed 199 articles, and Google Scholar 620 articles, so that the total number of articles found was 1019 articles. Furthermore, the articles found by the author will be processed and analyzed through several screening processes based on exclusion and inclusion criteria. After meeting the criteria, only 7 articles were sidelined. Most articles are not used because they do not discuss traditional games.

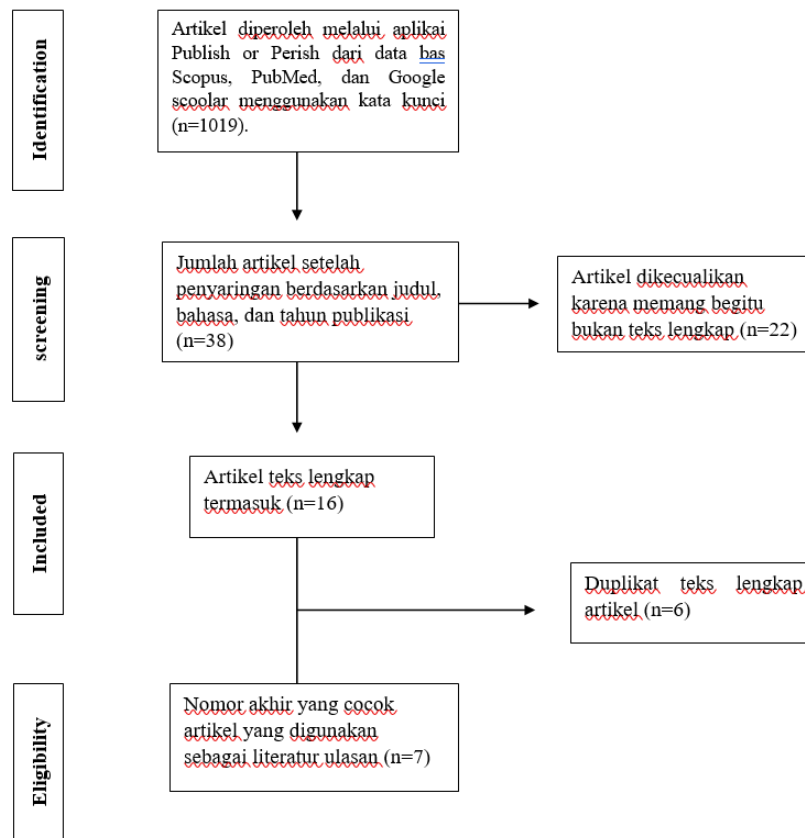


Figure 1. PRISMA Research Flow Diagram

The results of the study should be systematically arranged in a table showing that a thorough literature evaluation found that 7 articles met the research criteria.

Table 1: Summary of the article Traditional games on children's cognitive stimulation

No	Author and years	Objective	Method	Result
1.	(Ismawati dan Lutfiah 2020)	The purpose of this study is to measure the effect of the application of Sundanese	Pre- Eksperimental Design	The results of this study showed that there was a significant improvement in children's cognitive development after

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		Manda Geometric games on early childhood cognitive development in the Cahaya Qolbi Mojokerto Play Group.		being given the Sunda Manda Geometric game treatment.
2.	(Nisak 2023)	The purpose of this study is to explore the development of cognitive skills in early childhood through the traditional game of Gobak Sodor.	Observasional	These results highlight the effectiveness of Gobak Sodor in supporting cognitive development in early childhood through play-based learning. These games provide a practical and engaging way for children to develop important cognitive and social skills.
3.	(Huda 2023)	The main purpose of this study is to train the cognitive abilities of children in Group B PAUD (Early Childhood Education) aged 5-6 years through the use of traditional congklak games.	participatory training and mentoring.	The results of this study show that this training is effective in improving teachers' skills and knowledge in using traditional games as an educational tool for cognitive development in young children.
4.	(Meuthia dan Suyadi 2021)	Tujuan utama dari penelitian ini adalah untuk mengembangkan aspek kognitif anak usia dini menggunakan media permainan dadu.	Qualitative Descriptive	The results of this study state that dice games are a useful medium to improve cognitive abilities in early childhood, providing a fun and interactive way to learn and develop important skills.
5.	(Kusuma, Sukmono, dan Tanto 2022)	The purpose of this study is to explore how the traditional game of dakon can stimulate cognitive development in children, as seen through the lens of Vygotsky and Piaget's theory.	Qualitative Descriptive	The study concluded that traditional games such as dakon can be effective in stimulating cognitive development, with stimulating properties varying based on the theoretical perspective applied.
6.	(Kurniawaty 2022)	The purpose of this study is to explore the implementation of the educational game "Snake Ladder" in developing the cognitive abilities of children aged 5-6 years.	Qualitative Descriptive	The results of the study showed that (1) the use of snake and ladder games to improve the cognitive abilities of children aged five to six years including the creation of RPPM and RPPH with snake and ladder games to improve children's intelligence. Furthermore, excellent cognitive development, such as mentioning the names of family members, explaining the surrounding environment, mentioning frequently visited streets, following rules, getting to know the surrounding objects, knowing big and small, and being able to sort the number, shape, and size. (3) Internal factors, namely the physiological aspects of the child, and external, namely parenting and parental education, affect the cognitive development of children.

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7.	(Wilhelmina, Lestari, dan ... 2024)	The main purpose of this study is to determine the improvement of early childhood cognitive abilities through the traditional game of Congklak.	Qualitative Descriptive	As a conclusion from the results of the study, completeness occurred in the initial condition of 15.79 percent (3 children), in Cycle I it was 57.89 percent (11 children), and in Cycle II it was 89.47 percent (17 children). Group B of Tunas Mekar II Kindergarten uses traditional congklak games to improve early childhood cognitive abilities.
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III. DISCUSSION

This study explores the impact of traditional games on children's cognitive development, especially in an era where digital games are increasingly dominant. Through various screened studies, it was found that traditional games have great potential to stimulate children's cognition in a different way than modern games (Huda, 2023; Nisak, 2023). Several traditional games such as Sundanese Manda, Gobak Sodor, Congklak, and Dakon make a significant contribution to improving children's cognitive skills, including problem-solving, logic, and social understanding skills (Kurniawaty, 2022; Wilhelmina et al., 2024; Kusuma et al., 2022).

Research also shows that these games play an important role in developing children's ability to follow rules, strategize, and improve social interaction, all of which contribute to healthy cognitive development (Ismawati & Lutfiah, 2020; Meuthia & Suyadi, 2021). With a culturally based and interactive approach, traditional games help children in understanding the world around them as well as reinforcing social and cultural values (Luque Carbajal & Baranauskas, 2019).

However, the study also highlights the lack of attention to traditional games in the context of formal education, despite their great potential. Many studies have focused on digital games, and studies on traditional games are still limited. Therefore, there is a need to integrate traditional games into the educational curriculum to optimize the cognitive development of children.

V. CONCLUSIONS

Traditional games have been proven to provide effective cognitive stimulation for children, especially in developing problem-solving skills, social skills, and logic. With the integration of these games into education, children can benefit from activities that are not only fun, but also educate and reinforce cultural aspects. Although digital games are increasingly dominating, traditional games still have an important role that has not been fully explored in supporting children's cognitive development. Further implementation in formal education settings is strongly encouraged to achieve wider benefits.

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Applying Change Management Theory in Schools to Meet the Requirements of Educational Innovation and Training in Vietnam



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ABSTRACT: The application of change management theory to the management of teaching and learning activities in schools in Vietnam in recent years has attracted much attention, but this theory has not been systematically and clearly defined. The purpose of this article is to establish a theory of change management in schools to apply to school management in the context of education and training innovation in Vietnam today. Based on the approach of the Theory of Change, the article builds a system of theoretical issues on change management in schools. The research aims to establish directional criteria on change management capacity, requirements for change management, and methods of practicing change management. The research results provide a systematic approach to change management in schools that is suitable for the requirements of current education innovation in Vietnam.

KEYWORDS: Change, change theory, change management, educational innovation

1. INTRODUCTION

American novelist Louis L'Amour (1908 - 1988) once said, "There is one thing that never changes, and that is change ." Change is a characteristic of development. Changes are constantly occurring in all areas of a rapidly developing society. The education and training sector , with schools at the center, is no exception. In the context of globalization and the 4.0 Industrial Revolution, the Party advocates fundamental and comprehensive innovation in education and training . The fundamental and comprehensive innovation in education and training is a macro-level change that requires the entire system to change, in which the change taking place in schools is the core factor. In this process, educational management plays a leading role in ensuring that the entire education system operates in the right direction and reaches its destination. In order for this system to change in a positive, modern and effective direction, the management method must be changed. This requires local authorities and school managers to create all conditions to help them effectively perform their functions and tasks. In response to the requirements of current educational innovation, school managers must shift from traditional management methods to change management as an innovation in management work to manage people who implement educational and training innovation in specific conditions and circumstances. Change management in an organization in general , in schools in particular, is an issue of contemporary management science and is approached from many different perspectives. The approach to change management theory to apply to school management research in Vietnam has been of interest to researchers in recent years, but at a rudimentary level, the change management theory system has not been systematically defined, so the approach is not suitable for the context of educational innovation (Dang Xuan Hai, 2005); (Dang Xuan Hai, 2007); (Le Thi Thanh Thuy, 2018); (Nguyen Long Giao, 2021). From the perspective of change theory, the paper studies some theoretical issues on change management in schools in Vietnam to provide a systematic approach in the context of fundamental and comprehensive innovation in education and training today.

2. RESEARCH RESULTS

2.1. Theory of change

Theories of change emerged in the 1990s and have had a significant impact on the study of school change. They are concerned with complex developmental challenges that are often caused by multiple factors and layers that are deeply embedded in the way societies operate. The term " Theory of Change" was used by Weiss in one of his books as a way to describe a set of assumptions that explain both the small steps that lead to the long-term goals of interest and the connections between program activities and outcomes that occur at each step of the organizational change process. Weiss challenges designers of complex community-based initiatives to articulate the

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theories of change that guide their work and suggests that doing so will improve their overall evaluation plans and increase their ability to take credit for the predicted results. Weiss's research spurred some of the groundwork for using this technique—later called the “Theory of Change approach”—in evaluating community change initiatives. (Weiss, C, 1995)

Previous studies of organizational change have tended to focus on the changes rather than on the analysis of change (Pettigrew et al., 1992). Simply put, more attention is paid to what is being changed in the organization (content) than to how the change is implemented (process). In fact, this is especially the case with design approaches that aim at change by providing solutions to problems but underestimating the implementation process (Boonstra, J., 1997). Developmental approaches pay more attention to the process aspects of change (French and Bell, 1995). Regardless of the change approach being used, it is important to assess the characteristics of the process.

In recent years, research on change theory has become more extensive and has become a topic of interest for the largest international organization on the planet, the United Nations. Based on the research of experts on Change Theory (Valters, 2014; Stein and Valters, 2012; Rogers, 2014; Grantcraft, 2006...), the United Nations Development Group has published the Change Theory Guide to implementing leadership innovation in international organizations under the United Nations.

According to the UNDG (United Nation Development Group), Theory of Change can be used in the following situations: (1) *Developing a development strategy for an organization or unit*. By clearly articulating the causes of the development challenge, Theory of Change makes explicit assumptions about how the proposed strategy is expected to deliver results and testing these assumptions against evidence - including what has worked well or not in the past - Theory of Change helps ensure a sound logic for achieving change; (2) *Adjusting the strategy during implementation*. Theory of Change also helps to adjust course if the chosen approach is not effective or if anticipated risks materialize. New lessons and experiences from monitoring and evaluation help refine assumptions and inform decisions about how to adjust the approach to deliver the intended results. Adjustments to the theory of change should also be made in the context of changing circumstances, especially in response to crises and shocks, as well as as part of regular monitoring; (3) The theory of change *is a means of developing and managing partnerships and collaborative strategies*. The process of agreeing on a theory of change will establish different perspectives and assumptions among program planners, beneficiaries, donors, program staff, etc. This process can foster consensus and motivate stakeholders by involving them early in the planning process and by showing them how their work contributes to long-term impact. It can help others understand and support the organization's contribution to change, as well as enhance collaboration with other organizations contributing to similar outcomes, leading to new or stronger partnerships and better complementarity and coordination (United Nation Development Group, 2022).

A theory of change clearly presents a shared vision and strategy for how change can happen. A theory of change map or short text is a concise representation of the purpose of an organization and communicates that purpose to its members. It emphasizes real change over counter discussions that focus solely on resources, activities, and outcomes for organization members.

The practical method of the Theory of Change is a hypothetical structure with the pair of relations “If” - “Then”. If this is done, then these are the expected results. The outcome path is a set of necessary conditions related to a certain field of action, placed in a diagrammatic form in a logical relationship with each other and connected by arrows that acknowledge the causal relationship. The results along the path are also prerequisites for the results above them. Thus, the initial results must be available to achieve the intermediate results; the intermediate results must be available to achieve the subsequent results; and so the outcome path represents the logic of change and its basic set of assumptions. (Taplin et al., 2013)

Change theory has a great influence and is therefore applied by many agencies and organizations in change management. Change management is a process of applying Change Theory in 4 steps as proposed by the United Nation Development Group (2022): (1) Focus on the goal of change, (2) Analyze change, (3) Clarify relevant assumptions and clearly identify risks, (4) Identify partners and key actors. Determining change management solutions must be based on evidence and that evidence must be measured reasonably and objectively. The following change management issues focus on building a school development strategy in the context of fundamental and comprehensive innovation in education and training.

2.2. Change in schools and change management capacity

2.2.1. Changes in school

Schools in general are relatively stable, when perceived as a stereotypical organization. Rules, regulations, and standards bind schools in measures of management and professional bureaucracy. Change in schools always has a cause, and researchers in the Theory of Change tend to confirm the evidence for change as a reverse cycle of finding causes. Change in schools means that it must happen decisively, excluding scattered, isolated improvements. Approaching the causes of change in schools, we can identify the following three cases of change:

- *Change due to stagnation*. Muscella views the school as a learning environment, as an ecosystem that is crucial if we are to gain a holistic view of the events that make up learning. The school ecosystem has many components (students, teachers, curriculum,

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administrators, environment, and other types of education) and these components interact with each other in many different ways; therefore, intervention in one part of the system will have consequences for other parts of the system. This requires a radical change to create new quality, restore value, and restore customer trust in the school (Muscella, 1989).

Strategic change. Strategic change in education often begins at the macro level, when educational philosophy has been reviewed to suit development trends and the times. Strategic change with political significance requires the participation of many different subjects, of which school subjects are only one component and is mandatory. Strategic change requires schools to make changes from their mission, vision, goals to the content and methods of education, activities and conditions to support the change. This requires school management to also change to meet the strategic motto, "fundamental and comprehensive innovation".

- *Change by process*. The operation of educational activities in schools is repeated over the school year with improvements to overcome limitations, promote advantages and positives in school activities is considered as a change. The implementation of educational reform programs can also be changed by process because it takes time to implement it effectively. When faced with the task of implementing a new educational program, educators must determine how they will use the new program effectively. Their adjustment to the application and implementation is hierarchical, first paying attention to concerns about how a new program will affect them personally until finally teachers consider how the new program affects the learning process.

2.2.2. Changing the school curriculum

The most disruptive and impactful change is curriculum change, which every country in the world has to undergo to reform its education system. Curriculum innovation strategies involve stakeholders (teachers, students, parents, administrators, politicians), subject or pedagogical experts (scientific community) or collective organizations (e.g., ministries of education and training, local authorities, school boards, teachers' associations) involved in or affected by curriculum change. The involvement of these stakeholders refers to their involvement at different stages, from curriculum design to curriculum implementation. Involving multiple stakeholders in curriculum change helps to reduce resistance to this change (OECD, 2019).

The central figure in implementing the reformed educational program is the teaching staff. According to (Fullan, 2015), the implementation of the educational program corresponds to the means to achieve the desired goals and for the new educational program to bring results, it needs to be applied in practice in the classroom. The topic of implementing curriculum change has been widely studied in fields such as public administration, public policy, organizational change, and education. Echoing the traditions and debates in these fields, curriculum reform has traditionally been viewed from a "top-down" perspective, in which the "success" of implementation is measured by the degree of "fidelity" and "adherence" to the reformed curriculum by implementers, such as teachers. However, this approach is inconsistent with the trend toward school autonomy, which includes autonomy in curriculum development. Teachers are no longer the implementers but the central players in the curriculum development process, "as policy makers and intermediaries, rendering the notion of fidelity obsolete" (Braun et al., 2010). Thus, curriculum change in schools is not simply a matter of replacing one curriculum with another, but rather how the change takes place and the context in which it is implemented. The interest in curriculum reform stems not only from the need to ensure that students have the skills and attitudes appropriate to the 21st century, but also from the potential impact of implementing a particular curriculum on student learning outcomes. According to (Fullan, 2015), curriculum reform is demanding in terms of implementation, as it requires multifaceted changes that may challenge existing beliefs and subjective realities deeply rooted in individual and organizational contexts.

To implement school management to implement the reform education program, according to (Akker, 2010), managers must conduct policy planning on change management. According to him, in the school change policy, it must be based on 10 components to address ten specific questions about planning for student learning: (1) Theoretical basis or Vision: Why do students learn?; (2) Purpose and goals: What goals are students learning towards?; (3) Content: What are students learning?; (4) Learning activities: How do students learn?; (5) Teacher role: How do teachers facilitate learning?; (6) Materials and Resources: What are students learning with?; (7) Grouping: Who are students learning with?; (8) Location: Where are students learning?; (9) Time: When are students learning?; (10) Assessment: How to measure learning progress?

To ensure that the reform education program is implemented in schools, mobilizing resources to focus on this change is the task of managers based on management functions. However, experience-based management is a barrier to implementing reform education programs. On the other hand, the challenge for school managers is personal history as they have experienced the educational environment of the past and are performing management activities in the current educational environment but have to realize future educational goals. Analyzing the challenges of education in the 20th century, (Beare và Slaughter, 1993) it has pointed out the absurdity of vision when "We are very good at looking back at the past but we are not good at looking forward to the future with the same time period". This is a problem for the school management capacity of the management staff. In order for school management to effectively implement changes in the educational program, the leader must have certain standards of management capacity, which is the capacity to manage change.

2.2.3. Change management capacity

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From the perspective of school management, the application of Change Theory to school change management focuses primarily on the qualities and leadership abilities of the manager.

- In terms of qualities, (Hartog và cộng sự, 1997) identify four leadership qualities when implementing change management: (1) Charisma, which provides vision and a sense of mission, encourages dignity, gains respect and trust, and enhances optimism; (2) Inspiration, which involves the leader's ability to act as a role model for followers, communicating the vision, and using symbols to focus efforts; (3) Individual concern, which means the leader's use of individual concern is linked to the individual subordinate's maximizing their potential; (4) Intellectual stimulation, which provides followers with a challenging flow of new ideas that are generated to encourage rethinking of old ways of doing things.

- In terms of competencies, (Leithwood et al., 1999) it has developed into a change management model with 10 aspects: (1) Competency to develop the school's vision and goals; (2) Competency to provide intellectual stimulation; (3) Competency to provide personal support; (4) Competency to represent professional practices and values; (5) Competency to demonstrate high performance expectations; (6) Competency to develop structures to encourage participation in school decisions; (7) Competency to manage human resources; (8) Competency to support teaching; (9) Competency to monitor school performance; (10) Competency to focus on the community.

As a component of the education system where school leaders are responsible for the curriculum and provide instructional leadership (OECD, 2016), school leaders play a key role in initiating, communicating and persuading teachers to implement new educational programs. The role of school leaders in coordinating the implementation of educational programs is crucial, as they can create a culture of change, initiate and sustain improvements at the school level (Thompson et al., 2004). More importantly, they can establish school processes for teachers to collaborate in curriculum development, for targeted training and development to take place at the school level, and for the reformed educational program to be incorporated into their school improvement plans (OECD, 2020). In systems where the principal's role is more administrative, school leaders can support curriculum implementation by supporting teacher professional development, fostering professional learning communities, creating an open forum for discussion of reform, and facilitating the development of a collective consciousness. The Theory of Change approach to school improvement in the context of curriculum change creates change for the learning community and professional practice. This can be beneficial for curriculum reform because they can bring together school-based professionals to focus collectively on curriculum development and implementation.

2.3. Managing school change in Vietnam in the context of educational reform

2.3.1. Requirements for school change management

A theory of change can be established for school management in the context of changing educational goals. To ensure that the educational program innovation is successfully implemented, approaching the perspective of the UNDG (United Nation Development Group), we identify some requirements for change management as follows:

(1) Understand the nature of change:

- Change is complex, requiring managers to recognize that the starting point of change is need rather than individual perspective. The needs of an organization such as a school are related to the needs of each individual in relation to the needs of development. Meeting the needs of the organization in relation to the needs of the individual is what ensures that change is made.

- Risk anticipation requires leaders to make assumptions: if failure occurs, the leader takes responsibility instead of blaming the people under his or her management. Risk anticipation is one of the ways to demonstrate the manager's vision in the change management process. Accepting risks is inevitable, managers must have backup plans. This helps change management to be carried out continuously without having to wait to resolve risks.

- Change does not accept improvisation or suddenness, but requires time and time for subordinates to understand. When the change, especially its necessity, is understood, then action is firmly established.

(2) Focus on specific goals. The specific goal for change management is to determine the nature and requirements of each type of goal. School management in the context of fundamental and comprehensive innovation in education and training aims at the following 3 types of goals:

- Strategic goal: managing change to achieve national goals: fundamental and comprehensive innovation in education and training, which means political change in the field of education, so it is expressed by consistent guiding ideology. In Resolution 29-NQ/TW of the Central Executive Committee, there is a very important thesis for educational management: "Fundamentally innovate the management of education and training, ensure democracy and unity; increase autonomy and social responsibility of educational and training institutions; attach importance to quality management"(Central Executive Committee, 2013)

- The primary goal: to improve the capacity and quality of the teaching staff so that this force can successfully implement the goals of change. Resolution 29-NQ/TW sets out the requirement to "Strongly innovate the goals, content, methods of training, retraining, fostering and evaluating the learning and training results of teachers according to the requirements of improving quality, responsibility, ethics and

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professional capacity" (Central Executive Committee, 2013)

- Core goal: the quality of education is achieved according to the requirements of the orientation and goals of fundamental and comprehensive innovation in education and training. This goal is emphasized in Resolution 29-NQ/TW: "Educating Vietnamese people to develop comprehensively and best promote the potential and creativity of each individual; love family, love the Fatherland, love compatriots; live well and work effectively" (Central Executive Committee, 2013).

(3) *Ensuring the principle of change*. The principle of change must ensure the objective, that is, change to create new quality suitable for the context. This principle is reflected in management behaviors to ensure that the assurance of the principle can be measured and evidence provided. Behaviors ensuring the principle of change management are expressed as follows: Assessing quality based on new goals to have a basis for making decisions on change; Assessing students' learning needs and teachers' teaching needs to set reasonable goals; Combining the educational environment with the experiential environment to create conditions and opportunities to implement the new educational program; Sharing responsibility to create consensus among all members on the policy of change; Being consistent with the new model (management and teaching) so that mistakes of traditional methods do not have the opportunity to repeat; Providing necessary services to meet the needs and goals of the new educational program; Develop, implement, test, and evaluate the feasibility and effectiveness of new technology; Develop the capacity of teachers and promote the formation of active teacher groups; Identify barriers and identify ways to break down barriers to change in schools; Improve the organizational environment to promote the belief that student learning is the central goal of all members of the school

From the above issues, it can be seen that the Change Theory approach to change management in schools needs to be clearly defined, focusing on improving the quality of education based on the context of change as the frame of reference for this management method.

2.3.2. Practical methods of change management

Applying the Theory of Change, the practice of this theory is carried out in 04 steps as follows (United Nation Development Group, 2022):

(1) *Focus on vision and goals*. For school change to take place as expected, managers must first identify core goals. The core goals of school change are in the system of strategic change goals, that is, the goals of fundamental and comprehensive innovation in education and training. This educational innovation strategy is most clearly demonstrated in general schools, which is the innovation of educational programs. Managers realize that the new educational program focuses on developing the qualities and capacities of learners. Thus, which basic factors in the entire educational system of the school aim to develop the qualities and capacities of learners must be focused on to achieve the goals of implementing the new educational program. From here, the future of school development is to ensure the quality of education based on the goal of developing students' qualities and abilities.

(2) *Analysis of change*. The factors involved in school change in the context of educational innovation include: people (human resources), conditions supporting change (material resources), policies (legal). Among these factors, the human factor has the central meaning in governing change, and is also the driving force of change. The analysis of the human factor also needs to determine the role and position of each subject participating in the change process and which subject has the meaning of creating real change. The first human factor mentioned is the team of managers, teachers and students. The chain reaction from the team of managers to the team of teachers and from the team of teachers to students is the effect of change to achieve new goals, according to the requirements of the new educational program. The impact assessment of change is done in the reverse order: student performance reflects the quality and effectiveness of the teaching staff, the quality of education and the quality of the teaching staff reflect the quality of the school; the person responsible for the quality of the school is the manager. Can the analysis of these two-way change factors provide evidence of change management that it has been implemented? If so, to what extent?

Change occurs in a process, with a beginning and an end. Therefore, change in schools follows the structure: cause - action - result - feasibility. The "cause" factor can be the agent that creates change that requires corresponding action. Changes identified through evidence are considered effective because they are proven. When the change has met these three factors, it can be affirmed that the method of implementing the change is feasible. This is how change is analyzed through the implementation of change management.

(3) *Clarify assumptions and anticipate risks*. Establish and clarify the key relevant assumptions that underpin the theory of how change occurs and the key risks that may influence it. This includes identifying why solutions are the main drivers of change in a given context and the factors that may influence these drivers. Assumptions are taken for granted, accepted as certain things that will happen. It is particularly important that the assumptions that underpin proposed causal relationships between different outcomes and other factors are made explicit (if X, then Y, because Z) and evaluated against the available evidence (United Nation Development Group, 2022). There are 04 types of assumptions that can be applied to change management for schools in the context of educational innovation: "Cause - effect" assumption: using the pair of if - then relationships to identify factors belonging to the impact conditions that bring about the desired results for change; Implementation assumption: to determine the suitability of measures to implement change; External impact and influence assumption: identify the advantages and difficulties encountered in the implementation of change measures; Risk assumption: identify

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uncontrollable obstacles that require additional measures or support from participating parties. Types of risks include: environmental and political (e.g. due to policy changes), lost opportunities (e.g. timing or partner selection), technical errors (e.g. program design, plans are flawed, lack of information or incomplete), relationship losses (e.g. conflict of views or conflicts of interest). Identifying risk assumptions helps managers prepare for corrective actions, correct assumptions, take advantage of opportunities, and eliminate threats.

The assessment of assumptions must be carried out and adhere to the principles: transparency (can it be explained?), reasonableness (are they related to the measures of change?), and validity (are they testable?).

(4) *Identify key partners and actors.* Identify partners and actors by reviewing each outcome, including the risks and assumptions involved. Focus in particular on key actors that are likely to play a direct role in determining the success or failure of the change effort (United Nation Development Group, 2022). Applying this perspective to school change management in the context of educational reform is to assess the contributions of members to the change and how effective (or beneficial) are those contributions? For example, when considering whether teachers have become partners in managing change, evidence is provided that they have implemented innovative teaching methods and whether the effectiveness of these innovations meets the requirements of the new educational program? From there, it is possible to identify the main factors such as: awareness of the nature and process of education when implementing the new education program, teachers' ability to change before the requirements of the new education program, and teachers' motivation to make this change.

In managing change in schools, it is impossible not to consider partners from outside the school. Because these partners not only support school change but also participate in acknowledging that change has occurred. In addition, external partners of the school have the ability to participate in shaping and directing the change. Through these partners, the influence and spread of the school to society, is recognized or denied by society. From identifying the partners and agents that create change, managers can make appropriate adjustments in the process of managing change at school.

3. CONCLUSION

Change is an inevitable part of existence and development. Change in an organization in general, and in a school in particular, is a complex thing. Without a tool to control change, it is impossible to make the organization or school change. Any change in an organization must start from its operating mechanism, that is, management activities. Managing change in a school involves many organizations and individuals in a complex relationship. Managers must have both sufficient capacity and a firm grasp of the principles and requirements of change in order to direct and manage these individuals and organizations to realize the value of change and the need for change in order to actively participate in the change of the school. The school is both a social organization and a professional agency, so the change of the school has a strong impact on the lives of people and society. To successfully manage change in schools, it must be within the system of change in education, taking the strategic goal of educational innovation as a guideline to operate the school system in the change process.

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Innovative Vegetable Chips: Harnessing the Nutritional Power of Underutilized Leafy Greens



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ABSTRACT: This study investigates the acceptability of spinach-cabbage chips in three flavor variants: plain, cheese, and barbeque, specifically targeting preschoolers as the primary evaluators. A sensory evaluation was conducted, assessing the chips based on appearance, color, texture, taste, aroma, and overall acceptability. Data were analyzed using One-Way Analysis of Variance (ANOVA) to identify the most preferred nutri-chip formulation, while Kramer's Rank-Sum Test determined the favored variant among the participants. The study utilized fresh spinach and cabbage, focusing on their nutritional profiles and the production process for the chips. Key methodologies included sensory evaluations, cost analysis of ingredients, and calculations of theoretical vitamin A content, along with the percentage of the Recommended Nutrient Intake (RENI) for vitamin A per 50-gram serving for children aged 4-10 years. Results indicated that the optimal formulation comprised 200 grams of spinach and 100 grams of cabbage, with no significant differences at the 5% level in appearance and color between formulations. However, significant differences were noted in texture, taste, aroma, and overall acceptability. The spinach-cabbage nutri-chips contained 512 µg of Retinol Equivalents (RE) of vitamin A, translating to 12.8% of the daily recommended intake for preschoolers. The findings suggest that spinach-cabbage nutri-chips can serve as a nutritious snack option to enhance vitamin A intake among preschoolers and may be beneficial for supplementary feeding programs. Recommendations for production, packaging, and further research into the product's shelf life and applicability in school feeding initiatives are provided.

KEYWORDS: Vegetable Chips, Nutritional Value, Underutilized Leafy Green, Spinach-Cabbage Formulations, Sensory Evaluation

I. INTRODUCTION

Micronutrients, which include essential vitamins and minerals, are vital for maintaining good health. Among these, Vitamin A plays a crucial role as a fat-soluble vitamin, encompassing both natural forms and synthetic analogs known as retinoids. It can be sourced from both animal products, such as butter, egg yolks, and liver, and plant-based sources, where it exists as provitamin A carotenoids like beta-carotene, alpha-carotene, and betacryptoxanthin (Institute of Medicine, 2001; Ross, 2010).

Vitamin A exists in three primary forms: retinols (preformed vitamin A), beta-carotenes (plant-based), and carotenoids. Retinol is the most active form and is predominantly found in animal sources, while beta-carotene is converted into retinol in the body (Olson, 1996). This vitamin is essential for various physiological functions, including vision, immune response, reproductive health, and gene regulation (Institute of Medicine, 2001; Ross, 2010; Blomhoff, 1994). Deficiencies in Vitamin A can lead to serious health issues, particularly in developing countries, where the signs include impaired vision, dry skin, and increased susceptibility to infections (Sommer, 1995).

In the Philippines, Vitamin A deficiency is a pressing public health issue, significantly impacting children. In 1998, nearly 38% of children aged 0-5 years exhibited low plasma retinol levels (Food and Nutrition Research Institute, 2001). The economic challenges faced by the country have likely exacerbated this deficiency, contributing to a broader malnutrition crisis. The link between economic conditions and nutritional status is evident, as declines in the economy correlate with increased rates of underweight and wasting among children (Solon et al., 2000; Florentino & Tanchoco, 1988).

The consequences of Vitamin A deficiency extend beyond health, leading to increased morbidity and mortality rates among children and poor pregnancy outcomes (Sommer & West, 1996). While the government has initiated high-dose supplementation programs for young children, more comprehensive strategies may be needed to effectively combat this issue (Solon et al., 2000). Additionally, the Philippines faces challenges related to vegetable waste management, particularly in La Trinidad, Benguet, where

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significant amounts of vegetable waste could be repurposed into nutrient-rich compost, potentially improving agricultural productivity and nutrition outcomes (JDP/SCA-PIA CAR, Benguet, 2007).

II. RELATED LITERATURES

Spinach, scientifically known as *Spinacia oleracea*, is an edible flowering plant from the Amaranthaceae family, native to central and southwestern Asia (Douglas, 2010; Morelock & Correll, 2008). It is typically an annual plant that can grow up to 30 cm in height and may survive winter in temperate climates. The leaves are alternate and vary significantly in size, while the flowers are inconspicuous and develop into small fruit clusters containing seeds (Douglas, 2010; Morelock & Correll, 2008).

Cabbage, or *Brassica oleracea* var. *capitata* Linn., is a vital vegetable crop in the Philippines, significantly contributing to both the economy and the nutrition of its people (Knott & Deanon, 2009; Barba, 2006). It ranks first in production among leafy vegetables and is essential for a balanced diet due to its high content of vitamins A, B, and C, as well as minerals like calcium (Knott & Deanon, 2009; Barba, 2006). Cabbage thrives in fertile, well-drained soils, particularly at altitudes between 700 and 2,000 feet, and is best cultivated during cooler months (Knott & Deanon, 2009; Barba, 2006). However, it is highly perishable and susceptible to rotting, which can lead to market gluts and price fluctuations, adversely affecting farmers (Hurrell, 2006; Barba, 2006). Nutritionally, spinach is rich in antioxidants, vitamins, and minerals, especially when consumed fresh or lightly cooked (Ball, 2006; Bergquist et al., 2006). It is a significant source of vitamin A, C, E, K, and iron, although the presence of high oxalate levels can inhibit iron absorption (Ball, 2006; Bergquist et al., 2006). Cabbage is recognized as an excellent source of vitamin C and a good source of vitamin A, with notable antioxidant properties attributed to its polyphenols (World's Healthiest Foods, 2023; Barba, 2006).

Spinach can be categorized into three main types: savoy, flat/smooth leaf, and semi-savoy. Savoy spinach features dark green, crinkly leaves and is commonly sold fresh, while flat/smooth leaf spinach has broader leaves that are easier to clean, often used for canned and processed foods (Wright, 2010; Morelock & Correll, 2008). Semi-savoy spinach is a hybrid variety that combines characteristics of both types, suitable for both fresh markets and processing (Wright, 2010; Morelock & Correll, 2008). The health benefits of spinach are largely attributed to its antioxidant content, which provides anti-inflammatory effects and reduces the risk of health issues related to oxidative stress (Blumberg, 2004; Podsedek, 2007). Spinach consumption has been linked to decreased risks of atherosclerosis and high blood pressure, potentially due to its unique peptides that help regulate blood pressure (Basu et al., 2014). Additionally, spinach ranks highly in nutrient richness, being rich in vitamins and phytonutrients (World's Healthiest Foods, 2023). Cabbage also boasts impressive antioxidant properties, particularly due to its polyphenols, which contribute to its cancer prevention benefits (World's Healthiest Foods, 2023; Barba, 2006).

Cabbage is noteworthy as a probiotic superfood, particularly when fermented into products like sauerkraut, which enhances its nutritional profile and provides beneficial bacteria (Barba, 2006; Pardo & Zufía, 2012). This fermentation process not only preserves the cabbage but also increases its vitamin B content, making it a valuable food source, especially for those following a vegan diet (Barba, 2006). Moreover, spinach is considered excellent brain food due to its flavonoids, which may help protect against cognitive decline and improve learning and motor skills in aging populations (Gómez-Pinilla, 2008; Shukitt-Hale, 2015). Studies suggest that diets rich in spinach and other green leafy vegetables can significantly reduce neurodegenerative changes (Shukitt-Hale, 2015). To enhance the consumption of spinach, particularly among children who may be deterred by its bitter taste, various methods have been explored. One effective approach involves adding calcium, which neutralizes the bitterness by reacting with oxalic acid in spinach (Liang et al., 2005). Mixing spinach with milk creates a "spinach milk juice" that is devoid of bitterness while enhancing nutritional value (Liang et al., 2005). Additionally, incorporating oil, particularly olive oil, into spinach dishes can mask bitterness and improve flavor (Liang et al., 2005). Cooking methods such as boiling or steaming can also reduce bitterness, though they may lead to some nutrient loss (Robert & Praulx, 2006).

The Garantisadong Pambata program in the Philippines aims to improve child health through routine health services, including vitamin A and iron supplementation, highlighting the importance of micronutrients for growth and development (DOH, 2022). Vitamin A plays a crucial role in vision, immune function, and cellular differentiation, and its deficiency remains a significant public health issue globally (WHO, 2009).

III. METHODOLOGY

The research study employed an experimental design to evaluate the most acceptable variant of spinach-cabbage nutritional chips based on sensory attributes such as appearance, color, texture, taste, aroma, and overall acceptability. This evaluation was conducted using the Facial Hedonic Scale, as depicted in Figure 2. The sample formulations included different ratios of dried spinach and cabbage, specifically 100 grams of dried spinach with 100 grams of dried cabbage and 200 grams of dried spinach with 100 grams of dried cabbage.

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Participants in the study consisted of thirty preschoolers aged 4 to 10 years from City Camp Barangay in Baguio City, who conducted the facial sensory evaluation to identify the most acceptable nutritional chip variant. Data gathering involved cooking the nutritional chip formulation of 200 grams of spinach and 100 grams of cabbage, followed by sensory evaluation using the Facial Hedonic Scale. This scale provided descriptive rankings from "Gustong-gusto (Like Very Much)" to "Hindi talagang gusto (Dislike Very Much)

For statistical analysis, the One-Way Analysis of Variance (ANOVA) was utilized to assess the sensory evaluation results, while Kramer's Rank-Sum Test was employed to determine the preferred variant among the preschoolers. This methodology ensures a comprehensive understanding of the sensory preferences for the nutritional chips and supports the validity of the findings.

IV. RESULT AND DISCUSSION

The study aimed to determine the most acceptable spinach-cabbage nutritional chips among three variants: plain, cheese, and barbecue flavors, focusing on preschoolers from City Camp Barangay in Baguio City. The findings revealed that the formulation containing 200 grams of spinach and 100 grams of cabbage was the most acceptable. There were no significant differences at the 5% level in terms of appearance and color; however, highly significant differences were noted for texture, taste, aroma, and general acceptability between the two formulations. The vitamin A content of the chips was equivalent to 512 µg RE, translating to 51.2 µg RE per 50gram pack. This amount provides a total of 128 µg RE of vitamin A per serving, which is beneficial since the recommended daily intake for preschoolers aged 4-10 years is 400 µg RE. Therefore, these chips can serve as a nutritious snack to supplement preschoolers' vitamin A intake and can be included in supplementary feeding programs.

The study also developed three variants using the 200 grams of spinach and 100 grams of cabbage formulation: plain, cheese, and barbecue. The cheese-flavored chips were ranked as the most preferred by preschoolers, followed by barbecue-flavored chips, while plain chips were the least preferred. Conclusions drawn from the study indicated that preschoolers had different perceptions when rating the chips based on appearance, color, taste, aroma, and general acceptability, although they shared a common rating for texture. In terms of overall acceptability, cheese-flavored chips emerged as the most preferred, while plain chips were the least acceptable. Based on these findings, several recommendations were made for producing spinach-cabbage nutrichips. It is advised to use a deep fryer to prevent burnt chips from sticking together during frying. Proper packaging techniques should be employed to ensure the chips are well-strained and free from contamination. Moreover, maintaining a clean working environment and adhering to sanitation practices is crucial. The researcher also recommends conducting a study on the shelf life of the spinach-cabbage nutritional chips and suggests that these chips be introduced to Home Economics teachers for use in school feeding programs for grades 1-5, as they can help meet at least one-third of preschoolers' vitamin A requirements.

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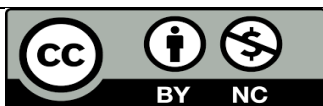
I would like to express my heartfelt gratitude to all those who contributed to the success of this study. First and foremost to the preschoolers and their parents for their participation in the sensory evaluation, which was crucial for the study. A special thanks to my colleagues and friends who provided assistance in data collection and analysis. I am grateful to our university for providing the necessary resources and facilities that made this research possible. Additionally, I would like to acknowledge the contributions of the staff in the in our college, whose expertise and support were instrumental. Finally, I would like to thank my family for their unwavering support and encouragement, which motivated me to complete this research.

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Impact of School-Based Feeding Program on Pupils Reading Performance in San Gabriel Elementary School



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ABSTRACT: This study examines the impact of a school feeding program on the reading skills of Grade IV pupils. The research hypothesizes that a well-structured and effectively implemented feeding program can enhance pupils' reading performance. Specifically, the study aims to determine how the school feeding program influences the reading performance of Grade IV pupils at San Gabriel Elementary School during the 2022-2023 school year. The study sought to address several key questions: What is the socio-demographic profile of the pupils (age, sex, parents' education, family income, and BMI)? What is the impact level of the school feeding program in terms of physical facilities, fund management, paraphernalia, and food preparation? What is the reading performance of the pupils? Is there a significant relationship between the pupils' socio-demographic profile and the effectiveness of the school feeding program? Lastly, is there a significant relationship between the feeding program's impact and reading performance? The research employs a descriptive-correlational design and involves 32 Grade IV pupils from San Gabriel Elementary School, selected through purposive sampling. Data collection instruments included a modified pupil profile survey and a school feeding program assessment, with responses measured using a 5-point Likert scale. The data were analyzed using frequency, percentage, mean, standard deviation, Biserial Correlation, and Pearson r. Findings reveal that the pupils, all aged 9, consist of an equal number of boys and girls. Most parents had completed high school, and family incomes were typically below 9,000 pesos. Pupils generally had a normal BMI. The school feeding program was found to have an outstanding impact on both nutritional support and reading performance, with a significant correlation between program management and pupils' reading improvement. A significant relationship was also found between the socio-demographic profile and program effectiveness.

KEYWORDS: Nutritional impact; school feeding program, management, educational outcome, correlational,

1.0 INTRODUCTION

The primary goal of every educational system is to enhance student performance and foster a school environment where all students can receive the best possible education. Quality education is essential for personal growth and future success. However, despite various government initiatives aimed at making education accessible to all, not all students receive a sufficient and well-rounded education. One significant factor contributing to this disparity is poor nutritional status, which is a leading cause of low academic performance and reduced productivity in primary education. Poor nutrition can negatively affect children's physical and cognitive development, especially during their formative years [1]. In response, the Department of Education has implemented curriculum improvements, introduced innovative teaching. On the other hand, School feeding is a multifaceted intervention, and designing effective programs on a national scale requires collaboration, evidence-based strategies, and an impact-driven approach for efficient implementation and long-term results [2]. The Department of Education (DepEd) has been conducting supplementary feeding programs in schools since 1997, initially aimed at addressing short-term hunger in public elementary schools. In 2012, the focus shifted from tackling short-term hunger to addressing the more critical issue of undernutrition. The School-Based Feeding Program (SBFP) now primarily aims to rehabilitate severely malnourished children and improve their classroom attendance, while also promoting the overall health and behavior of students [3]. While numerous studies have explored the relationship between nutritional status and academic performance, there is a significant gap in the specific context of school-based feeding programs and their direct impact on reading performance among elementary school pupils. Previous research has established that proper nutrition is essential for cognitive development and educational achievement [1,4]. However, studies focusing on the effectiveness of these feeding programs, particularly in the context of improving literacy skills, remain limited. For example, a recent study by Senesie et al. [5] examined the broader effects of school feeding programs on overall academic performance but did not isolate

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the impact on reading skills specifically. Similarly, a study by Mukhamedzhanov et al. [6] highlighted the importance of nutritional interventions in improving student engagement and attendance, yet it lacked a detailed analysis of how these factors translate into enhanced reading abilities. Moreover, while the Department of Education has implemented the School-Based Feeding Program (SBFP) to combat undernutrition and its related effects on learning, the existing literature does not provide robust evidence on how these programs specifically enhance reading performance among Grade IV pupils in specific local contexts, such as San Gabriel Elementary School. It is undeniable that every teacher understands the importance of proficiently teaching reading, particularly to beginning readers, in order to prevent frustration later on. During the first quarter of the School Year 2022 - 2023, San Gabriel Elementary School examined students' health status to identify who among the pupils are undernourished. Based on the Body Mass Index of one hundred fifty (150) pupils from Kinder to Grade VI, fourteen (14) of them are categorized stunned by BMI, out of which nine (9) Grade IV pupils. In the same manner, San Gabriel Elementary School experienced this kind of situation wherein the reading performance result for the first quarter, showed a poor performance in the reading of the Grade IV pupils. Of the 150 pupils, only 91 or 60% were classified as independent readers. These learners were the ones who could access the text very quickly with 100% accuracy when reading. On the other hand, 59 or 40% of pupils belong to frustration level, out of which are fifteen (15) from Grade IV. These data reveal that these grade levels have reading difficulties. The above problem encourages the researcher to conduct this study to determine how the School Feeding Program can improve the reading performance of pupils. Thus, the findings drawn from this study may best serve in improving the school-teachers-pupils performance as essential components of an effective and performing school. Thus, this research focused on the impact of school-based feeding programs on pupils' reading performance in San Gabriel Elementary School. As to the relation to the substantial impact of school-based feeding programs on pupils' reading performance in San Gabriel Elementary School, no empirical data support the claim. It is therefore on this premise that this study were conducted among the Grade IV pupils of San Gabriel Elementary School.

2.0 METHODOLOGY

2.1 Research Design

The descriptive-correlation research design were utilized in this study. This study assessed the socio-demographic profile of pupils, the level of effectiveness of school-feeding programs, and reading performance. Purposive sampling were used thru a complete enumeration technique to gather responses from pupils regardless of their socio-demographic profile, level of effectiveness of school-feeding programs, and reading performance. The respondents of this study are the Grade IV pupils of San Gabriel Elementary School. during the school year 2022-2023. A total of 32 pupil respondents were participated in this study using the purposive sampling technique. The researcher were sought the permission of the Schools Division Superintendent to conduct data collection among the respondents. She will also ask the permission of the respondents for them to answer the survey questionnaire. Once permitted, they were distribute to the respondents answer the survey questionnaire which were retrieved by the researchers. The data-gathering procedure were through the teacher handling the English 4 subject. While letters seeking permission were delivered to the DepEd Schools Division Superintendent, the researchers constructed a questionnaire and have it validated by the experts, preferably the experts of the study. The reading performance of the respondent were taken from the Group Screening Test (GST) of the school year and were the basis of the research since during this period the feeding program is not yet implemented. While the reading performance of the pupils in the fourth grading period after the feeding program implementation were utilized to compare the previous performances of the pupils before and after the feeding program. The respondents were given enough time to answer the questionnaire preferably 30 to 60 minutes to answer the questionnaire. After this, the questionnaires were collected or retrieved and subjected to further presentation, analysis, and interpretation of data. Then, a final draft were submitted for finalization and corrections. Data from the responses were submitted to the statistician for statistical computation, after which the researchers made an analysis and interpretation of the data gathered. The data collected were submitted to a statistician and were presented using tables and graphs. The relationship between the socio-demographic profile, the impact level of the school feeding program, and the reading performance of pupils were analyzed using descriptive and inferential statistics. To determine the demographic profile, impact level of school feeding program, and reading performance of pupils, percentage, mean and standard deviation were computed based on their score. The reading performance were determined through the Group Screening Test (GST) in their first quarter assessment. To determine whether there is significant relationship exist between respondent demographic profile and the impact level of school feeding, the Point Biserial Correlation coefficient were utilized. To determine whether there is significant relationship exist between the impact level of school feeding to the reading performance, Pearson r of correlation were computed at 0.05 level of significance. This study adhered to the relevant research ethics guidelines. Approval for data collection was obtained from the School Division Superintendent and District In Charge of Borongan City Division to allow Grade IV pupils to participate in the survey. Consent forms were distributed and collected from the respondents, along with the necessary permits from relevant government agencies. The questionnaire was

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administered only after securing the respondents' consent and permission from appropriate authorities. Additionally, the study complied with the provisions of the Data Privacy Act of 2012 regarding the handling, treatment, use, and storage of research data.

3.0 RESULTS AND DISCUSSION

Demographic Profile of Pupils

Tables 1 present the statistics on the profile of the teachers in Borongan City Division in terms of their age; sex; parents' educational attainment; family monthly income; initial BMI; and recent BMI.

Age. As reflected in Table 1, the data indicated that all of respondent's age bracket at 9 – 10 with 32 or 100% within the mean age of 9.69 years. This denotes that age is at the higher end of the grade level indicating that the pupils are older than the ideal median age for the Grade IV. According to Bundy et al., [7], health and nutrition of school-age children from 5-9 years of age; referred to as middle childhood receives less attention than that of younger children or adolescents.

Table 1. Frequency and percentage distribution of respondents demographic profile of Grade IV Pupils

Variable	Frequency	Percent
Age		
11 – Above	0	0
9 – 10	32	100
8 -- below	0	0
Sex		
Male	16	50
Female	16	50
Parents' educational attainment		
College Graduate	5	15.62
College Level	5	15.62
High School Graduate	20	62.5
High School Level	2	6.26
family monthly income		
20,000 - above	6	18.76
9,000 - 20,000	5	15.62
9,000 - below	21	65.62
Initial BMI		
Severely Wasted		
Wasted	21	65.63
Normal	5	15.62
Overweight	6	18.75
Obese		
Recent BMI		
Severely Wasted		
Wasted	3	9.37
Normal	29	90.63
Overweight		
Obese		
Total	32	100

Moreover, this life stage is critical for learning and intellectual development as well as for shaping attitudes, behaviors and practices. Thus, investing in children's nutrition, health and education during middle childhood, and sustaining this into adolescence, will help children to reach their full potential, become productive adults and break the inter-generational cycle of malnutrition [8]. This finding is same in the study conducted by [9], wherein older children tend to be wasted than their counterparts. Increasing age requires higher nutrients to support the continuous growth before adolescence; therefore, school children who have insufficient food intake suffered from a reduction in body weight. Likewise, older children are already

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transitioning to puberty, where numerous inimitable challenges occurred, including higher body requirements, making them more susceptible to wasting [10].

Sex. Table 1 shows that female respondents (16 or 50 %) and male respondents (50 or 50%). The data clearly manifest on the equality of the respondents. This finding is not similar on the study of Garcia and Meer [11], where the pupils-respondent is dominated by male students. In addition, the findings negate with the 2016 Philippine Statistics Authority (PSA) that there were more males who were out of school, due to lack of personal interest and insufficient family income. Hence, the benefits of school feeding go far beyond a school meal and include consequences for equity and inclusion in education. Particularly for girls, encouraging results have been documented on school performance through increased enrolment and sustained attendance [12]. By providing healthy balanced meals, school feeding programs can improve overall micronutrient status and reduce anemia prevalence in primary school-aged children and adolescent girls [13].

Parents' Educational Attainment. It is revealed from Table 1 that most of the parents' educational attainment, that High School Graduate gets the highest frequency of 20 and with the percentage of 62.5 of the respondents. This is followed by College Graduate and College Level with the frequency of 5 or 15.62 percent, respectively. The lowest in parents' educational attainment with the frequency of 2 and with the percentage of 6.26 are those with High School Level. From these findings, it was implied that most respondents' parents' educational attainment was completed only a high school graduate. Various studies reported on the effect of parents' educational attainment in improving nutritional status. Findings supported in the study of Soliman et al., [14], indicated that the parents with low educational attainment lack experiences and insights they can share to their children so the latter generally may feel inadequate to aim for higher life than what their parents have achieved. In contrast, parents' education matter in the interaction as it provides parents with the cognitive resources, values and skills that enable them to better support and facilitate their child's learning and developmental environment [15].

Family Monthly Income. Table 1 shows that most of the respondents' family monthly income that ranges from PhP 9,000 - below obtains the highest frequency of 21 and with the percentage of 65.62. Whereas, family income of more than PhP 20,000 - above and income of PhP 9,000 to 20,000 had no has the lowest frequency of 6 or 18.75 percent. This implies that most of the respondents' parents are very low wage earners with a monthly income ranging from PhP 9,000 - below. Relative to the findings of this study, based on the reports of the Philippines Statistics Authority [16], farmers, fishermen, and children that belong to these families have an income below the official poverty threshold which consistently recorded the highest incidence of poverty. Likewise, aside from low income among farming households, parental educational attainment was also considered low since most of the household's heads and caregivers had attained or completed elementary education. Poverty threshold on income in Eastern Samar where the study site belongs, for a family of five members (i.e., three children) was reported at P20,237 in 2021 (PSA, 2022) which means that a family of five members in the province should have a monthly income of P9,536 to meet its food and non-food requirements. This figure is lower than the regional (P21,304) figure. Eastern Samar registered a poverty incidence of 37.4% which is higher than the regional figure of 30.7% [17]. According to Fernandez, and Abocejo, [18], shows that the short-term needs for income among farming households across generations have become a vicious cycle of constantly neglecting education to augment the meager income of the households. This is consistent with the result of this present study, which revealed that most of the farming families belonged to the poorest wealth index.

Body Mass Index. Table 1 shows the frequency and percentage distribution on the respondents Nutritional Status Before and After the Feeding Program. The food served for the 100-day intervention program was noted to be nutritious and healthful. The meal is balanced with components of go, glow and grows food value. Based on the menu plan (see Appendix B). Before the feeding program, out of thirty-two (32) pupil respondents 21 or 65.63% under "wasted" nutritional status, 6 or 18.75 obtained "overweight", and 5 or 15.62% belong to "normal" nutritional status. The table highlights that more half of the respondents were wasted nutritional status before the implementation of school-based feeding program. This finding is in line with the report of Department of Education [19] Nutrition Status Baseline Report for School Year (SY) 2015—2016, that there were about 1,845,687 severely wasted and wasted students from Kindergarten to Grade 6. Meanwhile, after the intervention, there were 3 or equivalent to 9.37% retain the wasted status; and 29 or equivalent to 90.63% in the "normal" nutritional status. The data clearly demonstrate on the improvement of the school children nutritional status from August 2022 school opening to July 2023 school year end. There were 9.37% retained under the wasted status; and a total of 73.33% increase to "normal" status. This finding implies that school feeding it indicate significant improvement on the nutritional status of the schoolchildren during the feeding program. A similar result is found by Soliman et al., [14], for wasted pupils, with percentage improvement to normal nutrition status among the SBFP-fed wasted pupils exceeding that for their NB counterparts by nearly 8 percentage points. In contrast, with the study conducted by Lu and Dacal [20], that the status of undernourished children remains unchanged. Hence, changes in body mass indices arising from the school feeding are program intervention variables because they have been introduced from the program.

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Impact Level of School Feeding Program

The impact level of the school feeding program management was evaluated based on physical facilities; management of funds; paraphernalia; and food preparation.

Physical Facilities. Table 2.1 below disclosed the evaluation results of the impact level of school feeding program for Grade IV pupils in terms of physical facilities. Results showed that among the statement, "neatness and orderliness of the school feeding centers" obtained the highest mean ($M=4.82$, $SD=.467$) and was verbally interpreted as "Outstanding". On the contrary, the lowest rating was on statement, "Availability of a storage room for Perishable & non-perishable" with a mean ($M=3.80$, $SD=.831$) and was verbally interpreted as "Very Satisfactory". Based on the finding, the grand-mean of school feeding program management based on physical facilities is 4.20 with a standard deviation (of 0.322) which is interpreted as outstanding. The main reason for this outstanding outcome of physical facilities in school feeding centers have wide-ranging implications, including improved hygiene, increased participation, enhanced focus, a positive learning environment, and the promotion of healthy habits among pupils. This means that this neatness and orderliness and availability of a storage room can contribute in maintaining food safety standards, reducing the risk of food-borne illnesses, and ensuring the overall health and well-being of the pupils. This result is conforming with Saeni [21] highlighted the importance of adequate physical facilities, such as well-equipped kitchens, dining halls, and storage areas, in ensuring the success and sustainability of the programs. opined that SFPs would best improve the performance of pupils when coupled with adequate learning materials, physical facilities.

Table 2.1. Impact Level of School Feeding Program management in terms of Physical Facilities

Item	Mean	Std Dev	Interpretation
Neatness and orderliness of the school feeding center	4.82	0.467	Outstanding
Cleanliness of the lavatory used in washing all dishes after each feeding session	4.27	0.786	Outstanding
Functionality of handwashing and Toothbrushing area	4.09	0.539	Very Satisfactory
Availability of a potable water supply	3.90	0.831	Very Satisfactory
Availability of a storage room for Perishable & non-perishable goods	3.80	0.632	Very Satisfactory
Grand Mean	4.20	0.322	Outstanding

Moreover, Oro, et al., [22], emphasized that dedicated feeding facilities offer a conducive environment for learning and for food preparation and as a dining area for children. They help create an atmosphere that fosters nutrition, social interaction, and overall well-being, ultimately supporting the goals of the school feeding program in promoting healthy development and educational outcomes. Furthermore, Fernandes and Aurino, [23] pointed out that health conditions among children can be prevented or treated by interventions delivered through schools which often provide more opportunities to reach children than via health facilities, particularly in rural areas.

Management of Fund. Table 2.2 below disclosed the evaluation results of the impact level of school feeding program management on Grade IV in terms of management of fund. Findings showed that among the statement, "system of daily recording of all purchased items evident" obtained the highest mean ($M=4.46$, $SD=.0.523$) and was verbally interpreted as "Outstanding". On the contrary, the lowest rating was on statement, "updating of daily disbursement of funds by the head of school" with a mean ($M=4.16$, $SD=0.750$) and was verbally interpreted as "Very Satisfactory". Based on the finding, the grand-mean of school feeding program management based on management of fund is 4.25 with a standard deviation (0.711) which is interpreted as outstanding. This means that the management of funds are meet all the standards procedure in school feeding program. These findings collaborate with the statement of Palma [24], that utilization of financial resources is very precarious since many are looking into how the school resources are managed. Hence, Department of Education continues to allocate more funds to public schools to support them in performing their ultimate task to educate the students to become better citizens of the country [19].

Table 2.2. Impact Level of School Feeding Program management in terms of management of Fund

Indicator	Mean	Standard Deviation	Interpretation
System of daily recording of all purchased items evident	4.46	0.523	Outstanding
Promptness in the liquidation of financial reports	4.18	0.750	Very Satisfactory

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Regular basis of updating records by the school Feeding Committee	4.27	0.786	Outstanding
Transparency of financial reports available in school Bulletin Board	4.18	0.750	Very Satisfactory
Updating of daily disbursement of funds by the head of school	4.16	0.750	Very Satisfactory
Grand Mean	4.25	0.711	Outstanding

Paraphernalia. Table 2.3 revealed the below disclosed the evaluation results of the below disclosed the evaluation results of the impact level of school feeding program management on Grade IV in terms of paraphernalia. Findings showed that among the statement, "availability of plates, bowls and glasses for use" obtained the highest mean ($M=4.45$, $SD=0.522$) and was verbally interpreted as "Outstanding". Likewise, the lowest rating was on statement, "availability of chopping board, shredders, peelers & knives" with a mean ($M=4.17$, $SD=0.750$) and was verbally interpreted as "Very Satisfactory". Based on the finding, the grand-mean of school feeding program management based on management of fund is 4.21 with a standard deviation (0.711) which is interpreted as outstanding. This means that the paraphernalia are sufficient in catering for the needs of the learner in the school feeding program. This implies, that effective management practices ensure that the necessary resources and equipment are available, well-maintained, and utilized optimally, contributing to the overall success and positive outcomes of the program for the pupils it serves. This assertion is supported by Hamupembe [25] who cited sufficient equipment and utensils to support for the needs of the learners.

Table 2.3. Impact Level of School Feeding Program Management in terms of Paraphernalia

Item	Mean	Std. Deviation	Interpretation
Availability of plates, bowls and glasses for use	4.45	0.522	Outstanding
Availability of spoons and forks for use	4.18	0.750	Very Satisfactory
Availability of frying pans, kettles& casserole	4.27	0.786	Outstanding
Availability of chopping board, shredders, peelers & knives	4.17	0.750	Very Satisfactory
Grand Mean	4.21	0.711	Outstanding

Food Preparation. Table 2.4 revealed the impact level of school feeding program management on Grade IV in terms of food preparation. Findings showed that among the statement, "the cycle menu preparation as prescribed is planned." obtained the highest mean ($M=4.84$, $SD=0.408$) and was verbally interpreted as "Outstanding". Likewise, the lowest rating was on statement, "necessary gears during feeding sessions utilized" with a mean ($M=4.17$, $SD=0.405$) and was verbally interpreted as "Outstanding". Furthermore, the grand-mean of school feeding program management based on management of fund is 4.80 with a standard deviation (0.428) which is interpreted as outstanding. This means that the food preparation is fully supported particularly in the daily preparation of foods during the entire duration of the program implementation. These findings are contradicted with the study of Rivera [26], that respondents' parents were not able to sustain its support in the implementation of the SBFP particularly in food preparation and cooking during the entire SBFP implementation. The current DepEd SBFP guidelines suggest that the authority is with the schools themselves to change and select their own food preparation [27]. However, most schools relied on the menu recommended by their respective division office. Schools were hesitant to expand or develop their own menu because of liquidation and ordering concerns. One of the advantages of school feeding is that, in addition to enabling education, it has positive direct and indirect benefits relating to a number of other development goals [28].

Table 2.4. Impact Level of School Feeding Program Management in terms of Food Preparation

Item	Mean	Std. Deviation	Interpretation
The cycle menu preparation as prescribed is planned.	4.84	0.408	Outstanding
Preparation of vegetables & other raw food for cooking observed.	4.67	0.516	Outstanding
System in food distribution to pupils observed.	4.83	0.408	Outstanding
Necessary gears during feeding sessions utilized.	4.81	0.405	Outstanding

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Raw food items or ingredients to be cooked are carefully washed	4.82	0.407	Outstanding
Grand Mean	4.80	0.428	Outstanding

This section shows the summary of impact level of school feeding program management. Table 2.5 below shows that based on the agreement given by the respondents; all of the indicators obtained an outstanding rating. The findings show that a well-managed school feeding program has a significant impact on the nutritional support, academic performance, attendance, health, social-emotional development, and community engagement. According to Maijo [4], by implementing proper management practices, the program can contribute to the holistic development and success of elementary learners, ensuring their well-being, education, and long-term outcomes.

Table 2.5. Summary of level of school feeding program management

Indicators	Mean	Standard Deviation	Interpretation
Physical Facilities	4.20	0.322	Outstanding
Management of Fund	4.25	0.711	Outstanding
Pparaphernalia	4.21	0.711	Outstanding
Food Preparation	4.80	0.428	Outstanding
Over-all Mean	4.36	0.543	Outstanding

Relationship between Demographic Profile and School Feeding Program Management

Table 3 shows the relationship between the demographic profile of teachers and the level of school-based teamwork of elementary teacher in Borongan City Division. A Biserial Correlation test was run to assess the relationship between the socio-demographic profile and the level of school-based teamwork in a division level with a sample of 216 elementary teacher's participants. The following findings were revealed.

Physical Facilities. Table 3 below presents the data on the relationship between the demographic profile and the level of school feeding management in terms of physical facilities. It was revealed that physical facilities have significantly related to age ($r=.101$, $p = .038$), sex ($r= .017$, $p= .000$), parent educational attainment ($r= .082$, $p = .001$), family income ($r= .036$, $p= .000$) and body mass index ($r= .023$, $p = .000$). These p-values values were less than their critical value at 0.01 level of significance. This, therefore, reject the null hypothesis which is the state that there is no significant relationship between the demographic profile of pupils and the school feeding management. This indicates that the level of school feeding management in terms of physical facilities have an impact on the demographic profile of pupils in San Gabriel Elementary School. These findings not aligned with the study of Bilbar [29], shows that demographic profile of pupils had a significant relationship to the effectiveness school's feeding program. In the study of Hussein, et al., [30], shows that grade level of the students and diet information source were significant determinants of stunting in SFP students. But none of them could associate with stunting in NSFP students. Grade level of students persists to be significant factor associated with stunting in SFP students, NSFP students, and the overall stunting status. Pupils in grades 1, 2 and 3 of SFP schools were more likely to have stunting than students in higher grades. This may be due to as age and grade level increases knowledge of the student's increases, which in turn the stunting rate become decreased. In support to Bundy et al. [7], suggests that appropriately designed school feeding programs increase access to education and learning and improve children's health and nutrition, especially when integrated into comprehensive school health and nutrition programs.

Table 3: Test of relationship between the demographic profile and school feeding management.

Variable 1 (Profile)	Variable 2 (School-based Teamwork)	r-value	p-value	Interpretation
Age		.101	.038	Significant
Sex	Physical Facilities	.017	.000	Significant
Parent Educational Attainment		.082	.001	Significant
Family Income		.036	.000	Significant
BMI				

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			.023	.000	Significant
Age			.055	.001	Significant
Sex			.030	.001	Significant
Parent Educational Attainment		Management of Fund	.082	.002	Significant
Family Income			.073	.008	Significant
BMI			.022	.000	Significant
Age			.107	.005	Significant
Sex			.040	.002	Significant
Parent Educational Attainment		Paraphernalia	.067	.030	Significant
Family Income			.326	.000	Significant
BMI			.028	.001	Significant
Age			.037	.000	Significant
Sex			.010	.002	Significant
Parent Educational Attainment		Food Preparation	.003	.000	Significant
Family Income			.061	.000	Significant
BMI			.027	.000	Significant

*tested at 0.05 level of significance, two-tailed

Management of Fund. Table 3 below presents the data on the relationship between the demographic profile and the level of school feeding management in terms of management of fund. It was revealed that management of fund has significantly related to age ($r = .055$, $p = .001$), sex ($r = .030$, $p = .001$), parent educational attainment ($r = .082$, $p = .002$), family income ($r = .073$, $p = .008$), and body mass index ($r = .002$, $p = .000$). These p-values values were less than their critical value at 0.05 level of significance. Therefore, reject the null hypothesis which is the state that there is no significant relationship between the demographic profile of pupils and the school feeding management. This indicates that the level of school feeding management in terms of management of fund has an effect to the demographic profile of pupils. The same result was observed in the study conducted by Karaba, et al., [2] conclude that the SFP had a statistically significant influence on the language and profile of pupils in ECDE centres. Likewise, Delfino, [31], reported that management of school-based feeding program in terms of program implementation as to planning, organizing, coordinating, budgeting and monitoring is very high. However, ensuring adequate funding remains challenging for many countries and ensuring quality service provisions all year round [32].

Paraphernalia. Table 3 above presents the data on the relationship between the demographic profile and the school feeding management in terms of paraphernalia. It was revealed that identity has not significantly related to age ($r = .107$, $p = .005$), sex ($r = .040$, $p = .002$), parent educational attainment ($r = .067$, $p = .030$), family income ($r = .326$, $p = .000$) and body mass index ($r = .002$, $p = .000$). These p-values values were less than their critical value at 0.05 level of significance. Therefore, reject the null hypothesis which is the state that there is no significant relationship between the demographic profile of pupils and the school feeding management. This shows that the level of school feeding management in terms of paraphernalia improved learning outcomes among schools' pupils. This implies that feeding paraphernalia promotes an important opportunity to foster various health-promoting behaviours that can impact nutrition, by ensuring that clean equipment and facilities and areas for physical activity throughout the school feeding program. The result of the study is similarly explained to the result of Azubuike & Mbah, [33]; and Mwendwa, & Gori [34] and Bashir, Ninan, & Tan [35], whose studies revealed that school feeding program has a significant influence on school participation, effectiveness in learning and cognitive outcomes. Moreover, Alderman [12], emphasized the schools' role in social protection can access basic health services and support, including water, sanitation and hygiene (WASH) education and facilities, which are important for nutrition.

Food Preparation. Table 3 above presents the data on the relationship between the demographic profile and the level of school-based teamwork in terms of process development. It was revealed that process development has not significantly related to age ($r = .037$, $p = .000$), sex ($r = .010$, $p = .002$), parent educational attainment ($r = .003$, $p = .000$), and body mass index ($r = .061$,

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$p = .000$). These p -values values were less than their critical value at 0.05 level of significance. Therefore, reject the null hypothesis which is the state that there is no significant relationship between the demographic profile of pupils and the school feeding management. The results imply that the demographic profile of pupils concurred that the school feeding was acknowledged for providing meals in meeting educational objectives. These findings are in agreement with Sitali, et al., [36] who advocated that school feeding promotes educational objectives, health and community development. The result of the study is congruent to the result of Bilbar [29] that there are some factors of socio-demographic profiles that are correlated to the school feeding program. The discrepancy between the findings in different studies may arise from the discrepancies in the quality and quantity of food preparation and may also be due to the difference in food composition, the amount of feeding given, and the frequency of food eaten at schools. Preparation of meals is done at the schools with the local communities being involved in the preparation of meals.

Reading performance level of Grade IV pupils

The fourth objective was to determine the reading performance level of Grade IV pupils in San Gabriel Elementary School, overall mean percentile scores were utilized.

Reading Performance. Table 4 shows the frequency distribution of mean percentile scores of the Grade IV pupils in San Gabriel Elementary School, Borongan District III, Borongan City Division. The scores of pre-tests reading performances on mean percentage score showed that most of them 12 or (37.50 %) had interpreted as "Frustration". There were 10 (31.25%) pupils who scored "Independent" and "Instructional" performance, respectively. This means that these pupils found the reading material difficult or challenging, leading to a level of frustration. However, majority of them scored in the categories of "Independent" and "Instructional" performance, respectively. It implies that these pupils have developed the necessary skills to read and comprehend texts on their own without significant assistance. These findings collaborate in the study of Imus, and Resultay, [37], appeared that the reading proficiency level of the learners was within the frustration and instructional level in the pre-test.

Table 4. The reading performance level of Grade IV pupils in San Gabriel Elementary School

Performance Level	Pretest		Posttest	
	Frequency	Percentage	Frequency	Percentage
Independent	10	31.25	24	75.00
Instructional	10	31.25	7	21.88
Frustration	12	37.50	1	3.12
Total	32	100	32	100

Moreover, Miñoza, and Montero, [38] claimed that those young learners who have not attained proficiency in reading according to their level by grade 4 are most likely the ones who would experience academic problems in high school and college. On the other hand, the post test result shows that most of them 24 or (75.00%) obtained "Independent" reader. There were 7 (21.88%) pupils who scored "Instructional", and 1 or (3.12%) "Independent" reading performance. This indicates that these pupils' post-test reading performance indicate significant progress, with a majority of pupils achieving independence in their reading abilities. This demonstrates the effectiveness of the school feeding intervention provided, as most pupils were able to improve their reading skills and become independent readers. These findings is in line with Nyarko, et al. [39], found out that reading proficiency can positively affect the learners' achievement academically.

Relationship between the schools feeding management to the academic performance of Grade IV pupils in San Gabriel Elementary School

As the variables were not normally distributed and the assumption of linearity was markedly violated, Pearson r Coefficient of Correlation was computed to examine the inter-correlations of the variables. Table 5 shows that the computed r values signify a positive estimate for the evident level of school feeding management to the reading performance of Grade IV pupils in San Gabriel Elementary School. They are significantly correlated with the physical facilities, $r = .621$, $p = .001$; management of fund, $r = .642$, $p = .001$, paraphernalia, $r = .626$, $p = .001$; and food preparation, $r = .562$, $p = .001$. This is an implication that the school feeding management of Grade IV pupils were significantly associated with their reading performance.

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Table 5. Test on the significant relationship between the evident level of the factors to the academic performance of pupils in the kindergarten program in the new normal

Variable	Academic Performance		Interpretation	Decision
	Pearson's r	p-value		
Physical Facilities	0.621	**< .001	Significant	Reject Null
Management of Fund	0.642	**< .001	Significant	Reject Null
Paraphernalia	0.626	**< .001	Significant	Reject Null
Food Preparation	0.562	**< .001	Significant	Reject Null

Therefore, the null hypothesis which states that there is no significant relationship between the school feeding management to the reading performance of Grade IV pupils was rejected. This means that all the school feeding management initiated and implemented by the teachers are effective in developing children's intellectual, social and reading competence. This finding is similar to the study of Dela Cruz, [40], concluded that school-based feeding program is effective as it increases the nutritional status of the pupils and at the same improves the reading capability of Grade-One pupils, hence recommended the continuous implementation of both school-based feeding program and the reading validation oral test.

4.0 CONCLUSION

Based on the findings of the study, the following conclusions were drawn: The entire Grade IV pupils age bracket at 9 – 10, consists of an equal number of boys and girls, with majority of their parents have completed high school education, in their family monthly income below 9,000, and the body mass index are normally nutritional status. The level of school feeding program management are outstanding outcome impact on the nutritional support and reading performance. There is a significant relationship in the demographic profile of Grade IV pupils and the school feeding management. The level of reading performance of Grade IV pupils indicate significant progress, with a majority of pupils achieving independence in their reading abilities. There is a significant relationship between school feeding management and the reading performance of Grade IV pupils.

5.0 RECOMMENDATIONS

The foregoing conclusions served as the basis for the following recommendations: Department of Education must evaluate the effectiveness of different health and nutrition programs implemented for school-aged children to explore the gaps that the existing programs missed to address. Sustain the implementation of the nutrition and health education intervention program, particularly the school-based feeding program, has had a significant positive effect on the well-being of the pupils. Provide pupils with sufficient learning reading materials and software in order to improve the teaching-learning process, specifically about nutrition and health education. The school administration may conduct seminars to assist teachers in making this kind of learning materials suited for each type of learners. In order to expand the reach and applicability of the study, it is recommended to conduct additional research on the topic. This will help enhance the findings and allow for the formulation of broader generalizations with a wider scope and application.

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7.0 CONFLICT OF INTERESTS

The authors affirm that they have no conflicts of interest related to this research. The study was conducted independently, with no financial or personal relationships that could affect the interpretation or presentation of the results.

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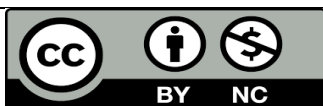
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Explicit Instruction in Teaching General Mathematics and the Application of Concrete – Pictorial-Abstract Approach



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ABSTRACT: This study determined the performance of grade 11 senior high school students using explicit instruction in teaching General Mathematics and the application of concrete – pictorial-abstract approach during the school year 2022-2023. The study utilized the quasi-experimental research design employing pretest and posttest in general mathematics during the second grading period. The participants of this study were 45 Grade 11 students of ICT B and 42 students of ICT C under TVL – Strand. Purposive sampling technique was utilized in determining the samples of the study. The findings revealed that Grade 11 students had very poor performance in general mathematics, but that performance improved when the teachers gave explicit instructions and employed the concrete-pictorial-abstract approach. Grade 11 students in the control and experimental groups increased their mean gain scores, which proved that explicit instructions and application of the concrete-pictorial-abstract approach were effective in teaching General Mathematics. It is highly recommended that teachers are advised to apply their learnings in teaching General Mathematics to Grade 11 senior high school students using explicit instruction and a concrete-pictorial-abstract approach in order to demonstrate a commitment to improving existing practices and ultimately enhancing the learning outcomes of the students.

KEYWORDS: Concrete – Pictorial-Abstract Approach, Explicit Instruction, General Mathematics

INTRODUCTION

Explicit instruction is a highly structured and direct teaching method that provides clear lessons to students. It focuses on teaching children how to effectively initiate and complete tasks while also offering ample feedback and practice opportunities. Research on mathematics intervention has demonstrated that explicit instruction is particularly effective for students who struggle or face challenges with mathematics. With a systematic approach, explicit teaching fosters essential classroom interactions between teachers and students, allowing for comprehensive coverage of various mathematical concepts, including measurement, geometry, and more (Ashman 2021, 12).

Furthermore, Explicit Instruction is a structured approach that offers a clear framework and set of supports in a logical sequence (Doabler et al., 2013, 1). The three key components of explicit mathematics instruction, as described by (Doabler et al., 2015, 16), are teacher modeling, guided practice, and academic feedback. This model of instruction provides a systematic series of scaffolds and instructional aides to facilitate effective learning in mathematics.

On the other hand, the Concrete-Pictorial-Abstract (CPA) approach is a progressive method of learning mathematics that follows a sequential step-by-step process. Each level of learning in the CPA approach builds upon the previous level and should be taught in a specific order. The approach consists of three stages: starting with hands-on manipulation of concrete objects, progressing to pictorial representations of those objects, and finally solving problems using abstract notation. Numerous studies, including research conducted by (Witzell 2005, 1), have provided evidence supporting the effectiveness of the CPA approach.

Explicit instruction and the Concrete-Pictorial-Abstract (CPA) approach are both instructional strategies used in teaching mathematics, including general mathematics. While they have distinct characteristics, they can be complementary and used in conjunction to enhance students' understanding and learning outcomes, (Athienitis 2022, 17). The relationship between explicit instruction and the CPA approach lies in their complementary nature. Explicit instruction can be used to provide clear explanations

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and guidance when introducing new mathematical concepts or skills. It helps students understand the purpose and procedures of using concrete materials and pictorial representations in the CPA approach.

To address students' lack of mathematical proficiency, National Council of Teachers of Mathematics (NCTM, 2000) recommends providing opportunities for students to use various mathematical representations when solving problems related to physical models, social contexts, and mathematical phenomena. One teaching and learning approach that allows students to employ representations in problem-solving is the CPA (Concrete-Pictorial-Abstract) approach, as identified by (Witzell 2005, 2). The CPA approach consists of three steps: 1) utilizing concrete objects for hands-on manipulation and learning; 2) employing pictorial representations to visualize the concrete manipulations; and 3) solving problems using abstract notation, such as numerical symbols or letters. During the learning and teaching process, concrete components such as manipulative objects (e.g., cakes, and measurement tools) can be employed. Pictorial representation involves the ability to create, interpret, and graphically represent images, as noted by (Sousa 2007, 9). Abstract notation refers to the use of symbolic representation, such as numbers or letters, when solving problems.

The sequence of learning activities within the CPA approach is crucial. Concrete materials should be prioritized to demonstrate how mathematical operations can be applied to real-world problems. Pictorial representation aids in visually depicting the manipulation of concrete objects, helping students understand how images relate to the concrete context. Finally, working with symbols in a formal manner demonstrates how symbols provide a more concise and efficient way to represent numerical operations. Ultimately, students should strive to achieve a high level of proficiency in using symbols and possess a wide range of mathematical abilities (Putri 2015, 21).

As mentioned in the research of (Cooper 2012, 13), the Concrete-Pictorial-Abstract (CPA) approach to teaching and learning mathematics involves the use of manipulative objects. These manipulatives offer both advantages and potential drawbacks. One benefit is that they can positively impact students' attitudes and enthusiasm towards learning in the classroom. However, a potential pitfall arises when students view the manipulation of objects as a recreational activity rather than a valuable opportunity to enhance their understanding of mathematics.

General mathematics has some inherent difficulties because of its abstract and cumulative nature. As such, students need a solid foundation and may not be able to learn new things without prior knowledge. Many students have high expectations of the difficulty of mathematics and have observed a low personal value attached to mathematics. For senior high school students, there is no difference. Many of them are not good at solving math problems. They also need concrete examples and the use of real objects when resolving. They are also interested in using pictures to solve math problems and appreciate the symbols shown in the task. Teaching general mathematics to high school students required a great deal of effort on the part of teachers, not only in preparing teaching materials but also in choosing different teaching strategies to use.

The application of the Concrete-Pictorial-Abstract (CPA) approach in mathematics education has significant policy implications. This approach, which utilizes physical materials, visual representations, and abstract symbols to teach mathematical concepts, has proven to be highly effective in enhancing students' comprehension and problem-solving skills. By incorporating the CPA approach into classrooms, policymakers can create a more inclusive and impactful mathematics education system. This approach caters to diverse learning styles and abilities by providing concrete experiences for tactile learners, visual representations for visual learners, and abstract symbols for more advanced learners. Additionally, the CPA approach fosters active engagement and critical thinking among students, allowing them to actively explore mathematical ideas and develop a deeper understanding. It also cultivates problem-solving abilities by encouraging students to visualize and manipulate mathematical concepts before transitioning to abstract representations. From a policy standpoint, the CPA approach has the potential to address achievement gaps in mathematics education. By offering a multi-modal learning environment, this approach supports students who struggle with traditional teaching methods and promotes educational equity by ensuring that all students have access to effective instructional strategies.

In conclusion, the policy implication of the application of the Concrete-Pictorial-Abstract approach is that it can contribute to a more inclusive, engaging, and effective mathematics education system. By incorporating this approach into educational policies, policymakers can support the diverse learning needs of students and foster a deeper understanding of mathematical concepts.

During a recent pre-test for the 2nd quarter exam in general mathematics, a significant number of Grade 11 students faced difficulties in solving problems related to simple and compound interest. The researcher finds this issue particularly intriguing and relevant to real-life situations. As a result, the researcher decided to undertake a study that aims to assess the performance of senior high school students in Grade 11 by employing both the concrete-pictorial-abstract (CPA) approach and explicit instructions in teaching general mathematics.

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This study was conducted at Baliwasan Senior High School Stand-alone during the first semester of the 2022–2023 academic year, with a specific focus on the general mathematics curriculum and the utilization of explicit instruction and the CPA approach.

Innovation, Intervention, and Strategy

CPA stands for Concrete, Pictorial, and Abstract (CPA) approach is a teaching method that starts with using real objects for children to perform mathematical operations like addition, subtraction, multiplication, and division. From there, they move on to using pictures to represent these objects and, eventually, abstract symbols. Children often struggle with math because it is abstract, but the Concrete, Pictorial, and abstract approach (CPA) addresses this challenge effectively. It is a highly successful teaching approach that helps students develop a deep and lasting understanding of math concepts. Also known as the concrete, representational, and abstract framework, CPA was developed by American psychologist Jerome Bruner. It is a fundamental technique used in the Singapore method of teaching math for mastery, and it plays a crucial role in helping students excel in math (Putri et al. 2020, 5).

Mathematics can be challenging for both children and adults because of its abstract nature. However, the CPA approach recognizes this difficulty and seeks to overcome it by connecting abstract concepts to concrete and tangible examples that children are familiar with. This approach involves progressing from using physical objects to represent mathematical ideas to using pictures or diagrams, and finally to working with abstract symbols and solving problems. The use of the CPA framework is so deeply ingrained in the teaching of math in Singapore that the Ministry of Education requires all teaching materials to incorporate this approach (Putri et al. 2020, 5).

The concrete stage of the CPA approach is focused on active learning. Students are encouraged to use physical objects to represent and solve math problems. Unlike traditional teaching methods that rely on teacher demonstrations, the CPA approach allows children to engage with and manipulate concrete materials, bringing concepts to life. In this stage, abstract ideas are introduced through hands-on interactions with tangible materials, providing a more immersive learning experience (Putri et al. 2020, 5)

During the pictorial stage of the learning process, visual representations are used to depict real objects and model mathematical problems. The main purpose of this stage is to help children establish a connection between physical objects and abstract pictures or models that represent those objects within the problem. By creating or drawing models, students find it easier to understand complex concepts like fractions. This stage allows students to visualize abstract problems, making them more understandable and manageable, (Putri et al., 2020, 5).

In contrast, the abstract stage involves the use of symbolic representations to solve problems. Students only progress to this stage after demonstrating a strong understanding of the concrete and pictorial stages. In the abstract stage, teachers introduce abstract concepts like mathematical symbols. Children learn these concepts at a symbolic level, using numbers, notation, and mathematical symbols like $+$, $-$, \times , $/$ to represent addition, multiplication, or division operations, (Putri et al., 2020, 5).

EXPLICIT INSTRUCTION. Research consistently highlights the significant impact of daily classroom instruction on students' overall academic achievement. It is crucial for all students to have access to high-quality instruction that aligns with standards and grade-level expectations. To support students in reaching their learning goals, teachers should strategically implement evidence-based instructional practices. Two closely related practices are explicit teaching and modeling. Explicit teaching involves a systematic approach where teachers carefully analyze the elements they plan to teach and continuously assess student understanding. Direct instruction and modeling are two important approaches within explicit teaching (Ashman 2021, 12).

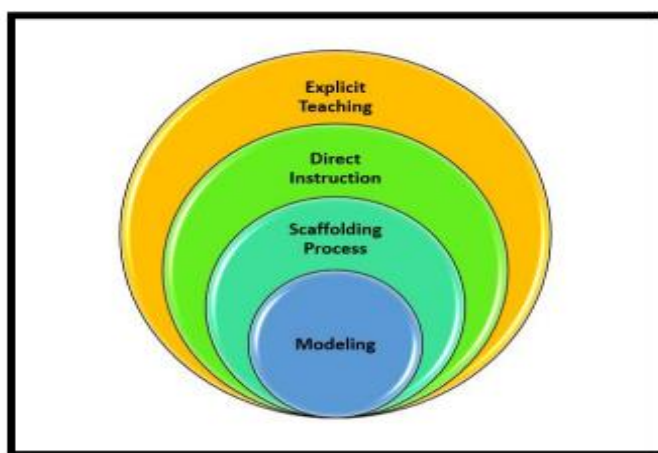


Figure 1. Explicit Teaching and Modeling

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Educators often mistakenly use the terms "explicit instruction" and "direct instruction" interchangeably, but there is a distinction between the two. Explicit teaching refers to a comprehensive system that goes beyond a single episode within a lesson, while direct instruction is a specific pedagogical approach within that system, (Ashman 2021, 13). Research supports the use of explicit teaching strategies as an effective student-centered approach. Combining interactive methods with direct instruction, which involves explicit and direct teaching of specific skills or knowledge, has been found to yield better results. While explicit teaching is backed by research, it is sometimes unpopular in education due to its perceived conflict with theories like inquiry and project-based learning, (Moore 2010,3).

Some educators believe that students should acquire knowledge through exploration and discovery rather than explicit instruction. However, it is argued that discovery and explicit learning can coexist and have their own purpose in today's classrooms. The misconception arises from observing suboptimal forms of explicit teaching, such as teacher-centered lectures, which leads to a lack of accurate understanding and recognition of true explicit instruction by educational leaders, (Salisu and Ransom 2014, 2).

The process of modeling in math begins with a teacher providing a step-by-step explanation of how to solve a problem. This explanation should be seen as a dialogue between the teacher and students. It may consist of one or multiple examples that have been carefully planned.

Practice is the next stage, where students begin to internalize the math concepts. Guided practice is a part of this stage, where the teacher and students work together on the same problems. Additionally, independent practice is also included in this stage.

Explicit instruction is a systematic and teacher-led approach that involves clearly explaining concepts, modeling skills, providing guided practice, and offering feedback to students. Here are some activities that can be undertaken using explicit instruction in teaching business math:

1. Direct Instruction: - Begin by introducing the specific concept or skill you want to teach, such as calculating percentages, understanding interest rates, or solving financial problems. - Provide a clear and concise explanation of the concept, breaking it down into smaller steps or components. - Use visual aids or examples to illustrate the concept and its application in real-world business scenarios. - Give clear instructions and expectations for student participation and engagement in the lesson.

2. Modeling: - Demonstrate step-by-step procedures for solving business math problems. Show students how to perform calculations, interpret data, or analyze financial statements. - Think aloud while solving problems, explaining your thought process and decision-making strategies. - Use visual representations, charts, or graphs to illustrate the steps involved in solving problems or making financial decisions.

3. Guided Practice: - Provide structured practice exercises or worksheets related to the concept being taught. - Break down complex problems into manageable parts, allowing students to practice each step with support. - Offer guidance, assistance, and feedback as students work through the problems, identifying any misconceptions and providing clarification as needed.

4. Independent Practice: - Assign independent practice activities that allow students to apply the skills and concepts learned. - Provide a variety of business-related problem-solving tasks, such as calculating profits, analyzing sales data, or interpreting financial reports. - Encourage students to explain their reasoning and justify their answers, fostering critical thinking and communication skills.

5. Review and Assessment: - Regularly review previously taught concepts and skills to reinforce learning. - Use quizzes, tests, or other assessment methods to evaluate students' understanding and proficiency in applying business math principles. - Provide timely feedback on assessments, highlighting areas of strength and areas for improvement.

By using explicit instruction techniques, you can provide students with clear explanations, structured practice, and feedback, enabling them to develop a solid understanding of business math concepts and their practical applications.

The Concrete-Pictorial-Abstract (CPA) approach is a widely used teaching strategy that helps students develop a deeper understanding of mathematical concepts by progressing from concrete materials to pictorial representations and then to abstract symbolism. Here are some activities that can be undertaken using the CPA approach in teaching business math:

1. Concrete Stage: - Begin by introducing a real-life business scenario, such as starting a small business or managing finances. - Provide concrete manipulatives, such as play money, cash registers, or financial documents like receipts or invoices. - Encourage students to engage in hands-on activities, such as counting money, calculating profits, or making purchases. - Discuss and analyze the outcomes of the concrete activities, relating them to business math concepts.

2. Pictorial Stage: - Move on to representing the concrete materials and scenarios using visual aids or drawings. - Use diagrams, charts, graphs, or bar models to illustrate financial data, trends, or calculations. - Ask students to create their own pictorial representations to demonstrate their understanding of business math concepts. - Compare and contrast different visual representations, discussing their strengths and limitations.

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3. Abstract Stage: - Finally, transition to the use of abstract symbols and equations to represent business math concepts. - Introduce mathematical formulas or calculations related to business topics, such as profit margins, interest rates, or break-even analysis. - Provide opportunities for students to practice solving problems using abstract representations. - Encourage students to explain the meaning behind the abstract symbols and how they relate to real-world business scenarios.

4. Integration and Application: - Integrate the CPA approach into various business math activities, such as budgeting, financial planning, or analyzing sales data. - Assign projects or tasks that require students to apply their understanding of business math concepts in practical situations. - Encourage students to reflect on their learning process, discussing how the use of concrete materials and pictorial representations helped them understand and solve business math problems.

By incorporating the CPA approach, you provide students with multiple representations of business math concepts, allowing them to move from the concrete to the abstract, and facilitating a deeper understanding of the subject. This approach helps them to make connections between real-life situations, visual representations, and mathematical symbols, enhancing their overall comprehension and problem-solving skills in the field of business math.

The duration of the intervention program was one quarter (2nd Quarter), one hour per session, three times a week (Monday, Wednesday & Friday) during the school year 2022-2023.

RESEARCH QUESTIONS

This study aimed to determine the performance of grade 11 senior high school students using explicit instruction in teaching General Mathematics and the application of the concrete–pictorial–abstract approach during the school year 2022- 2023.

This study sought to the following research questions:

1. What is the performance of Grade 11 senior high school students before and after using explicit instruction and the application of Concrete-Pictorial-Abstract approach in teaching general mathematics?
2. What is the pretest result in general mathematics of the control and experimental groups?
3. What is the posttest result in general mathematics of the control and experimental groups?
4. What are the mean gain scores of Grades 11 students in general mathematics of the control and experimental groups?
5. Is there a significant difference in the mean gain scores of the Grade 11 students in General Mathematics?
6. Is there a significant difference in the pretest and posttest results in general mathematics of the control and experimental groups?

METHODOLOGY

Research Design

The study utilized the quasi-experimental research design employing pretest and posttest in General Mathematics during the second grading period. This was quantitative research to determine the performance of grade 11 senior high school students using explicit instruction in teaching General Mathematics and the application of concrete – pictorial-abstract approach. Quasi-experiments are studies that aim to evaluate interventions but that do not use randomization. Similar to randomized trials, quasi-experiments aim to demonstrate causality between an intervention and an outcome. Quasi-experimental designs identify a comparison group that is as similar as possible to the treatment group in terms of baseline (pre-intervention) characteristics (White and Sabarwal 2014, 4).

Participants and Other Sources of Data and Information

The participants of this study were 45 Grade 11 students of ICT B and 42 students of ICT C under TVL – Strand who were enrolled during the school year 2022-2023. In determining the samples, the researcher collected the students' grades of all strands and sections and chose the students who obtained the least mastered skills in General Mathematics during the first grading period. The researcher utilized the purposive sampling technique in determining the study samples. Hence, the researcher chose TVL-ICT B and TVL-ICT C sections who were part of the study.

Instrument

The research instrument for this study was a 20-item Multiple Choice Exam in General Mathematics used for Pre and Posttests. The instrument was taken from the CapSLET and Math Modules, which was the tool to evaluate the math performance of the students. The instrument was validated by the Math Master Teachers, who were experts in terms of content validity. The experts validated the instrument in terms of its relevance and students' capacity level to answer. The suggestions and remarks of the validators were incorporated into the final draft. The instrument was subjected to item analysis to test the reliability and validity of the instrument. Twenty-five copies of the instruments were administered to the non-respondents with similar characteristics to the grade 11 students. The data were computed and statistically analyzed using the norm reference item

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analysis. The result of the reliability test using the norm-referenced test was .897, which means that the instrument was reliable and valid.

Data Gathering Procedures

Data gathering was conducted after the approval of the research proposal. The researcher secured approval from the Schools Division Superintendent through a letter to conduct the gathering of data from the Grade 11 students at School A. The data gathering started after the approval of the study by presenting the permission letter to the District Supervisor and school principal. The researcher presented the approved letter to the principal.

On the resumption of classes for the second quarter, the researcher collected the grades of all students from different sections and checked the level of proficiency of the students based on the result of the proficiency level per section and then based also on the most essential learning competencies. The researcher chose two sections that obtained the least mastered skills during the pretest for the second grading period. On the second day of the class, the researcher conducted a series of conditioning activities.

In addition, the researcher gave an overview of the topic and used explicit teaching and activities on the application of a concrete-pictorial-abstract approach to the experimental group. The respondents were oriented that they were part of an educational experiment to be conducted by the researcher. A consent form was given to them for their approval in the inclusion of themselves in the study. At the next meeting with the respondents, the researcher/teachers gave a 20-item – multiple-choice test to both the control and the experimental groups. The respondents were given approximately an hour to answer. After administering the pretest materials, the teachers did the routinary activity by using explicit teaching and the application of a concrete-pictorial-abstract approach. This served as the treatment. After the intervention, the researcher administered, collected, and personally checked posttest materials. After this, the researcher tabulated the data for statistical treatment. Lastly, the researcher analyzed, interpreted, and discussed the results of the study.

Data Analysis

Mean/Average was used to determine the pre and post-test results in General Mathematics of the control and experimental groups. This was also used to determine the mean gain scores of Grades 11 students in general mathematics of the control and experimental groups. Moreover, the **Paired-Sample T-test** was used to determine the significant difference in the mean gain scores of the students of Grade 11 General Mathematics. This was also used to determine the significant difference in the pre and post-test results in general mathematics of the control and experimental groups.

RESULTS AND DISCUSSION

Students' performance before and after the intervention. Table 1 presents the students' performance in General Mathematics before and after using explicit instruction and CPA application.

Table 1: The Performance of Grade 11 Senior High School Students before and after using explicit instruction and CPA Application in teaching General Mathematics

Performance of Grade 11 Senior High School Students Before Explicit Instruction & CPA Application				Performance of Grade 11 Senior High School Students After Explicit Instruction & CPA Application			
Control Group		Experimental Group		Control Group		Experimental Group	
Grade	Description	Grade	Description	Grade	Description	Grade	Description
80.00	Satisfactory	78.00	Fairly Satisfactory	80.00	Satisfactory	85.00	Very Satisfactory

Legend:

90-100 = Outstanding 85-89 = Very satisfactory 80-84 = Satisfactory

75-79 = Fairly Satisfactory Below 75 = Did not meet expectations

Table 1 shows the performance of Grade 11 senior high school students before and after using explicit instruction in teaching General Mathematics. It is evident that the Grade 11 senior high school students from the control group obtained a general average of 80, which is verbally described as satisfactory, while the students from the experimental group obtained an average grade of 78, which is described as fairly satisfactory. This means that the performance level of the students in Mathematics was satisfactory. These students performed an acceptable achievement, and their math fluency shows their ability to perform mathematical problems with average accuracy.

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This result is similar to (Onal, Inan and Bozkurt, 2017,21), who pointed out that mathematics offers fundamental skills such as thinking in life, establishing relationships between events, reasoning, estimating, and problem-solving apart from gaining calculation skills and teaching numbers and mathematical operation.

On the other hand, the performance of Grade 11 Senior High School students after explicit instruction from the control group was 80, described as satisfactory, and the students from the experimental group obtained an average grade of 85, which is described as very satisfactory. This means that students from the control group still had a satisfactory performance level, and their performance did not improve because they obtained the same rating of 80. However, the students from the experimental group improved their performance from 78 to 85, which implies that after the teachers used explicit instructions, the students showed a remarkable improvement in terms of solving math problems. Moreover, the students enjoyed the presentation using the concrete–pictorial–abstract approach when the teacher employed explicit instructions through SPEAR. This also implies that they learned a lot from the teachers after using explicit instructions.

Analysis suggests that the students from the experimental group had a 7% increase in mathematics performance after the teachers used explicit instructions. This implies that the explicit instruction and the application of the concrete–pictorial–abstract approach were effective in teaching general mathematics to Grade 11 students.

The findings of this study, conducted by (Kroesbergen et al., 2014, 33), support the idea that explicit mathematics instruction is more effective than constructivist instruction for low-achieving students in basic multiplication. The result of their study showed that students in the explicit instruction group demonstrated significantly greater improvement in math performance compared to the constructivist group. Both experimental groups showed significantly better performance than the control group. However, there were only minimal effects on students' motivation. Based on these findings, the study concludes that recent reforms in mathematics instruction, which emphasize student construction of knowledge, may not be effective for low-achieving students in this particular context.

Pretest Results. Table 2 presents the results of the control and experimental groups in the pretest.

Table 2. The Pretest Result in General Mathematics of the Control and Experimental groups

Pretest Result of the Control Group			Pretest Result of the Experimental Group		
Mean	Equivalent	Description	Mean	Equivalent	Description
5.56	70.00	Did not meet expectations	5.09	70.00	Did not meet expectations

Legend:

90-100 = Outstanding 85-89 = Very satisfactory 80-84 = Satisfactory
 75-79 = Fairly Satisfactory Below 75 = Did not meet expectations

Table 2 shows the pretest result in General Mathematics of the control and experimental groups. It is evident that the pretest result of the control group obtained the mean of 5.56, which is equivalent and transmuted as 70, and was verbally described that the students did not meet the expectations. In addition, the pretest result of the experimental group obtained the mean of 5.09, which is equivalent and transmuted as 70 and was verbally described that the students did not meet the expectations. This means that the students from the control and experimental groups had very poor performance in general mathematics during the pretest.

This implies that the students did not meet the expectations based on their performance in General Mathematics.

This result is similar to the findings in the PISA 2018 International Report (OECD, 2019, 2), which stated that Filipino students' average score in mathematical literacy was 353 points, significantly lower than the Organization for Economic Cooperation and Development (OECD) average of 489 points, indicating a below Level 1 proficiency. The result also measures the mathematical literacy of a 15-year-old to formulate, employ, and interpret mathematics in various contexts to describe, predict, and explain phenomena, recognizing the role that mathematics plays in the world.

Despite the fact that students performed very low in the pretest, it is still considered that mathematics offers fundamental skills such as thinking in life, establishing relationships between events, reasoning, estimating, and problem-solving, apart from gaining calculation skills and teaching numbers and mathematical operation (Onal, Inan and Bozkurt 2017, 12).

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Posttest Results. Table 2 presents the results of the control and experimental groups in the posttest.

Table 3. The posttest result in general mathematics of the control and experimental groups

Posttest Result of the Control Group			Posttest Result of the Experimental Group		
Mean	Equivalent	Description	Mean	Equivalent	Description
11.78	80.00	Satisfactory	13.31	85.00	Very Satisfactory

Legend:

90-100 = Outstanding 85-89 = Very satisfactory 80-84 = Satisfactory

75-79 = Fairly Satisfactory Below 75 = Did not meet expectations

Table 3 shows the posttest results in general mathematics of the control and experimental groups. It is evident that the students from the control group obtained a mean of 11.78, which is equivalent to 80 and is described as satisfactory. This means that the students had average performance in general mathematics after the teacher administered the posttest. Moreover, it is also evident that the students from the experimental group obtained a mean of 13.31, equivalent to 85, and was described as **very satisfactory**. This means that the students from this group had a very satisfactory performance in General Mathematics after the teacher administered the posttest.

This implies an increase of 6.22 points or 10% in the performance of the students from the control group and an increase of 8.22 points or 15% in the performance of the students from the experimental group. The increase in the student's performance indicated that they have gained and learned mathematics and problem-solving in General Mathematics. Hence, the explicit instruction and the application of concrete – pictorial – abstract approach were effective in teaching general mathematics.

The result of these findings is supported by (Magbanua, 2018, 5), who found that explicit instruction (EI) is effective in improving students' problem-solving and creative thinking skills in a Problem-Solving course. The study compared the effectiveness of explicit instruction and traditional instruction (TI) by assessing students' performance before and after the instruction. Both EI and TI were found to be effective in enhancing problem-solving and creative thinking skills, but the EI group had a higher confidence interval. The EI group exhibited significantly higher mean gain scores in problem-solving and creative thinking skills compared to the TI group. Students in the EI group demonstrated a better understanding of problems, the ability to identify and implement strategies, and the generation of various ideas for problem-solving. They also developed a positive attitude towards explicit instruction.

Mean Gain Scores of the control and experimental groups in the pre and posttest.

Table 4. The mean gain scores of Grades 11 students in general mathematics of the control and experimental groups

Variables	Control		Experimental	
	Mean	Std.	Mean	Std.
Pretest	5.56	1.94	5.09	1.26
Posttest	11.78	2.35	13.31	1.92
Mean Gain Score	6.22	0.41	8.22	0.66

Table 4 shows the mean gain scores of Grade 11 students in General Mathematics of the control and experimental groups. It is also revealed that the students from the control group obtained a mean of 5.56 in the pretest and 11.78 in the posttest. This resulted in the mean gain score of 6.22 obtained by the students from the control group. It is evident that the standard deviation of 1.94 indicates that the scores are narrowed and close to the mean in the pretest. Given the standard deviation of 2.35, the scores are scattered from the mean. This means that the student's scores lie far from the mean. This implies that the scores of the students from the control group have increased.

It is also shown in the table that the students from the experimental group obtained a mean of 5.09 in the pretest and 13.31 in the posttest. This resulted in the mean gain score of 8.22 obtained by the students from the experimental group. It is also revealed in the table that the standard deviations of 1.26 and 1.92 indicate the students' scores are narrowed and close to the mean. This means that the student's scores lie within the mean. This implies that the scores of the students from the experimental group were increased.

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The result of this finding is supported by (Khashi'ie et al. 2018, 16), who showed that the student's performance in the posttest was better compared to the pretest. However, statistical analysis of students' performance by each question showed that most students understood the basic concepts in Algebra, Trigonometry, and Functions.

Testing the difference in the mean gain scores of the experimental and control groups.

Table 5. The significant difference in the mean gain scores of the Grade 11 students in General Mathematics

Respondents	Mean Gain Scores	t-value	P-value	Interpretation
Experimental	8.22	4.890	.000	Significant
Control	6.22			

*Significant at $\alpha=0.05$

Table 5 shows the result of the Paired Samples T-test on the significant difference in the mean gain scores of the students of Grade 11 General Mathematics. It is evident that the mean gain scores of the experimental and control are 8.22 and 6.22, respectively, and the t-value of 4.890 with a p-value < 0.05 indicated that a significant difference existed. This means that both groups improved. Just that there is a significant difference in their performance. Thus, the experimental group performed better given the intervention.

This implies that students from the experimental group improved their scores during the posttest because the teachers used explicit instructions and applied the CPA approach. Hence, it can be implied that the explicit instruction and the application of the concrete–pictorial–abstract approach were effective in teaching general mathematics to Grade 11 students.

These findings were supported by (Archer & Hughes 2011, 21), who emphasized the effectiveness of explicit instructions in enhancing student learning outcomes. It outlines research-based strategies that promote explicit teaching, such as providing clear explanations, modeling, guided practice, and corrective feedback. By explicitly instruct the students so they learn the content and skills, providing modelling and guided practice, and offering explicit feedback, teachers can enhance students, performance posttest. In addition, (Putri et al. 2019) concluded that there was an increase in spatial sense in students who learned with the CPA approach, which was better than in students who received conventional learning. Thus, learning using the CPA approach can improve and develop the spatial sense abilities of elementary school students.

Testing the difference in the pre and posttest results of the control and experimental groups.

Table 6. The significant difference in the pretest and posttest results in general mathematics of the control and experimental groups

Respondents	Control	Experimental	t-value	P-value	Interpretation
Pretest	5.56	5.09	4.274	.000	Significant
Posttest	11.78	13.31	2.989	.000	Significant

*Significant at $\alpha=0.05$

Table 6 shows the result of the Paired – Samples T-test on the significant difference in the pretest and posttest results in General Mathematics of the control and experimental groups. It is evident that the t-value of the pretest was 4.274, and the posttest had a t-value = 2.989 with p-values < 0.05 indicating that a significant difference existed. This means that there is a significant difference in the pretest and posttest results in General Mathematics of the control and experimental groups.

Overall, this implies that the students' performance in General Mathematics improved, as indicated by an increase in posttest results. Specifically, the students in the experimental group showed very satisfactory performance during the posttest, with a mean score increase of 8.22 compared to the control group.

The result of this finding is supported by (Doabler et al., 2015), who emphasized that the students showed improved academic performance in mathematics during posttest when teachers utilized explicit instructions. This aligns with research and pedagogical practices that emphasize effectiveness, of explicit instructions in enhancing student learning outcomes. By providing clear explanations, modeling, guided practice, and corrective feedback, explicit instructions help students understand mathematical concepts, develop problem-solving skills and apply their knowledge effectively.

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CONCLUSIONS AND RECOMMENDATIONS

This study determined the performance of grade 11 senior high school students using explicit instruction in teaching General Mathematics and the application of concrete—a pictorial-abstract approach. Based on the findings, it can be concluded that the performance of Grade 11 senior high school students before using explicit instruction was fairly satisfactory, and after using explicit instruction was satisfactory. The pretest result in General Mathematics of the students from both the control and experimental groups was very poor. The posttest result in General Mathematics of the control group was satisfactory, and the experimental group was very satisfactory. The mean gain scores of Grades 11 students in General Mathematics of the control group increased by 6.22, and the experimental group increased by 8.22. There was a significant difference in the mean gain scores of the Grade 11 students in General Mathematics. There was a significant difference in the pretest and posttest results in General Mathematics of the control and experimental groups.

The teachers' commitment to enhancing current teaching practices for Grade 11 senior high school students in General Mathematics through explicit instruction and a concrete-pictorial-abstract approach is commendable. By reflecting on teaching methods and student needs, the significance of incorporating explicit instruction is highlighted. This method guarantees students receive precise and direct guidance, facilitating a more profound comprehension of mathematical concepts. It also aids in addressing any misunderstandings or knowledge gaps that students may have.

Additionally, the use of a concrete-pictorial-abstract approach in teaching mathematics is highly effective. By starting with concrete objects or manipulatives, students are able to engage in hands-on learning experiences that help them visualize and understand the concepts. This is then followed by the use of pictorial representations, such as diagrams or models, which further reinforce understanding. Finally, students are able to move towards abstract thinking and problem-solving.

It is highly recommended that teachers are advised to apply their learnings in teaching General Mathematics to Grade 11 senior high school students using explicit instruction and a concrete-pictorial-abstract approach in order to demonstrate a commitment to improving existing practices and ultimately enhancing the learning outcomes of the students. They may also integrate the SPEAR in Math where the Students' Performance was engaged in their performance task and the teacher recorded their Response through the output using the rubrics.

Action Plan

Objectives	Strategies/ Activities	Time Frame	Persons involved	Resources Needed	Expected Outcomes
PPA 1: Administration of Pretest & Posttest					
Administer Pretest & Posttest every quarter	Administering the Pretest & Posttest every quarter	First Semester of Every School Year	<ul style="list-style-type: none"> • Subject Group Head • Teachers • Students 	Printed Copy of the Modules, Lesson Plan, Handouts, Pretest and Posttest	Students equipped with life learning skills.
PPA 2: Remedial classes and utilization of explicit instruction in teaching in general mathematics for grade 11 students					
Give remedial classes and utilize explicit instruction in teaching general mathematics	Giving remedial classes and utilizing the Explicit instruction in Teaching General mathematics	First Semester of Every School Year	Subject Group Head Teachers Students	Printed Copy of the Modules, Lesson Plan, and Handouts	Students improved their Average grade in general mathematics
PPA 3: Peer tutorial in general mathematics for students and integration of Concrete Pictorial abstract approach					
Provide peer tutorial in General mathematics to students and integrate Concrete Pictorial abstract approach	Providing the peer tutorial in General mathematics to students and integrating the Concrete Pictorial abstract approach	First Semester of Every School Year	Subject Group Head Teachers Students	Printed Copies of the Modules, Lesson Plan, and Handouts	Students performed outstanding achievement in general mathematics

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Financial Report

Supplies and Materials					
ITEMS	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT
1	4	Reams	A4 size S20 Bond Paper	250.00	1,000.00
2	2	Set	Cannon Computer Ink	1500.00	3,000.00
3			Binding Expenses	2,000.00	2,000.00
5			Miscellaneous		5,000.00
Total					11,000.00
6			Contingency Expenses (5%)		550.00
Grand Total					PHp11,550.00



DEPARTMENT OF EDUCATION
Region IX, Zamboanga Peninsula
Division of City Schools
BALIWASAN SENIOR HIGH SCHOOL STAND-ALONE
San Jose Road, Zamboanga City
PRE & POST TESTS IN GEN MATH
2nd Quarter (1st Semester SY 2022-2023)



MULTIPLE CHOICE

Directions: Choose the letter of the correct answer and write the letter on the space provided for.

- _____ 1. The amount of money borrowed or invested on the origin date.
a. rate b. principal c. future value d. interest
- _____ 2. The amount of time in years when the money is borrowed or invested.
a. term b. origin date c. maturity date d. rate
- _____ 3. The person or institution that invests the money or makes the funds available.
a. lender b. collector c. borrower d. debtor
- _____ 4. The amount after t years that the lender receives from the borrower on maturity date.
a. present value b. rate c. maturity value d. principal
- _____ 5. It is based on a 30-day month computation.
a. actual time b. approximate time c. ordinary interest d. exact interest
- _____ 6. Find the actual time from February 20, 2018 to December 15, 2018.
a. 296 days b. 297 days c. 298 days d. 299 days
- _____ 7. Find the approximate time from October 23, 2018 to June 9, 2019.
a. 225 days b. 226 days c. 227 days d. 228 days
- _____ 8. How much simple interest would acquire the an amount of PHP 10, 000 after 6 years at a rate of 3%?
a. PHP 1,500.00 b. PHP 1,800.00 c. PHP 1,900.00 d. PHP 2,100.00
- _____ 9. Suppose you invested PHP 35, 000 at a simple rate of 2.5%, how much will be your investment after 10 years?
a. PHP 43,750.00 b. PHP 45,370.00 c. PHP 45,730.00 d. PHP 47,350.00
- _____ 10. Peter borrowed PHP 153, 000 at 8% compounded annually. How much he will be paying after 3 years?
a. PHP 129, 375.49 b. PHP 192, 735.94 c. PHP 195, 372.94 d. PHP 197, 273.94
- _____ 11. What interest remains constant throughout the investment term?
a. simple b. compound c. annuity due d. ordinary annuity
- _____ 12. It is an interest computed based on the principal amount.
a. simple b. compound c. annuity due d. ordinary annuity
- _____ 13. What is the difference between simple and compound interest?
a. Simple yields higher interest than compound interest.
b. Simple interest has a shorter term than compound interest.
c. Simple interest is always better than compound interest.
d. Simple interest is computed based on the principal while compound interest is computed based on the principal and also on the accumulated past interests.
- _____ 14. If you would like to invest money, which bank offer would you prefer if you do not plan to withdraw your money in 2 years?
a. 5% simple interest per annum b. 4% compounded interest per annum
c. 3% compounded interest semi-annually d. 2% compounded interest quarterly
- _____ 15. Which of the following statement is true about the borrower or debtor?
a. It is the amount of money borrowed or invested on the origin date.
b. It is the interest computed on the principal and also on the accumulated past interests

Explicit Instruction in Teaching General Mathematics and the Application of Concrete – Pictorial-Abstract Approach

- c. It refers to the person (or institution) who owes the money or avails of the fund from the lender.
d. It refers to the person (or institution) who invests the money or makes the funds available.

_____ 16. Which of the following statements is/are true?

- I. Compound interest of a loan favors the borrower.
II. Simple interest remains constant throughout the investment term.
III. In compound interest, the interest from the previous year also earns interest.
a. I only b. I and II c. II and III d. I and III

_____ 17. Which of the following formula can be used to solve for the simple interest?

- a. $I = Prt$ c. $A = P(1 + rt)$
b. $SI = \frac{Prt}{100}$ d. All of the above

_____ 18. It is an amount after t years that the lender receives from the borrower on the maturity date.

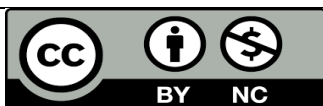
- a. loan date c. maturity value
b. maturity date d. term

_____ 19. Which of the following describes time or term?

- a. It is the date on which money is received by the borrower.
b. It is the amount of time in years the money is borrowed or invested; length of time between the origin and maturity dates
c. It is the date of which the money borrowed or loan is to be completely repaid
d. It is the amount paid or learned for the use of money.

_____ 20. In the formula, $I = Prt$, what is r?

- a. revenue c. repaid
b. real value d. rate of interest



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Literature Review: Definition of Integrated Marketing Communication (IMC) in Indonesian Journals (2019-2022)



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ABSTRACT: After 30 years of development, Integrated Marketing Communication (IMC) in Indonesia has been widely studied and published in scientific journals. From 2019 to 2022, 44 Indonesian scientific journals were identified through a Google search. This study aims to explore how IMC is defined in scientific journal articles from 2019-2022, considering the current context. The research employs a literature review method, using five definitions of IMC, which are then distilled into sixteen core ideas. The findings reveal that Indonesian scientific journals still adhere to two main definitional concepts: "IMC is comprehensive planning" and "IMC combines various communication elements." The first concept suggests that IMC must be thoroughly planned, typically through its communication elements. The second concept emphasizes the combination of various communication elements. Additionally, the articles found that the communicated message is predominantly from the brand, although only partially. This indicates that IMC has expanded to include brand value. A few scientific journals have advanced further in defining IMC, though only in terms of managing various communication elements, without incorporating dialogue or database-driven development. Overall, this study reveals that the definition of IMC in 44 articles positions it as a strategic process in business and management, involving the planning, execution, and persuasion of brand communication programs. On the other hand, many definitions of IMC need to be considered as concepts, at the very least those drawn from IMC thought leaders, such as the five definitions used in this study.

KEYWORDS: Scientific Journals, IMC, Definition, Literature Review

INTRODUCTION

To date, numerous articles have discussed IMC, both in terms of theoretical development and implementation, published in international journals such as the Journal of Marketing Communications, Journal of Advertising, Journal of Current Issues and Research in Advertising, International Journal of Advertising, Journal of Advertising Research, Journal of Promotion Management, and the European Journal of Marketing (Muñoz-Leiva et al., 2015). To understand its progress, several scholars have conducted studies aimed not only at mapping what IMC is, how it functions, and to what extent it has evolved, but also at establishing a customer-centric IMC (Finne & Grönroos, 2009; 2017), referred to as Consumer Integrated Marketing Communication (CIMC). This approach emphasizes two-way, or even multi-way, communication with customers (Vollero et al., 2019) and the effective use of digital media (Mulhern, 2009), including hybrid online-offline integration (Vernuccio et al., 2021). In addition, IMC messages are largely focused on brand messaging (Keller, 2009; Vollero et al., 2019).

However, despite over 30 years of academic exploration, there are still many gaps in the research on IMC, as highlighted in various international journals. Šerić (2016), for instance, provides a review of empirical studies on IMC in journals published between 2000 and 2015. The key topics examined include: (a) IMC implementation; (b) IMC impact; (c) IMC perception; (d) IMC measurement; and (e) the relationship between IMC and communication technology. The results indicate that while IMC impact, perception, and implementation have been extensively researched, IMC measurement and its connection to communication technology remain underexplored. Additionally, the operationalization of IMC needs further development and testing in future studies. Kliatchko (2008), who reviewed IMC in various journals from 1990 to 2006, concluded that theoretical issues and the definition of IMC remain relevant areas of study. Similarly, Schultz et al. (2014) conducted a content analysis of 65 studies on IMC published in seven journals between 1993 and 2009, identifying five popular topics: (a) IMC definitions; (b) IMC perceptions; (c) Branding; (d) Interactivity; and (e) IMC measurement. This research concluded that IMC is still far from being a fully established

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concept. Lastly, Muñoz-Leiva et al. (2015) conducted a bibliometric analysis of IMC research in journals from 1991 to 2012, finding that future research should focus on analyzing the success of IMC implementation and further examining the concept of the communication mix or promotion strategies.

IMC is a multidimensional process of communicating a brand to its audience, meaning that all departments and communication agencies must work together to plan and monitor brand relationships (Schultz et al., 2014). Moreover, consumers (customers) must be given access to media because today's consumers want to talk, be heard, and have their needs met. This shift is linked to technological advancements, transitioning from traditional to digital and interactive media (Ewing, 2009), which grants consumers more access (Duncan, 2002). Several studies have explained how IMC is driven by technology (Holm, 2006; Edmiston-Strasser, 2009) and its various applications (Barker & Angelopulo, 2004; Angelopulo & Barker, 2005; Gurău, 2008), data-driven management systems (Peltier et al., 2003; Dewhirst & Davis, 2005), and social media (Luck et al., 2010). All authors agree that IMC is a product of technological advancement, where communication technology has shifted the focus from one-to-many communication to one-to-one interaction (Vollero et al., 2019). This demonstrates that IMC cannot be achieved without communication technology (Duncan, 2002).

The world, consumers, and communication systems have evolved significantly in the 30 years since the inception of IMC (Schultz, 2009). With the emergence of the internet and digitalization, IMC has become increasingly important. Additionally, the internet (World Wide Web) has created new media platforms, such as websites and social media (Barker & Angelopulo, 2004; Gurău, 2008; Luck et al., 2010), and multi-tasking consumers, further highlighting the importance of IMC. Internet-based and digital tools fundamentally offer new ways for individuals to communicate with each other (Ewing, 2009), as well as enhance the ability to respond to company messages. Consumers are no longer passive receivers of messages through traditional media; they are now active participants in communication (Schultz, 2009). Today, the world offers the opportunity for two-way communication between companies and customers through communication technology (Kliatchko, 2009; Vollero et al., 2019).

Based on the above discussion, it can be concluded that IMC is a product of internet-based communication technology, meaning companies must engage in two-way or even multi-way, interactive communication with their customers. IMC should place the customer at its core. Moreover, IMC involves a hybrid approach, combining both online and offline communication. When communicating with customers, IMC must utilize communication technology and simultaneously integrate its communication across online media (websites and social media) and offline media (TV, radio, newspapers, and magazines). It must also leverage collected data to better understand its customers. IMC must pay particular attention to customers, as they engage in conversations about the company, brand, and products with other customers on social media platforms. Since companies and products are often represented by brands, the brand must be the central message communicated by the company through its promotions or communication mix. Therefore, the final concern is how to measure the success of IMC. This should be a fundamental part of the IMC definition, with operationalization emphasizing that the IMC message is the brand, and that brand communication should occur through the communication mix and information technology-based media. Finally, the success of IMC must also be measurable.

The above reflections represent the current conceptual development of IMC and can be seen through existing IMC definitions. Additionally, Kliatchko (2008) and Schultz et al. (2014) have pointed out the importance of reviewing IMC definitions and examining how well IMC is understood. Meanwhile, Šerić (2016) and Muñoz-Leiva et al. (2015) noted that communication technology and measurement remain under-researched, which can be seen from the available definitions. Given that the issues discussed are closely related to the definition of IMC, this study conducts a literature review on IMC definitions. Five key definitions by leading IMC thinkers are the focus of this research, as these definitions are the most frequently cited in various journals. However, the researchers do not include the first IMC definition from the 4As, as this definition was revised by Schultz in 1991 (Kitchen, 2004:21).

The first definition is from Duncan (2002), which emphasizes brand value and profit through harmonious relationships with customers and other stakeholders. This highlights the importance of brand value and communication technology, as well as how to foster relationships with stakeholders through dialogue, facilitated by the rapid advancement of communication technology. Duncan's (2002) definition of IMC is as follows:

IMC is a process for managing the customer relationships that drive brand value. It is a cross-functional process for creating and nourishing profitable relationships with customer and other stakeholders by strategically controlling or influencing all message sent to these groups and encouraging data-driven, purposeful dialogue with them.

Quoting Kliatchko (2005), a key weakness in Duncan's definition is its failure to explain the communication channels used to achieve the goal of strengthening dialogue. While channels are implied in the concept of "dialogue," they are not explicitly stated in his definition. It is true that Duncan did not specify the channels, but today, these channels must be digital (online) and capable of controlling and influencing customers through various brand messages (Schultz, 2009; Kliatchko, 2009; Vollero et al.,

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2019), while facilitating dialogue to enable one-to-one, one-to-many, or even many-to-many communication that is interactive.

In addition to Duncan, IMC has also been defined by Don Schultz, Heidi Schultz, and Jerry Kliatchko. These descriptions highlight the evolution of the IMC definition and reflect a conceptual shift from an inside-out to an outside-in approach (Kerr et al., 2008), transitioning from company-to-consumer communication to consumer-to-company communication (Estaswara, 2008b; 2016; 2023; Estaswara & Said, 2024). This thinking represents the second generation of IMC, where IMC is now consumer-centric and leverages communication technology.

The second important IMC definition comes from Schultz (Kitchen, 2004:21), which was widely accepted at the time after it revised the 4As definition from 1989:

A concept of marketing communications planning that recognizes the added value of a comprehensive plan that evaluates the strategic roles of a variety of communications disciplines (for example, general advertising, direct response, sales promotion, and public relations) and combines these disciplines to provide clarity, consistency, and maximum communications impact.

The weakness of this definition lies in its focus on integrating all elements of the promotional mix together in an attempt to "speak with one voice." In reality, some of these approaches cannot be managed internally (inside-out) with the advancements in communication technology today, which only obscures the meaning of the word "strategic" (Estaswara, 2008a). The definition is also considered controversial, as it challenges the principles of planning and operating various communication elements, such as advertising, sales promotion, direct marketing, and public relations, by emphasizing a "consumer first" rather than a "tools first" approach. It also suggests coordinating and aligning these communication elements across different functional departments (Kliatchko, 2009).

This thinking further demonstrates that IMC is more than just an inside-out tool that combines all elements of marketing communication (first-generation IMC). However, Schultz (1998) himself stated that IMC must evolve beyond this stage, where the IMC process begins with the consumer and circles back to the company (Estaswara, 2008b; 2015, 2016, 2023) as the foundation for determining and defining the appropriate persuasive communication methods (second-generation IMC). Persuasive communication methods are now shaped by the presence of communication technology, allowing for the flow of communication from the consumer to the company or even from consumer to consumer (Vollero et al., 2019). Therefore, according to this definition, the focus should be on a "consumer first" approach based on communication technology.

Thirdly, after the initial definition proved unsatisfactory, Schultz and Schultz (1998) proposed a new IMC definition based on various studies and built from the experiences of companies that had implemented IMC. The definition by Schultz and Schultz (1998:18) can be explained as follows:

IMC is a strategic business process used to plan, develop, execute and evaluate coordinated, measurable, persuasive brand communication programmes over time with consumers, customers, prospects and other targeted, relevant external and internal audiences.

Schultz and Schultz (1998) argue that what sets their definition apart from others is its focus on the strategic process within business. This definition encompasses the entire spectrum of the IMC concept (Estaswara, 2008b), positioning IMC as a journey from planning to evaluation, involving all stakeholders, both internal and external. Although this definition incorporates most, if not all, of the concepts cited in previous definitions, it is enriched by adding IMC as a business process that includes evaluation and measurement. This approach is even more applicable today, given advancements in communication technology.

Fourth, Kliatchko (2005) also proposed a definition of IMC, developed from the framework of Schultz and Schultz (1998), though it demonstrates originality with greater precision and clarity. Kliatchko's definition of IMC (2005:23) is as follows:

IMC is the concept and process of strategically managing audience-focused, channel-centred, and results-driven brand communication programmes overtime.

Kliatchko (2005) introduced three pillars of IMC that represent the fundamental variations in its concept and definition: audience-focused, channel-focused, and result-driven. Although these pillars are not entirely new and have been used to describe various aspects of IMC, they had not previously been articulated together within a definition or communicated through communication technology. Today, these three pillars have become central due to the advancements in communication technology, with audience-focused, channel-focused, and result-driven approaches now being the primary focus of IMC in relation to brand communication.

Duncan (2002) explained that IMC should follow an outside-in approach, starting from the consumer and circling back to the company to determine an effective marketing communication strategy for introducing, creating awareness, shaping perceptions, and building attitudes or desire to purchase a brand through data-driven insights. Meanwhile, Schultz & Schultz

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(2004) distinguished between two generations of IMC: the first generation focused on an inside-out approach, meaning that marketing communication must be integrated and communicated to consumers. In contrast, the second generation of IMC shifts to an outside-in approach, treating IMC as a strategic business process that focuses on both internal and external audiences (Estaswara, 2008a, 2016).

Essentially, IMC must evolve toward an outside-in stage, where it employs audience-focused, channel-focused, and result-driven strategies in brand-based marketing communication. In line with this, a more recent definition of IMC was provided by Šerić et al. (2015), who described the concept as:

A tactical and strategic consumer-centric business process, boosted by advances in Information and Communication Technology (ICT) which, on the basis of information obtained from customers databases, delivers a clear and consistent message through the coordination and synergies of different communications tools and channels, in order to nourish long-lasting profitable relationships with customers and other stakeholders and create and maintain brand equity.”

In general, this conceptualization is based on seven fundamental principles of IMC: (a) IMC as both a tactical and strategic process; (b) coordination and synergy of different communication tools and channels; (c) clarity and consistency in brand messaging; (d) communication centered on technology and data management; (e) customer-centered communication; (f) IMC as a component of relationship-building approaches; and (g) IMC as a component of brand equity strategy (Šerić et al., 2015). Clearly, this definition encompasses all the elements that should be part of IMC: a strategic and technical process, synergy, coordination, brand messaging, tools and channels based on information technology and data management, customer focus, and IMC as a relational approach. Although the definition does not explicitly address how to measure the success of IMC, brand equity can be considered as a metric.

Given these various definitions, this study aims to conduct a literature review on the definitions of IMC and how these definitions have been articulated in Indonesian journals published between 2019 and 2022.

METHOD

This research employs a literature review technique of national scientific journals on Integrated Marketing Communication (IMC) obtained online (Estaswara & Said, 2024). This method has also been utilized in international journals to map the evolution of IMC thinking (such as Kliatchko 2008; Kitchen & Schultz, 2009; Schultz, Kim & Kang 2014; Muñoz-Leiva, Porcu & del Barrio-García 2015; and Estaswara, 2023, Estaswara & Said, 2024). The literature review aims to synthesize and critically evaluate to provide an overview and information about the content of Indonesian journals from 2019 to 2022 regarding how they utilize and elaborate on the definitions of IMC.

The rigor of the methodology employed in this study is based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method, which involves a process of searching, screening, assessing eligibility, and analysis. Additionally, the systematic review adheres to a checklist to ensure credibility (Estaswara & Said, 2024). According to Sierra-Correa and Kintz (2015), there are three unique advantages: first, defining research questions that can be raised; second, identifying inclusion and exclusion criteria; and finally, examining scientific literature databases within a specific timeframe. Given that the PRISMA statement has been widely used in systematic reviews in social sciences, this methodology is considered suitable for this study (Estaswara & Said, 2024).

For the database utilized in this research, Google Scholar was employed, as previously done in earlier journal articles (Estaswara, 2023, Estaswara & Said, 2024). While databases such as EBSCO, Scopus, and Web of Science are among the largest and most commonly used (Muñoz-Leiva et al., 2015), Google Scholar is favored by social scientists across various disciplines, including researchers in communication and marketing. Therefore, relevant articles from this database cannot be overlooked in providing a review of the definitions and conceptualizations of IMC used after 30 years since its inception. A search in Google Scholar for journals from 2019 to 2022 yielded 44 journals, which can be found in the tables below.

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Table 1. Inclusion and Exclusion Criteria

Criteria	Inclusion Criteria	Exclusion Criteria
Concept	Integrated Marketing Communication (IMC), Marketing Communication Integrated	Marketing Communication, Public Relations, Personal Selling, Sales Promotion, Direct Marketing, Sponsorship, Point of Purchase
Language	Indonesian	Non-Indonesian
Manuscript	Scientific Articles	Theses, Dissertations, Books, Articles, Proceedings, Conferences
	Empirical Research	Non-Empirical Research
Time Frame	Years 2019-2022	Before and after 2019-2022
Text	Full Text	Abstract

Source: Researchers Data 2002

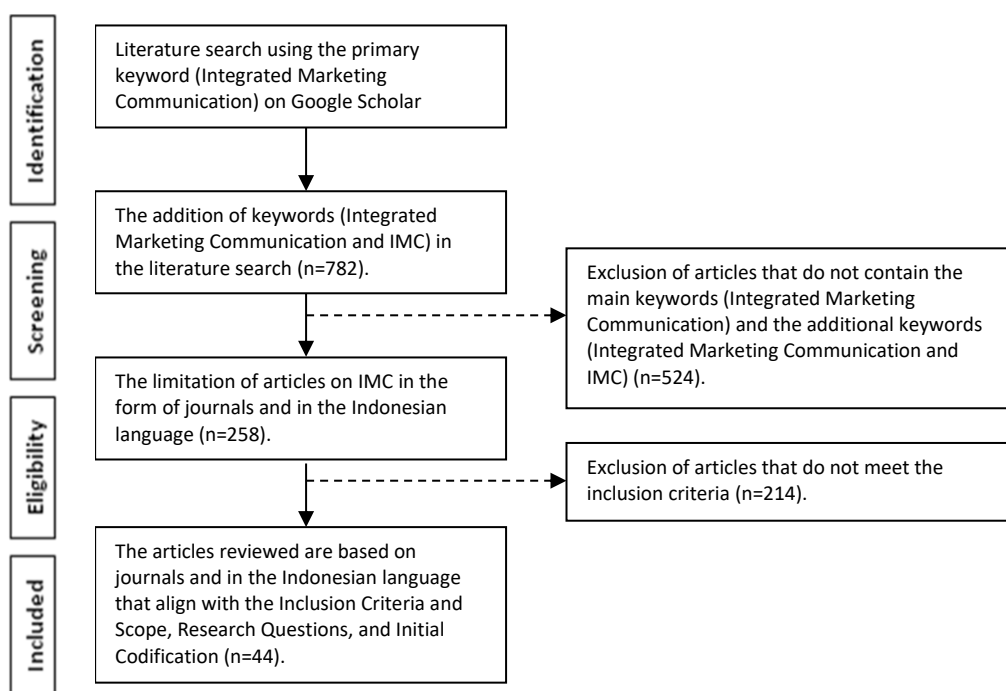


Diagram 1: Systematic Literature Review Diagram

Source: Adapted from Maher, 2009

A literature review is a scholarly work that analyzes, synthesizes, and critically evaluates to provide a clear understanding and information on a particular topic (Hart, 2018; Estaswara, 2023, Estaswara & Said, 2024). In this case, the analysis focuses on the definition of Integrated Marketing Communication (IMC) in online journal articles from Indonesia published between 2019 and 2022. This study is a document content analysis, which involves discussing the definitions found in these scholarly journals, with a total of 44 articles collected.

Table 2: Number of Online Scientific Journals Analyzed in Indonesia from 2019 to 2022

YEAR	NUMBER OF ARTICLES
2019	9
2020	17
2021	10
2022	8
	44

Source: Compiled by the Researchers, 2022

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The journal articles in Indonesia utilize concepts that are defined first. If the concept appears in the "Introduction" section, it indicates the presence of an IMC definition that is then elaborated along with the associated issues. However, if the definition is located in the theory section or in the "Theoretical Review," the defined and explained IMC is used to address specific cases. Defining concepts in scholarly articles is considered important, particularly in selecting the definitions that are presented. This approach allows for understanding how the definition of IMC is depicted and explained.

Furthermore, within the definition of IMC, there are always core ideas that encompass the overall content of the definition. Therefore, this study breaks down the definitions into ideas that can be understood as contemporary IMC concepts. Generally, the journals in Indonesia adopt several definitions, such as those by Schultz (Kitchen, 2004), Schultz and Schultz (1998), Duncan (2002), Kliatchko (2005), and Šerić et al. (2015). These five definitions are then distilled into sixteen core ideas, which are as follows:

1. IMC is a concept that adds value.
2. IMC is a comprehensive planning approach.
3. IMC must evaluate its strategic role.
4. IMC should combine various communication elements.
5. IMC communicates the brand as the main message.
6. IMC provides message clarity.
7. IMC requires message consistency.
8. IMC should deliver maximum impact.
9. IMC utilizes information technology.
10. IMC is a strategic process in business.
11. IMC is cross-sectoral in nature.
12. IMC is a management process in marketing communications.
13. IMC builds relationships with other stakeholders (multi-audience).
14. IMC employs databases for dialogue.
15. IMC fosters brand-related dialogue based on communication technology.
16. IMC strengthens databases with advancements in communication technology.

By understanding the core ideas of these five IMC definitions, one can see how these definitions are explained and how they are practiced in scholarly journals in Indonesia.

RESULTS AND DISCUSSION

The number of online scientific journals in Indonesia from 2019 to 2022 is 44 articles. All these definitions depict IMC more comprehensively. To understand how the definitions of IMC from these 44 articles are presented, refer to Table 3 below.

Table 3: Online Scientific Journals in Indonesia from 2019 to 2022

No	IDEA	Number of Articles				
		a	b	c	d	e
1	IMC is a concept.	4	9	2	4	18
2	IMC is a comprehensive planning approach.	4	14	7	6	31
3	IMC must evaluate its strategic role.	4	8	1	5	18
4	IMC combines various communication elements.	7	16	9	6	38
5	IMC communicates the brand as the primary message.	4	5	4	2	15
6	IMC provides clarity in messaging.	4	7	1	4	16
7	IMC requires message consistency.	4	7	2	4	17
8	IMC must deliver maximum impact.	4	6	3	3	16
9	IMC utilizes information technology.	4	6	4	4	18
10	IMC is a strategic process in business.	3	2	2	0	7
11	IMC is cross-sectoral in nature.	0	1	0	0	1
12	IMC involves management processes in marketing communications.	3	3	2	0	8
13	IMC builds relationships with other stakeholders.	1	2	2	2	7

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14	IMC fosters brand-related dialogue based on advancements in ICT.	0	2	0	2	4
15	IMC strengthens databases with developments in ICT.	0	1	0	0	1
16	IMC employs databases for dialogue.	0	0	0	0	0

Source: Data Compiled by the Researchers, 2023

a: Year 2019, b: Year 2020, c: Year 2021, d: Year 2022, e: Year 2019-2022

RESULTS AND DISCUSSION

Based on Table 3 above, the most prevalent definition of IMC found in scientific journals in Indonesia in 2019 is the combination of various communication elements. This concept of IMC is not significantly different from marketing communication or even promotion itself. However, it is also evident that IMC is viewed as a concept, a comprehensive plan, an evaluation of its strategic role, with the brand as its message, clarity in messaging, consistency in messaging, and maximum impact. Nonetheless, in the 2019 journals, the combination of various communication elements is the most frequently cited core idea, and most do not elaborate beyond the combination of communication elements. This indicates that the writings in the 2019 scientific journals focused on communication elements when analyzing IMC. The communication elements commonly used include advertising, public relations, sales promotion, personal selling, and direct marketing (Kitchen, 2004).

The IMC definition above falls into the first generation, or inside-out approach. This means that the various elements or promotions are communicated by examining each element across various media, especially social media. Although Schultz's definition (Kitchen, 2004) is fully articulated, the core ideas within that definition are not applied and merely describe the various communication or promotional elements through social media channels. It appears that while social media has been utilized, the communication is not two-way and lacks interactivity.

In 2020, there were 17 scientific journal articles in Indonesia, the highest number among all the years studied. During that year, IMC can generally be defined as a comprehensive plan that combines various communication elements. While many core ideas were presented, these two ideas were most frequently highlighted by the authors. This expression of communication represents the first generation or inside-out approach, which comprehensively communicates its elements to consumers.

The term "comprehensive" in that definition reflects a unified understanding of IMC, accompanied by the combination of various communication elements. The general conceptualization in the 2020 journals similarly depicts each element, just like in 2019. The difference lies in the stronger emphasis on the ideas of "a comprehensive plan" and "combining communication elements" in the Indonesian journals of 2020.

In 2021, scientific journals in Indonesia also raised two similar ideas: "a comprehensive plan" and "combining communication elements," with other ideas mentioned but not explained. These two ideas illustrate IMC within the first generation or inside-out framework, where IMC, in this case, the communication elements, becomes the focal point and is analyzed for internet-based media. Indeed, there is a distinction between 2020 and 2021, as the latter year featured more mentions of "communication elements" compared to 2020, though the difference is not substantial.

In 2022, the IMC ideas were evenly distributed across all responses in ranges 1-7, indicating that IMC resembled its 2019 definition. However, there is a difference, albeit minor. In 2022, the idea of IMC as a comprehensive plan emerged most prominently. The phrase "comprehensive plan" merely signifies that all communication elements are integrated in conveying messages to consumers or customers. Nevertheless, conceptually, the scientific journals in Indonesia describe communication or promotional elements individually, which are then used to analyze issues, with social media serving as the internet-based medium.

Overall, scientific journals in Indonesia from 2019 to 2022 predominantly focus on "combining communication elements" and "comprehensive planning," while the remaining ideas account for less than half of the definitions. Despite this, the notion of "combining communication elements" was the most frequently presented, cited in 38 articles. However, not all definitions are the same; differences exist. It is essential to remember that examining and studying definitions is not solely based on similarities in wording or phrases but on how the ideas behind those definitions can influence understanding or interpretation by researchers, which is what constitutes the core idea. At the very least, the most complete or equivalent definition can be referenced (citing) Schultz's definition (Kitchen, 2004). This is common in the scientific context, where other thinkers cite definitions from established sources. Additionally, simpler definitions may differ but should at least share similar core ideas with Schultz's definition (Kitchen, 2004).

In general, from the 38 definitions, it can be conveyed that IMC is viewed as a concept with added value, a comprehensive plan, involving evaluation, and combining various communication elements (such as advertising, public relations, sales promotion, personal selling, and others), along with clarity, consistency, and maximum impact. However, each of these ideas exists only

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within the concept and has not been implemented. Of all the ideas, generally, what is applied or realized is merely the combination of various communication elements, which can be referred to as promotion (Estaswara & Said, 2024).

Despite this, looking at these ideas beginning with the first concept, where "IMC is seen as a concept," explains that IMC is understood as an idea or notion requiring a way of thinking regarding holistic planning and implementation based on a strategic approach, where all elements have added value compared to marketing communication that does not utilize the internet (social media, websites, etc.) as a channel with its unique features. While the explanation of IMC as a concept seems clear, it is not elaborated in detail. Related to this idea, there are 18 definitions in scientific articles stating "IMC as a concept."

Next, the idea that "IMC is a comprehensive plan" explains that when planning IMC, it must be thorough, starting from identifying the target audience, developing the plan, beginning with the message, how to use communication elements, and then the channel. Although this idea is clearly defined, it is not conceptualized. Consequently, what gets applied is merely planning the communication or promotional elements. This idea is found in 38 definitions within scientific journal articles.

Regarding the idea that "IMC must evaluate its strategic role," it describes the communication process, where planning must include evaluation and what will be assessed based on objectives. Ultimately, an evaluation is conducted in accordance with the planning and objectives. The issue of evaluation ideas exists within the concept or explanation but does not clarify the objectives, and concerning its application, there is no evaluation conducted. Nevertheless, this idea of evaluation is found in 18 definitions within scientific journal articles in Indonesia.

Furthermore, IMC combines various communication elements. This statement reflects a communication process where various elements (advertising, public relations, sales promotion, and others) are combined according to IMC objectives. Moreover, it is crucial to manage these elements effectively. It is no surprise that almost all journal articles express definitions on this matter, yet they do not elaborate on how to manage and implement it directly.

IMC also provides clarity in messaging. When communication occurs between the company and consumers or customers, it must express the main message of the brand, adhering to a complete criterion, meaning there should be no noise or errors in any form (including image, sound, or message). This emphasis on message clarity is noted in 16 journal articles. However, in practice, the actual number is not as significant.

IMC requires message consistency. In addition to providing clarity, there must also be consistency in the messaging. Messages across communication elements and various channels, whether massive or interactive, must be consistent. If a channel communicates one message regarding a brand, then wherever IMC is implemented (in other channels or media), it should express that same brand message. Related to message consistency, there are 17 articles that convey this in their definitions, but only a few articles provide elaboration. This means that the messaging about the brand exists only at a conceptual level, with minimal direct explanation and implementation in only a small portion of the 17 journals.

IMC delivers maximum impact. If everything has been executed, the final aspect is the effect. The effect here must be maximal, meaning it should influence consumers, whether cognitively, affectively, or behaviorally. If it is cognitive, consumers should be fully aware of, knowledgeable about, or even perceive the brand favorably according to the plan. If the goal is affective, consumers should desire or feel an urge to purchase the brand. If the behavioral aspect is targeted, then consumers should have already purchased the brand and experienced high brand loyalty. In relation to this, there are 16 definitions in scientific articles that include such effects.

Conversely, the five other ideas—"IMC is cross-sectoral," "IMC builds dialogue with ICT developments," "IMC builds relationships with other stakeholders," "IMC strengthens the database with ICT advancements," and "IMC utilizes databases for dialogue"—do not become focal points of study. Thus, the definitions of IMC found in various journal articles can be summarized in just two core ideas: "comprehensive planning" and "combining various communication elements."

Other IMC ideas resemble the definitions provided by Duncan (2002), Schultz and Schultz (1998), and Kliatchko (2008). From these three ideas, the key concepts identified include strategic processes in business, management processes in marketing communications, building relationships with consumers and other stakeholders (multi-audience), engaging in dialogue with them, and ultimately strengthening the database (data-driven). Data indicates that the definitions of IMC in 11 scientific journals in Indonesia align with all the core ideas of IMC from Duncan (2002), Schultz and Schultz (2004), and Kliatchko (2008), although the quantities vary. The definition from Šerić et al. was not utilized.

From the discussion above, it can be concluded that the definition of IMC is "a strategic process in business and management in marketing communications, encompassing planning, executing, and persuading brand communication programs."

DISCUSSION

Based on the data above, it can be observed that, in general, Integrated Marketing Communication (IMC) is still in its

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first generation (inside-out), characterized by the notion that “IMC combines various elements of communication.” In the 44 journal articles reviewed, the conceptualization of IMC does not fully align with its intended definition. Although the core ideas of the definition are addressed, the articles primarily focus on explaining strategies and techniques of IMC in combining various communication elements. This indicates that IMC is still operating as “tools first” rather than “consumer first” (Kliatchko, 2009).

The concept of first-generation IMC provides foundational thinking related to messages, media, communication elements, and audiences. This idea has evolved from the initial definition of IMC proposed by Schultz and Northwestern University at the request of the American Association of Advertising Agencies (4As) in 1989 (Mazur & Miles, 2007; Schultz, 2003; Kitchen et al., 2004) through to Duncan (Kliatchko, 2005, 2008). First-generation IMC is externally focused, emphasizing the integrated management of various marketing communication elements (promotional mix). This perspective emerged as a response from academics to the state of advertising agencies in the 1980s (Schultz, 2010).

The scope of first-generation thinking can be considered limited to the management of external marketing communication elements. Although its scope does not significantly differ from traditional marketing communication, the idea of integration has introduced a different dimension, incorporating the internet as a medium. Additionally, when examining the foundational elements within the field of communication, the first-generation IMC thought has contributed new ideas related to the integration of messages, media, marketing communication elements, and audiences.

First, communication messages in IMC should embody “one voice,” “one look,” or “one spirit” (Schultz, 2003; Nowak & Phelps, 1994; Kliatchko, 2005, 2008). This implies the need for message consistency across all elements of the promotional mix used. By doing so, the effectiveness of shared meaning in communication messages can be achieved.

Second, the media used in communication should be multi-channel, integrating all media, whether traditional or new. Although the concept of media integration was not explicitly articulated in the early stages of its development, this idea is also connected to understanding the integration of all marketing communication elements. This concept is often referred to as seamless or classless concerning marketing communication elements (Schultz, 2003; Burnet & Moriarty, 1998; Duncan & Caywood, 1996; Duncan, 1993; Nowak & Phelps, 1994; Kliatchko, 2005, 2008; Swain, 2004; Fill, 2002). Lastly, while the audience in early IMC was not a primary focus, it has evolved to suggest that IMC should begin with an understanding of the audience and ultimately be audience-focused.

Regarding these three IMC concepts, the articles in Indonesian academic journals have, in principle, accommodated all of these ideas. The notion that IMC messages must exhibit “one voice,” “one look,” or “one spirit” across all communication elements has been realized. Moreover, the requirement for IMC to be multi-channel has also been addressed, with a significant number of channels practiced coming from online sources. Finally, IMC has also been directed toward the audience, specifically targeting consumers or customers in communication, despite the fact that it remains “tools first.”

The first-generation IMC concepts are articulated in definitions established by Schultz and his colleagues during the early development of the IMC concept up until 1993. Several other scholars have sought to expand, reinforce, and correct these definitions (Burnet & Moriarty, 1998; Duncan & Caywood, 1996; Duncan, 1993; Nowak & Phelps, 1994; Kitchen et al., 2004; Kliatchko, 2005, 2008; Swain, 2004; Holm, 2006; Fill, 2002). One notable thinker in IMC who proposed different ideas is Duncan. While his perspective on IMC supports certain first-generation ideas, Duncan places greater emphasis on brand value, relationship building, dialogue, and stakeholder involvement (Duncan, 1993), which essentially represents the core of second-generation IMC.

Regarding Duncan’s (2002) definition that emphasizes brand value, many have pointed out that within the context of “one voice,” only the brand value is communicated. This situation contrasts with Schultz’s definition (Kitchen, 2004), which considers brand value to be outside the scope. However, the authors of the journal articles have regarded brand value as an indispensable element. They recognize the evolution of the times, suggesting that the only aspect that can be communicated in IMC is brand value. Similarly, for nonprofit organizations, the raised brand value becomes the primary message, even if it is not communicated continuously as it is for profit-oriented organizations.

In the second definition and conceptualization, IMC has transitioned to the second generation (outside-in), which defines IMC as “a management process in marketing communication.” This indicates that IMC in Indonesian academic journals has made progress from the first definition and conceptualization. Although the instances are limited, representing less than a quarter of the total, it signifies that IMC in Indonesian journals has entered the second generation (outside-in).

However, within the broad conceptualization of the second-generation definition, Indonesian academic journals predominantly highlight only the management processes. While there are writings addressing each core idea, generally, they only discuss how the management process of IMC in this second generation should be implemented. Consequently, the conceptualization in Indonesian academic journals also reveals that IMC operates at the level of companies or organizations rather than at the divisional or departmental level. It also indicates the presence of other stakeholders beyond consumers or parties that directly focus on IMC, as well as the development and utilization of databases for creating dialogue. Nonetheless, this is only

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evident in a very few scholarly articles in Indonesia.

Second-generation IMC thought differs significantly from the initial ideas of IMC. The distinction lies in the involvement of the internal company in the effective implementation of IMC programs. The foundational idea of IMC, when viewed from the discipline of communication related to aspects of messages, channels, communication elements, and audiences, has been improved and expanded. First, the notion of messages is no longer limited to the integration of communication messages. More specifically, these messages pertain to brand messaging. This gives rise to the idea of brand communication, aimed at creating superior brand value. Furthermore, building a strong brand must also involve the internal role of all company stakeholders and be cross-functional (Duncan, 2002; Kliatchko, 2005, 2008; Madavaram et al., 2008).

Second, the audience in IMC now includes not only prospects, consumers, and customers but all stakeholders, both internal and external (Kliatchko, 2005, 2008; Duncan, 2002; Schultz & Schultz, 2004; Šerić et al., 2015). Third, regarding channels, IMC leverages communication technology through consumer databases to build long-term relationships with customers, which can also serve as a basis for financial evaluation (Schultz & Schultz, 2004; Kliatchko, 2005, 2008; Šerić et al., 2015). IMC also necessitates dialogue or interactivity (Duncan, 2002). Lastly, the communication elements utilized encompass all forms of company communication, both internal and external (Madavaram et al., 2005).

The second-generation IMC thought has evolved significantly, encompassing a broader scope of study in terms of messages, channels, communication elements, and audience. Second-generation IMC is also more strategic, positioning brand, customers, and relationships at the forefront and involving stakeholders in achieving effectiveness. However, the implementation of IMC still presents numerous challenges. Several weaknesses that continue to arise include the difficulty of implementation (Kitchen & Burgman, 2010). Another challenge is how to integrate IMC cross-functionally within the organization. Active involvement from top management is required to lead the implementation of IMC. This implies that IMC should play a central role in the company's internal communication (Sheehan & Doherty, 2001; Moriarty, 1994; Eagle & Kitchen, 2000; McArthur & Griffin, 1997; Swain, 2004). This understanding ultimately necessitates an organizational structure that aligns with the needs of IMC. The issues regarding organizational structure remain a topic of academic debate (Pettegrew, 2001).

Moreover, there are still additional issues concerning the measurement of IMC effectiveness. Given that the ultimate goal of IMC is the creation of brand value measured through financial return as a form of ROI from investments in communication technology utilizing customer databases (Schultz & Kitchen, 1999; Swain, 1994; Schultz & Barnes, 1995; Semenik, 2002; Kitchen & Schultz, 2009; Kliatchko, 2005, 2008), the challenge of financial evaluation remains significant. IMC is generally not viewed as an investment but rather as a "cost" in company accounting calculations (Kitchen & Schultz, 2009). Another concern involves the compensation for advertising agencies that have traditionally acted as IMC agents compared to the companies themselves (Eppes, 1999; Swain, 2004), even though conceptually, IMC should originate from and be led by the company, with advertising agencies acting merely as implementers (Kitchen & Schultz, 2009; Kliatchko, 2005, 2008; Swain, 2004).

CONCLUSION

This article examines 44 online academic journals from 2019 to 2022 authored by national scholars, revealing that they remain within the first generation definition of Integrated Marketing Communication (IMC) or "inside-out." A redefinition of these 44 journals could be articulated as "a strategic process in business and management within marketing communications, encompassing the planning, execution, and persuasion of brand communication programs." This definition primarily focuses on the aspect of combining various communication elements, while other components present in the original definition appear to be overlooked. However, one notable advancement is the emphasis on brand value.

In Indonesian academic journals, there are indeed a few that incorporate definitions akin to those found in the second generation of IMC. Yet, these definitions and conceptualizations focus predominantly on management processes. Although some mention that IMC should be organizationally based, utilize databases, and communicate with other stakeholders, such instances are rare and lack thorough analysis.

Regarding practice, the question arises: is the implementation of IMC in Indonesia merely a reflection of the definitions found in this research, or do the researchers lack an understanding of the extensive and profound developments in IMC? This prompts Indonesian IMC scholars to engage with the concept of IMC more accurately. A comprehensive understanding of IMC should include various internal elements of the company; otherwise, if only external factors are considered, one might adopt the latest IMC definitions and operationalize them in detail. Thus far, authors of IMC journal articles in Indonesia have focused primarily on the 4As definition, which is not addressed in this study as it was refined by Schultz (Kitchen, 2004) in 1991. On the other hand, numerous IMC definitions warrant consideration as concepts, at least those derived from IMC theorists, such as the five definitions employed in this research.

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Students' Attitude and Oral Communication Performance

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ABSTRACT: Every student's educational path must include learning since it allows them to improve and advance their speaking, writing, listening, and reading skills. The goal of the current study was to ascertain how students' attitudes and oral communication performance related to one another. The study looked into the relationship between the prevalent attitudes that students frequently displayed in relation to their performance in oral communication. 226 Senior High School students from Opol National Secondary Technical School, Opol East District, Division of Misamis Oriental, who were enrolled in the HUMSS, STEM, and TVL tracks and strands participated in the study by responding to three sets of survey questions. The mean and standard deviation were employed to ascertain the predominant attitudes among the pupils about affective, behavioral, and cognitive attitudes. The students' performance in oral communication was assessed using frequency, percentage, mean, and standard deviation. To ascertain whether there was a significant relationship between the independent and dependent variables, Pearson r correlation was employed. Because there was a strong association found between students' attitudes and oral communication performance, the study found that cognitive attitudes had a substantial impact on students' oral communication performance. This shows that the respondents' use of cognitive attitudes in scholastic oral activities is crucial since it has a big impact on how well they do. The results of the study imply that in order to assist students acquire positive behavioral and affective attitudes, educators and school administrators should employ a variety of activities that will help them refine their behavioral and affective skills.

KEYWORDS: Affective, Behavioral, Cognitive, Oral Communication, Performance

I. INTRODUCTION

A student's educational journey cannot be complete without learning, which helps them to improve and advance their speaking, writing, listening, and reading skills. But the "new normal" has brought with it difficulties that have impeded student's expected advancement. Students' performance clearly reflects this since many of their macro skills are out of step with their grade or year level. This problem presents a serious worry because it implies that the fundamental goals of teaching and learning could not be met. This has prompted academics to tackle one of the most important issues in the teaching of macro skills: identifying the causes of students' poor performance, especially in oral communication tasks.

The four macro skills are speaking, writing, reading, and listening. While many children have shown that they can adjust to this new learning environment by displaying competency in writing, listening, and reading, there is a noticeable difference in speaking proficiency. Speaking competency is the capacity to utilize language appropriately and accurately in oral communication, which is important in daily life, particularly while socializing.

The researchers have imagined the attitudes of the students in order to identify the variables that influence their success in oral communication. According to Asemanyi (2019), among the elements influencing students' performance were their own complacency as well as their unfavorable attitudes and beliefs of the Communication Skills course's curriculum. Furthermore, a study on public speaking attitude discovered that students' intentions to use the abilities they acquired in introductory speech classes in their future undertakings are much more influenced by public speaking attitude than by public speaking anxiety and shyness (Welch, 2022). To further assist the pupils in their oral communication, it is necessary to address certain speaking attitudes.

Oral communication with others is also considered a common language learning activity in universities. It is clear that students at higher levels are considerably more likely to have commendable attitudes that lead to strong oral performances, given

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that attitudes have a significant impact on the results of language learning by giving oral presentations. The main elements that influence students' attitudes toward giving their oral presentations are their language skills, learning, styles, and factors pertaining to teachers and the audience; topic familiarity and public speaking anxiety also had an impact on the students' presentations (Ho, 2023).

This study intends to assist students in developing their oral communication skills by examining their attitudes regarding oral communication. It is hoped that this research will have a positive and long-lasting effect on the senior high school education of Opol National Secondary Technical School students, giving them the tools they need to succeed in the rapidly changing and dynamic world of education in the new normal.

The Social Learning Theory (SLT), first proposed by psychologist Albert Bandura, served as the foundation for this investigation. According to Albert's theory, attention, motivation, emotions, and attitudes are some of the characteristics that affect oral communication skills and may be learned and improved through observation, modeling, and imitation. The idea describes how environmental and cognitive factors interact to influence students' oral communication learning.

Although oral communication happens when people converse with one another, SLT proposes that social circumstances influence how people behave when speaking to others. Accordingly, every action a person takes when interacting with others is acquired through social interactions and, to a lesser extent, through watching behaviors in the media (Cherry, 2023).

Language attitudes play a major role in shaping students' oral communication abilities and English proficiency. Affective, behavioral, and cognitive aspects are the main determinants of speaking fluency in the context of English language learning. Notably, there is a relationship between students' views regarding English-medium instruction (EMI) and their perceptions of their own language proficiency. Furthermore, attitudes and motivations related to language play critical roles in language acquisition; students' attitudes about certain languages influence their motivations and perspectives regarding language learning. Additionally, there are differences in students' perspectives about communication skills (Ho, 2023).

A student's positive behavior, effort, involvement in extracurricular activities, work habits, and attendance all contribute to their behavioral attitude, which is defined as their visible behaviors or participation at school (Mundt & Hänze, 2022).

The way that students approach oral communication with an affective attitude has a big impact on how well they learn languages and how engaged they are in the process. Studies have indicated that students' motivation, involvement in the classroom, and general level of learning engagement might be impacted by their attitudes about oral communication, especially their affective ones (Apat et al., 2023).

Students' ideas, opinions, and beliefs about the subject matter make up their cognitive attitude in oral communication, and this can significantly affect how well they communicate (Apat et al., 2023). The other theory pertaining to student oral communication is Anthony Giddens' Adaptive Structuration Theory (AST). The performance and conversational competency of students are impacted by this extremely intricate theory. It is where the established norms, employed resources, goals attained, and cohesiveness attained by the group all of which a student may eventually adapt to are where influences are accumulated.

According to AST, the social, cultural, and historical elements that every member of the group brings to the table shape students' performance in oral communication and have an impact on their views toward communicating. The academic demands of AST contribute to its complexity. For example, AST recommends that students have sufficient real-world experience or the aforementioned performances when they are required to give oral performances, such as impromptu or extemporaneous. As it encourages students to develop their oral competency through adaptive learning from experiences and groups, AST has also shown promise in influencing oral communication. According to (Schleidewind et al. 2018), this would allow students who don't think well of themselves to join the group and gradually add a subtle impact.

The main concept underlying the conceptual framework of this research is how various attitudes impact the oral communication abilities of eleventh-grade students majoring in Technical-Vocational-Livelihood, Humanities and Social Sciences, Science, Technology, Engineering, and Mathematics who are enrolled at Opol National Secondary Technical School in the academic year 2023–2024.

The study's target population is 11th graders. This group is a representation of a particular academic cohort with unique learning requirements and interests, especially in the area of oral communication. Proficiency in speaking is a prerequisite for success in this academic topic.

II. METHODOLOGY

To ascertain the important association between senior high students' attitude and oral communication proficiency, this study used causal, descriptive-correlational, and documentary analysis designs. Palmero (2019) states that the descriptive technique of research incorporates both correlational and descriptive designs. In descriptive research, information is gathered to address research questions regarding the respondents' present employment status or to test hypotheses. Descriptive research

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reports and directs the state of affairs. Conversely, correlational research aims to ascertain the presence and strength of a relationship between two quantitative variables. Correlational research serves the purpose of verifying a relationship in order to make predictions. Research on relationships usually examines a number of factors thought to be connected to a few significant and intricate variables (Fleetwood, 2024).

Documentary research methods are used in causal research with documentary analytic goals to comprehend and value causal links between variables. In order to determine causal mechanisms and correlations, this approach combines systematic study with already-existing records or papers (Villegas, 2024).

III. RESULTS AND DISCUSSION

Problem 1. What is the Senior High School students' level of attitude in terms of:

- 1.1. affective;
- 1.2. behavioral, and
- 1.3. cognitive attitudes?

Table 1: Overall Students' Attitude

Indicators	Mean	SD	Description	Interpretation
Affective Attitude	3.22	0.67	Agree	Favorable
Behavioral Attitude	3.11	0.70	Agree	Favorable
Cognitive Attitude	3.15	0.68	Agree	Favorable
Overall	3.16	0.68	Agree	Favorable

Note: 3.26-4.0 High Favorable; 2.51-3.25 Favorable; 1.75-2.50 Less Favorable; 1.0-1.75 Not Favorable

Table 1 presents the summary of the students' attitudes. It has an overall Mean of 3.16 with SD=0.68, described as Agree and interpreted as Favorable. This shows that the performance of the learner in oral communication may be influenced by their attitude. Students' attitudes have a significant impact on their oral communication ability when it comes to giving oral presentations and oral communication. The attitudes of individuals simply influence variables like learning styles, language competency of pupils, and those pertaining to students and teachers. Research on students' attitudes about oral communication performance, especially in the context of communicative competence, has repeatedly demonstrated that attitudes have a big impact on how well students communicate orally (Ngoc, 2020).

Affective attitudes, which are viewed as Favorable, had the highest Mean of 3.22 with SD=0.67, indicating agreement. Affective attitude plays a major part in students' total communicative experience since it effects their language skills, motivation, anxiety, and communication behavior. Students' readiness to speak and actively engage in communicative activities has a strong impact on emotional attitudes, and this will increase their oral communication performance (Bao & Liu, 2021). With a Mean of 3.15 with SD=0.68, which is characterized as Agree and interpreted as Favorable, cognitive attitude comes in second place to affective attitude. This means that an individual's cognitive attitudes can be observed in the way they express their ideas, the arguments they make, and the language they use when speaking orally. It possesses a noteworthy, when students communicate orally, their ideas, arguments, and language choices all demonstrate their cognitive attitudes (Valdez & Lopez, 2023).

Finally, behavioral attitude received a Mean of 3.11 with SD=0.70, which is viewed as Favorable and classified as Agree. This implies that the way pupils behave has a big influence on how well they communicate. Students' drive and desire to develop their communication abilities can be reinforced by adopting a positive behavioral attitude toward oral communication, which results in improved oral communication performance. According to the statistics, students' oral communication ability is impacted in various ways by the various attitudes, even though there are variations in the mean rating of the prevalent attitudes (Rastegar & Gahari, 2019).

Problem 2. What is the academic performance of the senior high school students in Oral communication?

Table 2: Performance in Oral Communication

Grade	Frequency	Mean	Standard Deviation	Interpretation
90-100	42			
85-89	86			

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80-84	94	85.61	3.96	Satisfactory
75-79	4			
Below 75	-			
Total	226			

Note: 90-100 Outstanding; 85-90 Very Satisfactory; 80-84 Satisfactory; 75-79 Needs Improvement; 75 below Poor/Failed

Table 2 shows the distribution table of the students' performance in oral communication for the 3rd Quarter of the School Year 2023-2024. According to the results, 94 out of 226 respondents had grades between 80 and 84, which are considered satisfactory, with a mean of 85.61 and a standard deviation of 3.96. This indicates that a satisfactory grade has been received by the majority of responders. The data also indicates that students who received an oral communication performance grade of 80–84 were able to complete oral communication-related tasks with enthusiasm and vigor. As a result, they were able to participate in activities that improved their communication skills and handle difficult tasks that they found enjoyable.

The result of students' competency in effective and correct expression, acceptable handling of unexpected thoughts, and a satisfactory command of language communication rules is a satisfactory performance in oral communication. It entails employing suitable grammatical structures, speaking clearly and fluently, presenting the information in an efficient manner, and using a large vocabulary (Denomme et al., 2023).

Problem 3. Is there a significant relationship between the students' attitudes and performance in oral communication?

Table 3 demonstrates the connection between senior high school students at Opol National Secondary Technical School in the Opol District's attitudes and their oral communication skills. As demonstrated by the correlation value with correlations significant at the 0.05 level (2-tailed), the overall cognitive attitudes of the student respondents exhibited a significant association with their oral communication skills, leading to the rejection of the null hypothesis.

Table 3: Correlation Analysis

Attitude	R-value	P-value	Description	Decision on Ho	Interpretation
Affective	0.013	0.845	Negligible	Accept	Not Significant
Behavioral	0.038	0.568	Negligible	Accept	Not Significant
Cognitive	0.145	0.029*	Very Low	Rejected	Significant

*. Correlation is significant at the 0.05 level (2-tailed).

The significant level is typically considerably above 0.05, suggesting a lack of statistical significance, while the Pearson Correlation is typically near to 0, showing very low correlations. The Pearson Correlation of 0.145 shows that, overall, there is very little positive correlation between students' oral communication skills and Cognitive Attitudes. Given the sig (2-tailed) of 0.029, the correlation appears to be statistically significant. This indicates that students' cognitive attitudes have an impact on how well they communicate orally. Cognitive attitudes are evident in the way pupils express their ideas, the language they choose, and the arguments they make while speaking orally. It has a significant effect on how well and competently pupils perform in oral communication. Students' oral communication performance is greatly impacted by common cognitive attitudes like motivation, self-efficacy, learning approach, and personality (Kelsen & Liang, 2018).

Additionally, research indicates that students' enhancement of their public speaking and self-efficacy leads to gains in oral communication abilities; these benefits are largely attributed to cognitive motivating factors (McNatt, 2019). In the meantime, there appears to be no significance in the correlation between the student's oral communication skills and affective attitudes, as indicated by the indicator with the lowest Pearson Correlation of 0.13. Consequently, there is no discernible correlation between the students' affective attitudes and their oral communication performance.

Overall, there is a strong correlation between better performance in speaking skills and cognitive attitudes toward oral communication, which emphasizes the importance of attitudes in improving communication abilities. Additionally, it enables students to apply their in-depth knowledge and critical thinking abilities to produce improved oral communication performances (Wijirahayo & Dorand, 2020).

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Problem 4. Which of the independent variables singly or in combination, has an impact on the senior high school students' performance in oral communication?

Table 4: Regression Analysis

Variables	Unstandardized Coefficients		Standard Coefficient Beta	T	Sig.
	B	Std. Error			
Constant	83.078	2.279		36.446	0.000
Affective	-0.597	0.832	-0.062	-0.717	0.474
Behavioral	-0.525	0.836	-0.060	-0.268	0.531
Cognitive	1.928	0.783	0.216	2.461	0.015*
	R=0.168	R ² =0.038		F=2.145	Sig.0.000

Table 4 The regression analysis of attitudes and oral communication performance is shown on page 42. The table indicates that the student respondents' oral communication performance is influenced by their cognitive attitude ($\beta=1.928$; $t=2.461$, $p<0.000$). More specifically, the beta weights (β) represent the anticipated scores for the values of the independent variables; each extra score or unit accounted for by this variable would reflect an improvement in oral communication skills. This implies that the better the oral communication performance, the more positive the attitude toward this component.

Moreover, the R² value clarifies the degree to which the entire collection of independent variables treated as a single entity has an impact on oral communication performance. The dependent variable's measure of total variation was 3.8%, indicating the portion of variance explained by this variable; other component variables not included in the study account for 96.2% of the variance. However, based on the study above, the equation that may be used to predict the oral communication performance percentage (Y) is significant at ($p<0.000$), as shown by the F-value (2.145) and its related probability value (.000).

As a result, in this case, the null hypothesis—that there is no independent variable that effects the dependent variable singly or in combination—is rejected. An individual's cognitive attitude is evident in the language they use, the arguments they make, and the way they express their ideas while speaking orally. Since it depends on the knowledge people have about the problem, it has a big influence on the structure and substance of their communication. Because of this, the cognitive aspect of attitude plays a crucial role in explaining how individuals process and convey information while speaking orally (Attitude in Business Communication, 2019).

In oral communication, an individual's ideas and perspectives regarding a subject are also considered to be part of the cognitive component of attitude, and they can significantly influence communication. This element expresses an individual's opinions and assessments on a thing or occasion (Chaudhry et al., 2020). Moreover, information, beliefs, moods, personality, and communication methods are among the many components that make up cognitive attitudes toward oral communication. According to the Personal Experience (PE) Theory, an individual's cognitive processes and distinct personal experiences play a significant role in oral communication (Ngoc & Dung, 2020).

However, the student respondents' oral communication ability was unaffected by affective attitude $\beta = -0.597$ $t = -0.717$ ($p < 0$) or behavioral attitude $\beta = -0.525$ $t = -0.268$ ($p < 0$).

IV. CONCLUSIONS

The following conclusions are reached in light of the data presented:

1. When it comes to Oral Communication with activities and performances, students strongly prefer an affective approach. Majority of students use emotions as a basis for oral communication which is the affective attitude.
2. The oral communication performance of the students was good enough to receive an acceptable rating.
3. The success of the students in oral communication is significantly correlated with their attitudes, specifically their cognitive attitudes. Therefore, the null hypothesis is rejected. Behavioral and affective attitudes, however, do not significantly correlate with a students' ability to communicate orally, which means that the null hypothesis for the two attitudes is accepted.
4. The students' cognitive attitude is evident in the language they use, the arguments they make and the ways they express their ideas orally.

V. RECOMMENDATIONS

Below are the recommendations based on the findings and conclusions made.

Students' Attitude and Oral Communication Performance

1. Since the students' attitude in terms of affective, behavioral, and cognitive are all favorable, it is wise that teachers may sustain those behaviors while teaching the students in oral communication. The school may have a high priority on helping students continue their Favorable attitude for Oral Communication.

2. Satisfactory rating needs to be improved. Students need to apply their good attitude for the subject.

3. Cognitive attitude of students in Oral Communication be sustained because it is important in the subject. Teachers may also consider to find ways to improve the ratings of the students since these attitudes are also necessary for Oral Communication.

4. Cognitive attitude influences the academic performance of the students. However, results showed that students' ratings are only satisfactory. Other attitudes such as affective, and behavioral need to be given attention for these may contribute to an improved performance in Oral Communication.

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Parents' Participation and Learners' Educational Achievement



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ABSTRACT: Parents' participation plays a great role in a child's learning development. This study sought to determine the relationship between the parents' participation and learners' educational achievement. It also identified which independent variable/s singly or in combination influenced the educational achievement of learners. This study used descriptive-correlational and causal design with content analysis. It utilized an adapted and modified questionnaire which was validity and reliability tested. Mean, Standard Deviation, Pearson Product Moment Correlation and Multiple Linear Regression as the statistical tools. The study's respondents were the Grades 4,5 and 6 pupils from Naawan Elementary School, Naawan District of Misamis Oriental Division, who were elected through simple random sampling using Slovin's Formula. Results reveal that parents are highly involved in all six dimensions namely, parenting, communicating, volunteering, learning at home, decision making and collaborating with community. Parenting as the highest and volunteering as the lowest. Pupils have the Very Satisfactory rating. Parents' participation has low positive correlation between the pupils' educational achievement while parenting and decision-making influence the pupils' educational achievement. Thus, parents may continue to be involved in their children's education and teachers may sustain parental participation by providing accessible avenues for parents to engage in their children's academic journey.

KEYWORDS: Educational Achievement, Parents' Participation, Parenting

I. INTRODUCTION

The influence of parents on the educational achievement of their children is a topic that continues to garner interest and hold significance within the field of education. As pupils' progress through their educational trajectory, the impact of parental engagement becomes progressively more significant (Hill & Tyson, 2019).

This study aimed to explore the intricate relationship between parents' participation and their children's educational achievement, with the overarching objective of providing valuable insights and recommendations that could contribute to the development of educational policies and practices. The intention was to enhance the collaboration between parents and schools in order to promote improved educational achievement (Chen et al., 2021).

Numerous studies continuously demonstrate that educational achievement is positively correlated with parents' participation in pupils' educational journey (PISA, 2018). The participation of parents encompasses a range of activities, such as aiding with academic assignments, participating in school functions, and fostering effective channels of communication with educators (UNESCO, 2019).

In the Philippines, the legal obligation for parental support in education is outlined in the Philippine Family Code (Executive Order 209). According to this mandate, every Filipino child's parents are mandated to take responsibility for the presence, guidance, education, and moral instruction of their children. This includes setting the right example and providing for their overall well-being within their financial means. Furthermore, parents are expected to furnish their children with appropriate educational materials, oversee their activities and interactions, shield them from negative influences, and prevent the formation of habits detrimental to their health, academic performance, and moral values (Diaz, 2018).

Such parental participation and collaboration with other educational stakeholders come in many forms but is mainly institutionalized by virtue of Department of Education Memorandum No. 74 series of 1999 which brought to life the Parent-Teacher Association (PTA). This program involves a series of meetings in order to coordinate various stakeholders, especially the parents, in addressing issues and concerns with respect to their children's education. Another program of equal importance is the

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Brigada Eskwela, an annual program where parents alongside other stakeholders are enjoined to provide voluntary assistance in repairing classrooms and facilities before the school opening. This program is grounded on Republic Act 8525 or the Adopt-A-School Program (ASP) in 1998 and a series of DepEd implementing orders such as Department Memorandum 066, series of 2018. The United Nations Children's Fund (2019), however, said institutionalized form of parental support to children's education under PTA and Brigada Eskwela are often limited to resource mobilization and volunteer participation which then obscures other meaningful forms of parental involvement.

The local literature is vast when it comes to the relationship between parental support and educational outcomes. A consolidated report by UNICEF (2019) on parental support to children in the Philippines, for instance, shows that Grade 5 students whose parents have greater level of participation to their education tend to have higher scores in reading, writing, and Mathematics. This is particularly important especially as Filipinos puts emphasis on education of children (Alampay & Garcia, 2019) and parenting is viewed to be central in the children's growth and development in the context of the Philippine society with close family ties. Bartolome (2023) however points out that despite wealth in literature, the concept of parents' participation in various educational settings remains misrepresentative, thus the need for further probe into parental involvement in specific learning contexts. Specific domains such as parental communication, volunteerism, learning at home, decision-making, and collaboration also remain to be understudied in existing local literature.

Hence, the main purpose of this study was to examine the complex nature of parental participation and its impact on educational achievement to form basis for an intervention scheme. This study magnified into the case of Naawan Elementary School, a public elementary school in Misamis Oriental. This locale proves to be a good study site as the composition of pupils in this public educational institution comes from diverse backgrounds and with varying levels of parental involvement. The researcher initially observed that children whose parents are actively participating in school affairs also tend to perform better academically. This study further probe on this linkage between parental influence and academic achievement; the results of which served as empirical basis for the formulation of an intervention scheme geared towards enhancing participation levels of parents as well as enhancing parental communication, volunteerism, home supervision, decision-making, and collaboration in their children's education and development.

This study was anchored on Epstein's framework, which significantly impacted this study. Epstein's framework is comprised of six critical factors: parenting, communicating, volunteering, learning at home, decision-making, and collaborating with the community. Epstein and Sheldon (2019) emphasized that each type of involvement is a two-way partnership—ideally one that was co-developed by educators and families working together—rather than a one-way opportunity determined unilaterally by a school.

Epstein developed the Theory of Overlapping Spheres of influence, which asserts that pupils learn more when parents, educators, and other members of the community collaborate to guide and support pupils' learning and development. The Theory of Overlapping Spheres of Influence shifts the narrow focus of "parental involvement" from what a single parent does to a broader, more realistic representation of how influential people can collaborate to help students' education and development. The six types of parental involvement framework implied that guardians who are informed and involved in their children's education can positively impact their child's attitude and performance. According to Epstein, school, family, and community partnerships are better terms than parental involvement to recognize that parents, educators, and others share responsibility for their children's learning and development.

In the study of Caño et al. (2017), supported that parents' participation includes parenting, assisting in situations where parents and extended family members are aware of and conversant with child's maturity, and providing possessions that enable them to create home environments that promote learning. Second is effective, appropriate two-way communication about school events, student academic or personal issues within the home environment, development and progress, and/or insight. Third, volunteering is organizing and participating in activities initiated by school personnel, such as parent-teacher associations and community associations, or generated by community members to support students and school programs, such as service-learning projects and violence reduction assemblies. The fourth is learning at home, wherein it informs parents and families about school procedures, such as homework opportunities and grading rubrics, in order to supplement their children's academic activities. Fifth, decision-making includes parents and family members from all backgrounds who agree on educational events as representatives and leaders on school committees. Finally, there is collaborating with the community—identifying and integrating community funds, services, and other assets to lend a hand and meet the needs of school personnel, students, and their families.

Caño et al. added that parents' participation in children's education is a crucial factor for the child's continuing educational development and success in school. If there is a deficiency in parental involvement, the educational improvement and accomplishment of the pupils' performance are greatly affected.

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This thesis explored the complex connection between parents' participation and educational achievement, aiming to provide insight into how parents' active participation, advice, and support influence their children's educational accomplishments (Cahapay, 2021).

II. METHODOLOGY

The researcher employed a descriptive-correlational and causal design with content analysis research approach to achieve the stated aims. Descriptive-correlational research is a type of research design that tries to explain the relationship between two or more variables without making any claims about cause and effect. It includes collecting and analyzing data on at least two variables to see if there is a link between them. In descriptive correlational research, researchers collect data to explain the variables of interest and figure out how they relate. The main goal is to give a full account of the variables and how they are related without changing them or assuming that one thing causes another (Question Pro, 2020).

This study also utilized causal design because this study tried to identify which of the independent variable/s singly or in combination influenced the academic performance of the pupils. Causal research design, which is also referred to as explanatory research or causal-comparative research, is a method that investigates the nature and extent of cause-and-effect relationships between two or more variables (Causal Research: Definition, Examples and How to Use It, 2024). A content analysis was also done in the academic performance of the pupils. Content analysis is a research instrument that is employed to ascertain the presence of specific words, themes, or concepts within qualitative data (i.e., text). Researchers can quantify and analyze the presence, meanings, and relationships of specific words, themes, or concepts by employing content analysis (Content Analysis Method and Examples | Columbia Public Health, 2023).

III. RESULTS AND DISCUSSION

Problem 1. What is the level of parents' participation in terms of;

- 1.1 parenting;
- 1.2 communicating;
- 1.3 volunteering;
- 1.4 learning at home;
- 1.5 decision-making, and
- 1.6 Collaborating with the community?

Table 1: Overall Level of Parents' Participation

Variables	Mean	SD	Description	Interpretation
Parenting	3.42	0.54	Most of the time	Highly Involved
Communicating	2.99	0.53	Most of the time	Highly Involved
Volunteering	2.61	0.54	Most of the time	Highly Involved
Learning at home	2.89	0.54	Most of the time	Highly Involved
Decision-making	2.98	0.53	Most of the time	Highly Involved
Community collaborating	2.93	0.52	Most of the time	Highly Involved
Overall Mean	2.97	0.53	Most of the time	Highly Involved

Note: 3.51-4.00 Very Highly Involved; 2.51-3.50 Highly Involved; 1.51-2.50 Less Involved; 1.00-1.50 Almost not Involved

Table 1 presents the overall level of parents' participation. It has an overall Mean of 2.97 with SD = 0.53, described as Most of the Time and interpreted as Highly Involved. This means that parents are involved in their children's education, especially that respondents in this study are still young. They still need active parents in school. By actively participating in their child's education, parents can significantly influence their child's long-term success and educational trajectory. This means that parents are actively involved in various aspects of child's education and are committed to support their academic growth (Barger et al., 2019).

Besides, teachers and the school can receive invaluable assistance from parents who are actively engaged. Parents are instrumental in the improvement of the educational environment and the encouragement of teachers to do better because of the parents who offered whether by volunteering in the classroom, participating in school events, or contributing resources.

As presented in the data, Parenting has the highest Mean of 3.42 with SD = 0.54, described as Most of the Time and interpreted as Highly Involved. This suggests that parents are particularly dedicated to their parenting role and actively involved in their child's upbringing. Particularly, parents have committed in their responsibilities to their children such as fulfilling basic

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needs like food, clothing, and shelter, ensuring that the child attends school, discussing the importance of good education, and supervising when watching television and playing computer games. Grepon and Cipada (2020) posited that parental involvement can help overcome absenteeism of pupils. This starts with parenting. Parents are responsible for their children's well-being, including meeting their needs (Brooks, 2019). One of these essential needs is quality education. Good parenting paves the way for children's success. It contributes to early learning skills and fewer behavioral issues (Lanjekar et al., 2022).

On the other hand, Volunteering has the lowest Mean of 2.61 with SD = 0.54, described as Most of the Time and interpreted as Highly involved. This indicates that parents might not be as actively engaged in volunteering activities within their child's school. It is important for parents to recognize the potential benefits of volunteering and consider ways of increasing their involvement in school activities. Parent volunteers benefit everybody, especially the pupils. By volunteering, the parents can ensure that their children receive quality education (Cudy, 2023). It provides additional support and improves academic performance (Daly, 2023).

Problem 2. What is the pupils' level of educational achievement for S.Y 2023-2024?

Table 2 shows pupils' overall educational achievement with an overall Mean of 85.43 and SD = 1.58, indicating a Very Satisfactory level. This signifies that the majority of the pupils are performing at a very satisfactory level in their academics. This means that pupils still need to study more to obtain the highest grade or the Outstanding level because Very Satisfactory is the second level from the highest. Only 27 or 11% of the pupils obtained an Outstanding remark, meaning that a significant portion of Grade 5 students are performing exceptionally well academically, surpassing expectations.

Moreover, most of the pupils achieved a Satisfactory remark. This suggests that the majority of the Grade 5 pupils are performing at a satisfactory level in their academic. Although, there were no pupils who received a poor rating, there should be further efforts to support the pupils and improve their educational achievement. The literature indicates that students' academic success is influenced by a range of interconnected factors, such as the management and utilization of school facilities and resources (PHD & Nnenna, 2018), students' class attendance patterns (Asante, 2019), their communication and articulation skills (Miraj et al., 2021).

Table 2: Pupils' Overall Educational Achievement

Level of Academic Performance	Frequency	Percentage	Mean	SD
Outstanding	27	11	85.43	1.58
Very Satisfactory	83	34		
Satisfactory	91	37		
Fairly Satisfactory	43	18		
Did Not Meet Expectations	0	0		
Total	244	100.00		
Note:	<i>90-100 Outstanding</i>	<i>85 – 89 Very Satisfactory</i>	<i>80 – 84 Satisfactory</i>	
	<i>75 – 79 Fairly Satisfactory</i>	<i>74 & below Did not Meet Expectations</i>		

According to Luz (2021), the SEA-PLM, pupils' test results in 2019 led to a disappointing result. So, the foundation skills in reading, writing, and Mathematics should be improved. Boiser et al. (2019) stated that the factors that affect the pupils at risk of getting failing grades are their distance from school and their family's financial problem. Thus, efforts should be made to address these factors and provide support to ensure academic success for all students.

Problem 3. Is there a significant relationship between the level of parents' participation and educational achievement of pupils?

Table 3: Pearson's Correlation Test Between Parents' Participation and Educational Achievement of Pupils

Variables	r-value	p-value	Level of Correlation	Decision	Interpretation
Parenting	0.423	0.002	LPC	Reject Ho	Significant
Communicating	0.329	0.001	LPC	Reject Ho	Significant
Volunteering	0.316	0.001	LPC	Reject Ho	Significant
Learning at home	0.382	0.001	LPC	Reject Ho	Significant

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Decision-making	0.391	0.001	LPC	Reject Ho	Significant
Community collaborating	0.299	0.001	LPC	Reject Ho	Significant

Note: 0.00 – 0.19 = Very Low Positive Correlation 0.20 – 0.39 = Low Positive Correlation
 0.40 – 0.59 = Moderate Positive Correlation 0.60 – 0.79 = Strong Positive Correlation
 0.80 – 1.00 = Very Strong Positive Correlation Significant at the 0.05 Level (2 tails)

The table 3 shows Pearson's correlation test between the parents' participation and educational achievement. The test reveals a low positive correlation between the dependent variable and all the independent variables. All independent variables which are parenting, communicating, volunteering, learning at home, decision-making, and community collaborating show low positive correlation towards the educational achievement of the pupils with *r*-values of 0.423, 0.329, 0.316, 0.382, 0.391, and 0.299 respectively. These indicate that if those variables change its direction the pupils' educational achievement also changes in the same direction.

In addition, table 9 took the analysis at the independent variable level by looking at the correlation test while holding the dependent variable constant at a time. As can be seen from the same table, all independent variables are significant at 0.05. In summary, taking it at the coefficient level, those variables are correlated to pupils' educational achievement, with a *p*-value less than 0.05. Thus, the correlation analysis yielded that the null hypothesis test (H_0) was rejected. With the following findings, low positive correlation.

This means that parenting is very important in the lives of the children. This means further that if children feel loved, have given attention in their studies, they feel motivated to do good in school. The study of Naite (2021) indicated that students with highly involved parents achieved better educational achievement and higher test scores across all subjects compared to those whose parents were not involved in their education. This study suggested that parents should be more aware of the importance of supporting their children in their academic endeavor. Since parents are the first teachers of their children, they are advised to take an active role in assisting their children's education both in school and at home.

Additionally, Hanif & Alwi (2019) recommended that parents should spend time with their children and discuss their education at home. Also, the parents must have a frequent interaction with the teachers and other school staff to identify how they can support more to the betterment of their children's education.

Communicating as parental involvement has also a low positive correlation. This means that if parents are communicating with their children's teachers, their children can have better educational achievement. It means further that the more parents are communicating with the teachers, the more their children's academic performance will improve. This may imply that pupils work better in school if they know that their parents are communicating with their teachers. This may suggest that pupils are afraid to do bad because their teachers might tell their parents. Parents who are communicating with the teachers will know the progress of their children. It is like monitoring their children's activities. Boonk et al., (2018) considered communicating to children's teachers as an important role parents should do. Such action will inspire parents to assist their children's education.

Volunteering is another way of parental participation. It also has low positive correlation which means that though it has low positive correlation, it also means that when parents volunteer in school, their children's educational achievement is better. According to Llego (2022) parents volunteering in school activities show active support to their children in school. It shows interest of parents to their children's school, educational achievement, and extracurricular activities. For Diaz (2018), there is an increased parent-child interactions, responsiveness to children's needs, and a positive impact on the educational system if parents volunteer in their children's school.

Learning at home is another practice of parental participation. Parents who support their children's studies at home is a good practice to improve their children's education. No matter how low positive correlation, it still means that if parents support their children's learning at home, it will improve their children's performance in school. Additionally, Grepon and Cipada (2020) mentioned in their study that if parents support their children's learning at home, it will minimize absenteeism. Parents are able to monitor the studies of their children. They can assist their children in their studies and children in return will be inspired to study well because they are well supported in their studies.

Decision making is an important involvement parents in school. Still has a low positive correlation to pupils' educational achievement. It means that parents' involvement in decision making in school can be associated with the performance of pupils in school. Parents who are interested in school activities and learning progress can motivate children to stay focused and engaged in their studies. It promotes a sense of accountability for their academic responsibilities. According to Baldonaza and Vargas (2022) it is important to have parents support at varying degrees to be voice of the children during the planning for programs and projects for the school. Involving parents in the decision-making process can assist guarantee that all the children's needs—including those

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of children from underrepresented groups or varied backgrounds—are taken into account and met. This encourages inclusion and equity in the educational setting.

Community collaborating or collaborating with community. Such parents are very active. Such an act has inspired their children to be active in school too. As the result shows, it has low positive correlation to the pupils' educational achievement. While parental involvement can take various forms, such as providing a conducive environment for studying, assisting with homework, and showing interest in academic progress, the active engagement from parents sends a message to their children (Selvarajoo & Baharudin, 2023). This suggests that education is important and so as their children's efforts (Naite, 2021).

This shows that engaged and supportive parents are contributory to the children's academic accomplishment and the overall development.

Furthermore, Mugumya et al. (2022) discovered that parental involvement in the form of providing basic needs and effective communication to their children can predict the academic performance of the children. Parents providing a good learning environment at home can also predict the children's academic performance. In conclusion, this study proved that pupils' academic performance is influenced by various parental involvement aspects.

Problem 4. Which of the independent variable/s singly or in combination influence/s the dependent variable?

The table 4 on the next page presents regression analysis with moderating variables that predict the students' educational achievement. It is hypothesized that the six (6) predictors were positively or negatively associated with workplace factor where $\beta = 0$ as null and the alternative of $\beta \neq 0$. That explains whether the independent variables are good predictor of pupils' academic performance. Results show that the 24.217% of the variance is explained by the six (6) predictors, $F(6,244) = 24.217$. Moreover, parenting ($\beta = 0.588$, t -value = 7.933, p -value = 0.001) and decision-making ($\beta = 0.458$, t -value = 6.033, p -value = 0.002) are positively have relationship with the students' academic performance. It can be concluded that if the parents' participation in terms of parenting and decision-making increase by 1% their educational achievement will also increase.

Taking it in the coefficient level, parenting and decision-making are a good predictors of students' academic performance with a p value lesser than 0.05. Hence, the regression analysis yielded that the null hypothesis test (H_0) was rejected. With the following findings, a positive linear relationship exists between the variables as can be reflected and summarized with the following regression equation;

$$\text{Parenting, } Y = 0.538x + -0.396$$

Where;

Y = Academic Performance

X = Parenting

Table 4: Regression Analysis Parental Involvement and Pupils' Academic Performance

Predictor	Estimate	SE	β	t-value	P-value	Decision	Interpretation
Constant	-0.396	-0.387		-6.512	0.000		
Parenting	0.538	0.467	0.588	7.933	0.001	Reject H_0	Significant
Communicating	0.094	0.080	0.074	1.165	0.246	Accept H_0	Not Significant
Volunteering	0.096	0.092	0.086	1.281	0.091	Accept H_0	Not Significant
Learning at Home	0.085	0.093	0.176	1.118	0.231	Accept H_0	Not Significant
Decision-Making	0.952	0.688	0.458	6.033	0.002	Reject H_0	Significant
Community Collaborating	0.196	0.122	0.138	1.171	0.098	Accept H_0	Not Significant
	R	R²	F-value		P-value	Decision	Interpretation
Model	0.568	0.454	24.217		0.001	Reject H_0	Significant

Note: Dependent Variable = Academic Performance *Significant when computed p-value <0.05.*

$$\text{Decision-making, } Y = 0.952x + -0.396$$

Where;

Y = Academic Performance

X = Decision-making

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The analysis shows that Parenting and Decision-Making are crucial factors influencing the dependent variable, highlighting their importance in this context. On the other hand, Communicating, Volunteering, Learning at Home, and Community Collaborating do not have a significant impact according to this model, suggesting that their contributions might be less direct or overshadowed by other factors. The overall model is effective in explaining a substantial portion of the variance in the dependent variable, underscoring the relevance of the predictors included, while also indicating that other factors may be influencing the outcome. This means that parenting and decision-making impact pupils' academic performance. Therefore, the null hypothesis is rejected.

Parenting has a positive and statistically significant effect on the dependent variable. The positive β coefficient of 0.588 indicates that as parenting increases, the dependent variable tends to increase as well. This suggests a strong relationship between effective parenting and the outcome being measured. Parenting, is a very important responsibility of parents that children really need and consider as very important also in their lives. The presence of parenting in their lives gives them the confidence and motivation to improve themselves in school because they have parents who believe on them and expect them to succeed in their studies. Sanders and Turner (2018) said that parenting has great influence in a child's developmental capacities as he grows.

According to Minkin and Horowitz (2023) asked the parents about their ambitions for their children when they reach adulthood. Most of them prioritized financial independence and career satisfaction. They also acknowledged the importance that their children earn a college degree. This is why parents utilize their resources to support their children's academic journey and ensure that they will achieve their full potential. Yang and Zhao (2020) studied the effect of parental styles on children's academic performance. The results showed that parenting style has a more distinguished effect on children in disadvantaged areas. They also found out that the parenting styles of mothers, in comparison to the fathers, play a crucial role in the academic performance of children.

Decision-Making also has a significant positive effect on the dependent variable with a β coefficient of 0.458. This suggests that as decision-making skills improve, the dependent variable improves too. Enhancing decision-making abilities could lead to better outcomes. For example, if the dependent variable is related to personal or professional success, training or programs focused on improving decision-making could be beneficial. In this study, parents' or the family's support in the decision-making process of their children may help their children to better performance in school and up to their future (Kocak et al., 2021).

On the flip side, communicating ($\beta = 0.074$, t-value = 1.165, p-value = 0.246), volunteering ($\beta = 0.086$, t-value = 1.281, p-value = 0.091), learning at home ($\beta = 0.176$, t-value = 1.118, p-value = 0.231), and community collaborating ($\beta = 0.138$, t-value = 1.171, p-value = 0.098), are not good predictor of pupils' academic performance. But other independent variables in this study are not good predictors of the pupils' academic performance. The null hypothesis is accepted.

IV. CONCLUSIONS

The following conclusions are reached in light of the data presented:

1. Parents' participation is a regular practice of parents whose children are still in the elementary level.
2. Grades 4, 5 and 6 pupils show great interest in their academic journey since they are performing well in their studies as manifested in their educational achievements.
3. The more parents are highly involved in parenting to their children, the more the pupils improve their educational achievements. Thus, the null hypothesis is rejected.
4. Pupils at Grades 4, 5 and 6, being young still lean unto their parents in their studies and in decision-making in this phase of their lives.

V. RECOMMENDATIONS

Based on the study's findings and conclusions, the researcher offers several recommendations detailed in the following paragraphs.

1. Parents are encouraged to play an active role in supporting their children's learning and development. It is recommended to continue attending parent-teacher meetings, school events, and staying updated on their child's progress.
2. To maintain, if not increase the Very Satisfactory rating of pupils, teachers may enhance parental involvement by providing accessible avenues for parents to engage in their children's academic journey.
3. Promoting collaboration between home and school is essential for fostering a supportive educational environment. Teachers may maintain regular communication with parents, providing updates on their child's progress, discussing challenges, and celebrating achievements. This communication may include feedback on assignments, assessments, and overall performance, ensuring parents are well-informed and engaged in their child's educational development.

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4. In addition to promoting collaboration, schools may provide resources and support to assist parents in supporting their children's learning at home. This includes offering resources, hosting workshops, and providing materials that help parents create a conducive study environment.

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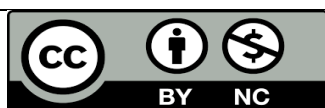
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Learners' Conduct and Educational Achievement

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ABSTRACT: Learners' conduct may be taken from several factors which may be the cause for their educational achievement. This study aimed to determine the level of learners' conduct and educational achievement. This also determined the relationship between the learners' conduct and educational achievement. The respondents of this study were the teachers (n=105) from the selected schools in the Division of Cagayan de Oro City. This study used descriptive correlational research design with documentary analysis and utilized an adapted and modified survey questionnaire as its instrument to gather the data from respondents. Statistical tools like frequency and percentage, mean and standard deviation, Pearson Product Moment Correlation Coefficient were used to find out the relationships between the variables. Results showed that the learners' conduct was at moderate level on which family has the highest mean score while teacher has the lowest mean score. Learners' educational achievement was at a satisfactory level. Learners' conduct was negatively correlated with educational achievement. Though negatively correlated but it can be concluded that family plays an important role in molding learners' conduct. Thus, the school may hold parenting seminars to remind parents of the importance of family in developing the learners' conduct. If learners have desirable conduct, they would have good study habits that would improve their educational achievement.

KEYWORDS: Educational Achievement, Family Factor, Learners' Conduct

I. INTRODUCTION

Behavior or conduct refers to how a person or an entity acts or responds in a specific circumstance. It is the observable and quantifiable behaviors conduct, responses, and activity patterns displayed by people or groups. A wide range of elements, including as heredity, environment, and learning, can have an impact on conduct.

According to Crowder (2022), "Conduct is any activity which can be observed, recorded and measured, this includes first what living beings or organism's do- that is their movement in space." A person's conducts or behaviors in response to an internal or external stimuli condition are referred to as their behavior. When one is aware of what motivated or drove his conduct, one can better understand it. When one accepts or disapproves behavior, one evaluates it. A typical response that includes both comprehension and evaluation is a common reaction that individual engages daily.

As children grow and develop, their behavior becomes more nuanced and multifaceted. Children's conduct is a reflection of their changing needs and understanding of the world. As they grow and mature, they learn to control their impulses and to behave in ways that are appropriate for their age and situation. Children's conduct can also be influenced by their emotions. When they are feeling happy, sad, angry, or scared, their conduct may change.

Disruptive conduct in children refers to conducts or behaviors that occur when a child has difficulty controlling their actions. This is often in social settings and can happen for many different reasons. Disruptive conduct is roughly defined as inappropriate behavior of learners in the classroom that impedes both learning and teacher's instructions (Gómez et al., 2018; Närhi et al., 2017). Some of the most common disruptive conduct include learners' inappropriate gestures, talking with classmates, physical and verbal aggressiveness, moving in the class, shouting, and not respecting the classroom rules.

Fact that disruptive conduct in the classroom is an undeniable problem faced by teachers of all generations (Abeygunawardena & Vithanapathirana, 2019), many research studies have been carried out investigating the causes of this disruptive conduct and developing possible intervention strategies (Rafi et al., 2020). Teachers, academic staff, and mental health

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professionals are increasingly concerned due to the incidence of disruptive conduct in primary schools. The amount of time teachers spends correcting and redirecting conduct may have an impact on how well other learners behave in the classroom.

When face-to-face classes resumed after pandemic, teachers were facing a really challenging academic year, not only because of poor performance of learners academically but the conduct as well. Teachers are being challenged because of the conduct of the learners. The learning pace of the learners were lessened because the class is disrupted due to this learners' disruptive conduct. The teachers could not continue teaching. Learners have different backgrounds and by understanding some of the factors that can explain why learners misbehave, teachers and leaders can take steps to improve learners' behavior and minimize disruptions to learning.

This study is anchored on the theories of Pavlov on behaviorism. Behaviorism focuses on how people behave. In the field of education, behaviorism examines how learners behave through learning. More specifically, behaviorism focuses on observing how learners respond to certain stimuli that, when repeated, can be evaluated, quantified, and eventually controlled for everyone. The emphasis in behaviorism is on that which is observable and not on the mind or cognitive processes. In sum, if one cannot observe it, it cannot be studied. The development of behaviorism is frequently associated with Ivan Pavlov, famous for his experiments with dogs, food, and audible stimuli, such as a bell. In his experiments, dogs learned to associate food or feeding time with the sound of the bell and began to salivate. Pavlov conducted his experiments in the early 1900s and they were replicated by many other researchers throughout the 20th century (McLeod, 2017).

John B. Watson, among the first Americans to follow Pavlov's work, saw it as a branch of natural science. Watson became a major proponent of Pavlov and is generally credited with coining the term behaviorism. He argued that mind and consciousness are unimportant in the learning process and that everything can be studied in terms of stimulus and response. Other major figures associated with behaviorism are B.F. Skinner and Edward Thorndike. Skinner is particularly well known, primarily because he introduced what he referred to as operant conditioning which emphasized the use of both positive and negative reinforcement to help individuals learn new behaviors.

This was quite different from Pavlov, who relied on simple reflexive responses to specific stimuli although both Pavlov and Skinner promoted repetitive behavior that leads to habit formation. These proponents have significant impact on various educators on the development of modular distance learning approaches. The delivery of the instructional model of this research were patterned on these theories and educators and realigned with the current state or level of understanding and learning capacity of learners under this study.

The study of Alcalá (2021) revealed that behaviorism is still significant in today's teaching and learning process, however it must be aligned with the current learning needs and styles of learners. Thus, using a theory in the teaching and learning process needs enhancements and modifications to make it more useful and effective. This was seen on the study of Fidalgo (2020) who revealed that behaviorism plays a vital role in child's development. To make it more effective it must be accompanied with the use of technologies available that can make learning aligned with the current trend in education.

II. METHODOLOGY

The researcher used descriptive correlational research design with documentary analysis to attain the objectives set in this study. The descriptive correlational design investigates relationships between variables without the researcher controlling or manipulating any of them (Bhandari, 2021). It is a design in which the researcher is primarily interested in describing relationships among variables without seeking to establish a connection. It also aims to accurately and thoroughly describe a population, situation, or phenomenon. It can answer the questions of what, where, when, and how, but not why. Furthermore, a descriptive research design can investigate one or more variables using a variety of research methods.

III. RESULTS AND DISCUSSION

Problem 1. What is the level of learners' conduct in the classroom based on the following factors:

- 1.1 peer;
- 1.2 individual;
- 1.2 family;
- 1.4 school; and
- 1.5 teacher?

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Table 1: Overall Learners' Conduct

Variables	Mean	SD	Description	Interpretation
Peer Factor	3.49	0.59	Often	High
Individual Factor	3.30	0.60	Sometimes	Moderate
Family Factor	3.55	0.58	Often	High
School Factor	3.07	0.58	Sometimes	Moderate
Teacher Factor	2.36	0.57	Seldom	Low
Overall Mean	3.15	0.58	Sometimes	Moderate
Note:	4.21 – 5.00 Very High	3.41 – 4.20 High	2.61 – 3.40 Moderate	
	1.81 – 2.60 Low	1.00 – 1.80 Very Low		

Table 1 presents the overall level of learners' conduct. It registered an overall Mean of 3.15 and SD= 0.58 described as Often and interpreted as Moderate Level. Moreover, the variables were rated as either low, moderate and high level respectively. The data imply that there are various factors that could influence learners' conduct. This means that some factors may influence from internal and external to the learners. Thus, guidance and understanding from the school administrator, teachers and parents can create a learning environment that caters diverse needs, foster positive behavior and ultimately promotes effective learning to the learners.

As highlighted by Ardin's research (2017) on disruptive conduct is influenced by internal and external factors. Seeking attention is an internal factor while factors come from classmates, close friends, the learning environment, family, and society are called external factors. Teachers and parents should work together to address these various factors. It can create a supportive learning environment that encourages positive conduct and allow learners to thrive.

In the same table, the highest rated variable is Family factor with the Mean of 3.55 and SD=0.58, described as Often and interpreted as High. This data implies that family-related influences, play a significant role in shaping learners' conduct and classroom conduct. This influence can be a positive or negative, depending on the various aspects of the family dynamic. This further indicates that family factor is a strong influence to learner's conduct and learning environment.

Bennett (2018) when a child misconducts or fails to meet expectations at school, the child's home and family life should be considered. Several family factors can affect a child's behavior and ability to perform in the classroom. These include economic stability, changes in family relationships, parental attitudes toward education and incidents of child abuse. Moreover, teachers and parents should collaborate and have constant and positive communication that can create a strong support system that benefits the learner.

Meanwhile, the lowest rated indicator is Teacher factor with the Mean of 2.36 and SD=0.57 described as Seldom and interpreted as Low. The data imply that while Teacher Factor received the lowest rating, it is still important for educators to reflect on their conduct and instructional practices to create a positive classroom environment. The disruptive conduct of learners can be influenced by teacher factors, which have the ability to both increase and decrease disturbances in the classroom. Teachers have a huge impact to learning environment. Reflecting on their own practices could really create an environment wherein learners feel engaged and supported, reducing the likelihood of disruptive conduct.

One aspect that may contribute to the issue of disruptive learners is the behavior of teachers conduct within the classroom. Addressing issues such as ineffective teaching methods, lack of preparation, and negative interactions with learners can help reduce instances of disruptive conduct and enhance the overall learning experience. Thus, it is important that the teachers contemplate on their actions and build rapport with the learners by showing genuine interest in the lives of the learners (Handayan et al., 2020)

Problem 2. What is the learners' level of educational achievement based on School Year 2022 – 2023?

Table 2 presents the Learners' Overall Educational Achievement based on school year 2022-2023. It registered an overall Mean of 84.19 and SD= 2.13 which indicates a satisfactory level of educational achievement. The data imply that learners achieving satisfactory grades might be flying under the radar while actually struggling due to disruptive behavior. This means that even though they are getting satisfactory grade, they might be capable of much more if they could focus and avoid disruptions. This there is a strong link between the disruptive conduct and educational achievement. Thus, guidance from teachers and parents are needed.

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Table 2: Learners' Overall Educational Achievement

Level of Academic Performance	Frequency	Percentage	Mean	SD
Outstanding	59	5		
Very Satisfactory	398	34	84.19	2.13
Satisfactory	574	49		
Fairly Satisfactory	141	12		
Did Not Meet Expectations	0	0		
Total	1172	100.00		

Note: 90-100 Outstanding 85 – 89 Very Satisfactory 80 – 84 Satisfactory
75 – 79 Fairly Satisfactory 74 & below Did not Meet Expectations

Learners with low educational achievement or struggling with their studies must be given attention by the teachers and eventually their parents. They need extra time, attention, assistance and guidance. Teachers and parents may collaborate with each other so that the set of activities and the lessons taken at school will have concrete follow up when the learners are at home. Learning must have recollection and re-enforcement at home for better understanding, familiarization and memory.

As highlighted by The Program for International Learner Assessment (PISA), Cahu and Quota (2019) found a correlation between learners' reports of disruption and their educational achievement. The scores are lower when there are more disruptions. Teachers and parents should be working together in guiding and reminding these learners to focus more and to lessen disruptive conduct.

Moreover, Oco and Comahig (2023) stated that teachers' efforts on providing assistance to learners through interventions and remediations with the support and guidance of parents or family members have significantly impacted the learners' improvement in their educational achievement. Learners further behave well as they are aware that their misconduct can be reported to their parents and they also feel secure and confident knowing that they can ask for help from their parents or siblings about their struggles in their studies.

Problem 3. Is there a significant relationship between the factors that influence the learners' conduct in the classroom and their educational achievement?

Table 3: Test Correlation on Factors Affecting Learners' Disruptive Conduct and educational achievement

Variables	r-value	p-value	Level of Correlation	Decision	Interpretation
Peer Factor	-0.539	0.001	Moderate Negative Correlation	Reject Ho	Significant
Individual Factor	-0.328	0.013	Low Negative Correlation	Reject Ho	Significant
Family Factor	-0.635	0.001	Moderate Negative Correlation	Reject Ho	Significant
School Factor	-0.375	0.016	Low Negative Correlation	Reject Ho	Significant
Teacher Factor	-0.361	0.003	Low Negative Correlation	Reject Ho	Significant

Note: Correlation is significant at 0.05 level (2-tailed)

Table 3 shows the test correlation on between learners' conduct and educational achievement. For Peer Factor, it registered a computed r-value of -0.539 with computed p-value of 0.001. The computed p-value is less than the p-critical value of 0.05 level of significance. This implies that significant moderate negative correlation between learners' disruptive conduct and educational achievement was established when peer factor is taken into consideration. Thus, the null hypothesis is rejected. Peer influence to a learner is imminent as they are in the stage of development wherein, they still do not have fixed things to believe and follow and they are still searching for a person or group to belong to. It is important that parents and teachers should help in guiding the learners in their activities with their peers.

Learners' learning and emotional health can be negatively impacted by negative peer interactions. This is due to the fact that they will encounter unfavorable attitudes and behaviors. Sometimes it is too late once they realize it. In addition to improving overall academic results, fostering a supportive peer environment can assist decrease disruptive conducts. Consequently, it is critical that the community as a whole keep an eye on the learners' actions and develop initiatives and programs that will help them focus on doing good deeds and divert their attention (Panikar and Silva).

For Individual factor, it registered a computed r-value of -0.328 with computed p-value of 0.013. The computed p-value is less than the p-critical value of 0.05 level of significance. This implies that significant low negative correlation between learners'

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disruptive conduct and educational achievement was established when individual factor is taken into consideration. Individual factor of learners' conduct affects their educational achievement as they are the one that will decide on which they will take and consider in using and following. Parents and teachers may guide and assist the learners specially on the concept of good and bad conduct and activities. Learners needs assistance in making decisions as they are still not that experienced in making hard decisions.

Rauch (2021) has drawn attention to the fact that learners who experience mental health problems—such as anxiety disorders—may also exhibit poor classroom conduct. Teachers need to be aware of this because there's a possibility that a pupil behaves differently at home and at school. Additionally, parents and teachers should supervise and manage their learners' behavior, particularly if you notice that the learner is acting inappropriately.

For Family Factor, it registered a computed r-value of -0.635 with computed p-value of 0.001. The computed p-value is less than the p-critical value of 0.05 level of significance. This implies that significant moderate negative correlation between learners' disruptive conduct and educational achievement was established when family factor is taken into consideration. Family factor of learners' conduct affects their educational achievement. Activities or situations within the family affects the conduct and mode of the learner. It can be in positive way or in the negative side. Learners need assistance on this matter so that they can better understand on why those things happened and what they can do to minimize the impact towards them.

A learner's conduct and educational achievement in the classroom can be impacted by a number of family problems, such as financial hardships, illness, and, in the worst cases, child labor or abuse. As a result, in some cases, schools may need to provide extra assistance to children in order to help them with their problems. This assistance may include counseling or even just talking to parents about how their activities at home are affecting their learners (Bennett, 2018; Silva, 2020).

For School Factor, it registered a computed r-value of -0.375 with computed p-value of 0.016. The computed p-value is less than the p-critical value of 0.05 level of significance. This implies that significant low negative correlation between learners' disruptive conduct and educational achievement was established when school factor is taken into consideration. School factor on learners' conduct affects their educational achievement. The school is the learners' second home. It is the place where they encounter and socialize more time with learners of their same age or generation. The environment that the school have will affect the learners' behavior and eventually their educational achievement.

According to Yussif (2021), improving communication and the connections between teachers and learners may be able to help with this problem. It might be an effective strategy for dealing with problems like disruptive kids or absenteeism from class because of inadequate follow-up. Thus, developing relationships and open lines of communication between teachers and learners promotes belonging and trust. As a result, learners might feel more upbeat and productive in the classroom and be more motivated to succeed.

For Teacher factor, it registered a computed r-value of -0.361 with computed p-value of 0.003. The computed p-value is less than the p-critical value of 0.05 level of significance. This implies that significant low negative correlation between learners' disruptive conduct and educational achievement was established when teacher factor is taken into consideration. Teacher factor on learners' conduct affects their educational achievement. The teacher is the learners' second parent and the best instructional materials for learning. Learners tend to imitate them as they admire and idolizes them. Whatever the teachers do they are observed, followed and even copied by the learners.

According to Dulay and Karadag (2020), despite instructors' activities having an impact on learning and motivation, learners are frequently depicted as the cause of disruptive conduct. This highlights the difficulty of attributing disruptive conduct to teacher actions alone. Learners' motivation and, eventually, behavior might be influenced by the activities of their teachers.

IV. CONCLUSIONS

Based on the data presented, the following conclusions were revealed:

1. Family is important in molding learners' conduct. Other factors may influence learners' behavior, but family is the most essential factor in creating the behavior of a child.
2. Educational achievement of learners needs improvement. It needs the support of family and teachers.
3. Though learners' conduct is negatively correlated to educational achievement, it still needs to consider the development of the learners' conduct because if a child has a good conduct, he would also have good study habits that help improve his educational achievement.

V. RECOMMENDATIONS

The following are the formulated recommendations based on findings and conclusions.

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1. Teachers and parents may communicate consistently to guide and address learners' conduct. The school may provide parenting seminars to remind parents the importance of family in developing children's behavior.

2. Teachers and parents may collaborate to create support services or group to address individual learner's needs and create a supportive learning environment that can address their struggles and improve their educational achievement.

3. Parents/Guardians may actively engage in school activities to support their children's educational achievement and most importantly their conduct or behavioral development. Parents/Guardian can enhance communication with teachers and provide a supportive home environment to positively impact conduct and educational achievement.

5. Future researchers can conduct longitudinal studies to track the long-term effects of family and peer factors and as well as other factors that may affect the learners' educational achievement to further provide valuable insights for future interventions.

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Strategy for Supervision of Islamic Religious Education in the Era of Information Technology in Banggai Regency



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ABSTRACT: The impact of information technology has permeated various aspects of human life, including social, cultural, economic, political, and even educational elements. The education sector, influenced by technology, significantly affects the quality of education, including Islamic Education, where one crucial element is the presence of Islamic Education Supervisors. The role and responsibilities of Islamic Education Supervisors are to enhance the quality of Islamic Education and to exhibit adequate professionalism. Therefore, this study addresses the professionalism of Islamic Education Supervisors and the implementation of information technology in the duties of Islamic Education supervision in Banggai Regency. This study uses a qualitative approach. Data collection techniques include direct observation, in-depth interviews, and written document analysis. Data was analyzed using three stages: data reduction, presentation, and verification. This study found that the professionalism of Islamic Education supervision in the era of information technology in Banggai Regency is outstanding. This is proven by the research findings, which show that supervisors consistently carry out their duties despite many challenges and obstacles. The extensive supervisory area, the large number of supervised teachers, and the need for more supervisors present real challenges in performing their duties professionally. On the other hand, Islamic Education Supervisors still need to improve in aspects of information technology and discipline. Other findings indicate that in performing their supervisory duties, Islamic Education Supervisors in Banggai Regency use information technology in various strategies and methods.

KEYWORDS: Supervision, professionalism, religious education, Islamic education, information technology

I. INTRODUCTION

The role of teachers and supervisory committees, especially school principals, occupies a central position in advancing the quality of education in schools (Spencer-Jones, 2010; Wanzare, 2012). As a teacher, one of the leading indicators in improving quality is through the classroom learning process, which is determined by innovation and creativity. Meanwhile, the role of technology in this aspect is that it can help and make it easier for teachers to find learning models, such as using *YouTube* as a learning reference in the modern era that suits students' interests, namely the tendency of students today to have a close relationship with the virtual world so that this is the primary provision in adapting to technology-based learning.

On the other hand, the role of the supervision committee, both school principals and teachers, has an essential contribution to improving the quality of education (Weiss-Dagan, Ben-Porat, & Itzhaky, 2018). Overall, the supervisory committee has the main responsibility for supervising and guiding various activities in schools/madrasahs in accordance with the type and form of education and learning activities in educational institutions, in the designated positions and functions.

Furthermore, supervision is interpreted as an activity carried out by an individual who acts as a supervisor whose primary focus is supervising, controlling, and providing support to achieve optimal teaching goals (Yerushalmi, 1999). The supervisor's function in Islamic education focuses more on managing the learning process, including monitoring and evaluation, to improve teacher competence so that it contributes positively to student learning outcomes.

The word supervisor in the education supervision system is often called supervisor in academic studies. Supervision comes from English, namely "supervision," which consists of two words; "super" and "vision." Super means "above" or "more," while vision means "to see" or "review." Supervision is coaching given to all school staff to improve their abilities and develop better teaching and learning situations. The person who supervises is called a supervisor. Specifically, in this study, the researcher used

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the word supervisor to refer to or represent the word supervisor further. This was done by the researcher because there are still many regulations and provisions in government regulations that use the word supervisor to mention the duties of a supervisor (Kiley, 2011).

Based on the Minister of State Apparatus Empowerment Regulation Number 118/1996 Part II Article 3 Paragraph (1) and the Decree of the Minister of Religion Number 381 of 1999 concerning the supervisory profession, it is stated that school/madrasah supervisors are civil servants who are assigned, have responsibility and have the authority full authority from authorized officials to carry out comprehensive supervision of the implementation of education in public schools and madrasahs. This supervisor is tasked with conducting assessments and providing guidance in the technical aspects of teaching and administration in preschool, primary, and secondary education units.

According to Ministry of Religion regulations, the supervisory position for schools/madrasahs is recognized as the Supervisor of Islamic Religious Education. The Supervisor of Islamic Religious Education is a civil servant who has comprehensive responsibilities, duties, and authority to supervise the implementation of Islamic religious education in public schools and the management of education in madrasahs. Its main functions include evaluation and guidance in educational and administrative technical matters, especially in preschool, primary, and secondary school education units.

The level of professionalism of Islamic Religious Education supervisors in the information technology era can be seen in the effort to increase the competency of Islamic education teachers, both in terms of learning and performance, to improve teacher quality. This is also the duty and responsibility attached to the supervisor of Islamic Religious Education in Banggai Regency, Central Sulawesi Province.

The main problem related to the supervision of Islamic Religious Education in the Sulawesi Province area is its implementation's unique challenges and obstacles. In this province, 13 districts/cities are spread over a wide area, while the number of Islamic Religious Education supervisors is minimal. The main problems related to the challenges faced by supervisors of Islamic Religious Education in Central Sulawesi Province in carrying out their duties include the limited number of supervisors. One of the main problems is the limited number of Islamic Religious Education supervisors. One supervisor must supervise many trained teachers in many cases, making it challenging to provide sufficient attention to each teacher. Then, the area of Central Sulawesi Province is quite large, with an uneven distribution of Islamic religious education teachers. This large area makes it difficult for Islamic Religious Education supervisors to visit and monitor each school effectively.

Based on this discussion, the primary variable or focus of this research is the professionalism of Islamic religious education supervisors in the information technology era in carrying out their supervisory duties. The similarities between this research and previous research are in the role of Islamic religious education supervisors. Therefore, researchers are interested in conducting this research to complement relevant and unstudied previous research and to emphasize the strategic aspects of monitoring Islamic religious education in the era of information technology in the Banggai district.

II. LITERATURE REVIEW

A. Educational Supervision

The definition of supervisor comes from English, which means a person given the task of supervising (Kiley, 2011). Furthermore, supervision is said to be an action carried out by supervisors and school principals, who have a higher position than teachers, to observe and supervise the teacher's work. In other words, supervision refers to a shared view of learning concepts and teaching methods developed jointly by supervisors, teachers, and school community members (Harris & Valverde, 1976). In addition, supervision in the educational context, known as educational supervision, refers to professional actions carried out by experts or school principals to supervise, guide, and evaluate teachers' performance in schools. Academic supervision is also included to guide teachers in developing the learning process and its supporting elements.

Educational supervision is assistance from the supervisor or school principal to improve school management and teaching staff performance to achieve academic goals optimally (Patel, 2016). In education, supervisors provide technical services and guidance to teachers and school staff to improve the quality of work, especially in developing classroom learning. Supervisors must have knowledge and skills that can be passed on to teachers, even on a small scale. Supervisory assistance and services to teachers are always aimed at ensuring the quality of education. Supervisors' knowledge and skills should be conveyed to teachers continuously.

The responsibilities of school supervisors include carrying out supervision in the academic field and supervision in managerial aspects. In line with this, the role of supervisors is divided into two factors: the first is academic supervision, which includes operational supervision, and the second is administrative supervision, which involves managerial supervision or aspects of organizational supervision (Yavuz, 2010). Academic supervision prioritizes observation of issues directly related to the teaching and learning process carried out by teachers to help students during the learning process. Meanwhile, administrative supervision

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focuses on observing administrative aspects that act as a learning environment that supports the smooth learning process. These two forms of supervision activities are known as educational supervision (Gülşen, Ateş, & Bahadır, 2015).

B. Use of Technology in Supervision

Utilization of technology is a pattern of behavior or attitude in using information technology to complete tasks and improve performance (Ratna, Nayati Utami, Siti Astuti, Wilopo, & Muflih, 2020). Within the scope of companies and government institutions, technology is now an everyday activity that is not difficult to find. It cannot be denied that information technology has become a need and a requirement for organizations in running their business. Organizations need information technology to help achieve their goals, but providing information technology requires a significant investment. The company's information technology investments must be implemented optimally. Information technology in an organization needs to be managed by the information technology department but must be managed (governed) professionally. Professional information technology management is called information technology governance (IT Governance) (Peterson, 2004).

Utilization of technology is related to the behavior of using technology to complete tasks and improve the performance of companies or government institutions. The theory of attitudes and behavior states that the use of personal computers or PCs (Personal Computers) by users who know an environment that can choose (optional) is influenced by their affection (Maseeh et al., 2022). The attitude and behavior affect the use of PCs, social norms in workplaces that use PCs, habits regarding the use of PCs, expected individual consequences from using PCs, and facilitating conditions in a conducive environment utilizing a PC.

Social factors internalize a group's subjective culture and certain interpersonal agreements between individuals in certain social situations (Bagozzi & Lee, 2002). Subjective culture contains norms, roles, and values. Meanwhile, affect is related to feelings of pleasure, joy or depression, disgust, displeasure, or hatred towards an individual with specific actions. Complexity is the level at which innovation is perceived as relatively difficult to interpret and use. In the context of innovation adoption, complexity has a negative relationship with technology utilization. Job suitability is related to an individual's ability to use a PC. This dimension measures the level of individual confidence that using a PC can improve their performance. Facilitating conditions in Triandis theory are objective factors in the work environment that make it easy for users to use a PC.

This theory emphasizes using data and information technology to support supervision and increase teacher competence (Martin, Kumar, & Lizarondo, 2017). Supervisors use digitally collected data, such as teacher performance evaluation results, test results data, or recorded classroom observations, to provide feedback and plan specific corrective actions. Data-Driven Supervision Theory is a supervision approach that emphasizes using data and information technology to support supervision and increase teacher competency. In this theory, school supervisors use digitally collected data, such as teacher performance evaluation results, test results data, or recorded classroom observations, to provide specific feedback to teachers and plan appropriate corrective actions (Rousmaniere, 2014).

II. METHODOLOGY

This study was conducted in State Islamic High Schools in Banggai regency in Central Sulawesi, Indonesia. Data was gathered through field observation, in-depth interviews, and written material analysis. The interviews involved five the schools supervisors, two school principals and fifteen Islamic religious teachers from the schools. Data was analyzed using a thematic analysis approach, which begins with open coding, iterative coding, and finally, theoretical coding to build theoretical constructs from the data. Before analysis, the data was transcribed, and the results of the transcripts were consulted with the participants to obtain their consent (Nurdin, Scheepers, & Stockdale, 2022; Nurdin, Stockdale, & Scheepers, 2014). The data analysis used a deductive thinking technique, interpreted as a research procedure that produces deductive data from the interviews and field notes. Data analysis was conducted using thematic analysis from Strauss and Corbin (1998). The analysis started with open, axial, and selective coding. The final result of the data analysis is themes found from the data as practiced by Nurdin (2018).

This study was conducted in a telecommunication company in Central Sulawesi, Indonesia. Data was gathered through field observation, in-depth interviews, and written material analysis. Data was gathered through observation, in-depth interview, and document analysis. The interviews involved 12 employees and five managers. Data was analyzed using a thematic analysis approach, which begins with open coding, iterative coding, and finally, theoretical coding to build theoretical constructs from the data. Before analysis, the data was transcribed, and the results of the transcripts were consulted with the participants to obtain their consent (Nurdin et al., 2022; Nurdin et al., 2014). The data analysis used a deductive thinking technique, interpreted as a research procedure that produces deductive data from the interviews and field notes. Data analysis was conducted using thematic analysis from Strauss and Corbin (1998). The analysis started with open, axial, and selective coding. The final result of the data analysis is themes found from the data as practiced by Nurdin (2018).

III. RESULTS AND DISCUSSION

A. *Professionalism of Islamic Religious Education Supervisors.*

The Supervisor of Islamic Religious Education is a functional official who plays a vital role in carrying out technical tasks of assisting and supervising Islamic religious education in schools. One of the successes of Islamic religious education is very dependent on supervisors' performance. Therefore, the involvement of Islamic Religious Education supervisors in various educational activities and increasing professional insight and abilities in their field of work is a must. In this era of globalization, one way to improve the quality of Islamic religious education in schools is to increase the professionalism of supervisors. Supervisors who undertake this profession must carry out their supervisory duties professionally.

This research explores the professionalism of supervisors in carrying out their supervisory duties in the information technology era in Banggai Regency through interviews with Islamic Religious Education supervisors, assisted Islamic Religious Education teachers, and several School Principals, as well as stakeholders and the government, in this case, the Ministry of Religion of Banggai Regency.

1. *Carry out the role of a responsible supervisor.*

One form of professionalism of Islamic religious education supervisors in the era of information technology in Banggai Regency is the role and duties of supervisors as responsible supervisors. To be able to explore this, the researcher analyzed and concluded the data based on the results of interviews, observations, and documentation studies of the primary informants and supporting informants and then analyzed it so that a conclusion could be determined. This research shows that professional Islamic Religious Education supervisors in the information technology era play a crucial role in improving the competency of Islamic Religious Education teachers.

Supervisors are essential as mentors who provide direction and support to Islamic Religious Education teachers. This guidance includes learning planning, teaching methods, and classroom management. Based on the results of interviews with Islamic Religious Education Teacher Supervisors in Banggai Regency, as follows:

We provide guidance both in theory and direct practice. This guidance includes preparing a Learning Implementation Plan, teaching techniques, and classroom management. We also often hold group tutoring sessions so teachers can share experiences (Informant A).

Based on this statement, the researcher then conducted a documentation review of the supervision reporting of Islamic Religious Education Teachers in the Banggai district. Based on the results of documentation studies in the form of meeting minutes books and supervisory reports show that supervisors have demonstrated their role as supervisors by guiding the quality of learning, including the preparation of learning implementation plans, teaching techniques, and classroom management with group guidance using the method of sharing experiences. However, under the same conditions, guidance using a model like this cannot be carried out continuously on a regular and ongoing schedule because supervision scheduling cannot be carried out repeatedly. After all, the area is covered by a few trained teachers who must be accompanied.

2. *Provide Teachers with Opportunities for Professional Development*

Efforts to improve the quality of Islamic education in Banggai Regency are by improving the quality of teachers. Professional development for Islamic Religious Education teachers is significant. Interviews with education supervisors, principals, and teachers highlight their commitment to providing substantial opportunities for Islamic Religious Education teachers to develop themselves professionally. The following is an interview excerpt that illustrates the joint efforts to support the career development of these educators. As one supervisor put it:

One of our focuses is the professional development of Islamic Religious Education teachers in Banggai Regency. We provide information and facilitate teacher access to development programs, including workshops, seminars, and training that can improve their teaching competency (Informant C).

The supervisor's attention to the professional development of Islamic Religious Education teachers in Banggai Regency actively facilitates teachers in various training efforts to increase the competency of Islamic Religious Education Teachers in Banggai Regency. Apart from that, the supervisor also provides related direction to support the school's needs. As expressed by Moh. Ridwan, as follows:

As supervisors, we provide information so that Islamic Religious Education teachers have the opportunity to develop themselves professionally. We not only support them in undertaking training but also provide guidance on programs that best suit their individual and institutional needs (Informant B).

The results of these interviews indicate that there is synergy between supervisors, school principals, and teachers in an effort to improve the competency and quality of teaching of Islamic Religious Education teachers in Banggai Regency. The initiatives

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demonstrate an understanding of the importance of continuous professional development to enhance the quality of Islamic religious education.

Based on the results of a review of the 2016-2021 Banggai Regency Regional Government Strategy Plan Documentation, the percentage of teachers who are certified and meet the required educational qualifications in 2019 is 95% of the target set in the Strategic Plan of 80%. Achievements in 2020 amounted to 60% of the target set at 95%. There was a decrease of 35%. Meanwhile, in realizing the Banggai Regency strategic plan for 2021-2025, an increase of up to 70% of teachers who have been certified and meet the required educational qualifications will be achieved in 2024.

Based on interview findings and documentation, studies show that the commitment of supervisors, school principals, and teachers in Banggai Regency is to provide significant opportunities for Islamic Religious Education teachers to develop themselves professionally. Active support from these parties includes giving information about training and guidance and practical support to ensure participation and success in the career development of Islamic Religious Education teachers. This approach ensures that teachers can continue to improve their competency to provide quality education to students in the region.

3. Effective collaboration and communication with colleagues

Improving the quality of educational supervision depends not only on a supervisor's competence but also on their ability to collaborate and communicate effectively with colleagues (Ubogu, 2024). In Banggai Regency, effective collaboration and communication between Islamic Religious Education supervisors have become a necessity in efforts to improve the quality of religious education supervision.

The findings of this research provide insight into how collaboration and good communication can positively impact supervisory professional development. Through interviews and observations, this research highlights various strategies and best practices implemented by Islamic Religious Education supervisors in Banggai Regency to build an effective work environment. This includes regular meetings to share experiences and discuss challenges faced in the oversight process.

This research aims to provide guidance and recommendations for other supervisors of Islamic Religious Education by highlighting this effective communication. Through strong collaboration and effective communication, the supervision of Islamic Religious Education can continue to run professionally in assisting Islamic Religious Education teachers in Banggai Regency. These findings illustrate the importance of building good relationships between supervisors of Islamic Religious Education in Banggai Regency. Good relationships between fellow supervisors promote better-quality supervision and provide much-needed emotional and professional support. These findings show that through constructive relationships, supervisors of Islamic Religious Education can support each other and jointly overcome challenges in supervision, especially supervision of Islamic Religious Education.

B. Strategy for Supervising Islamic Religious Education

The research results show that Islamic Religious Education teacher supervisors can overcome obstacles in the information technology era by implementing various strategies. These strategies and solutions are summarized below:

1. Decentralization of Supervision.

Decentralization of Islamic religious education supervision is carried out as a strategy to overcome the large area of the target area and the large number of teachers who must receive assistance. Decentralization of supervision is carried out in two ways, namely:

- a. Establishment of Regional Coordinators: Appoint supervisory coordinators to manage and monitor the implementation of religious education in their respective regions.
- b. Dividing the supervised areas proportionally: The supervision area consists of four supervisors responsible for specific areas so that supervision can be more focused and well distributed. The supervisory area is divided into four zones to facilitate the visiting process, where assignments are adjusted to where each supervisor lives. This is very effective because supervisors can easily access the nearest target area.

2. Flexible and Adaptive Supervision Approach

One of the central supervisory tasks that Islamic Religious Education supervisors must carry out is regular visits to schools and trained teachers to monitor the implementation of Islamic religious education and provide constructive input to improve the quality of Islamic religious education. In its implementation, the large area and the large number of trained teachers who must be provided with assistance are crucial obstacles, so one of the strategies implemented is to take a flexible and adaptive supervision approach, namely:

- a. Flexible Visit Schedule: Create a flexible visit schedule based on priorities, such as low-performing schools or those that need more attention.
- b. Hybrid Approach: Using a hybrid approach that combines direct (face-to-face) and indirect (online) supervision as needed

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3. Strengthen Communication and Collaboration

The following are interview statements from four supervisors regarding strategies and solutions to overcome obstacles and challenges in supervising Islamic Religious Education teachers in the information technology era, with a focus on strengthening communication and collaboration. From interviews with supervisors, the researcher can conclude that supervisors establish regular lines of communication with Islamic Religious Education teachers through video conferencing platforms. They held meetings to discuss challenges in teaching Islam and find solutions together, even though these activities were carried out infrequently. This approach ensures open and transparent communication and creates greater trust between supervisors and teachers.

It was found that teachers are encouraged to share their ideas and challenges through online forums and discussion groups as practiced in previous studies (e.g: Hur & Brush, 2009). They use chat and email applications to facilitate intensive daily communication. This approach helps create a collaborative work environment, supporting improving the quality of Islamic learning in schools.

A participant admitted that he occasionally actively organizes virtual discussion sessions and Islamic Religious Education teacher groups using the WhatsApp and Zoom Meet platforms. This allows teachers to communicate easily and resolve problems raised during discussions (Informan A).

The four supervisors demonstrated a solid commitment to overcoming communication and collaboration barriers in supervising Islamic Religious Education teachers in the information technology era. By utilizing video conferencing platforms, online forums, communication applications, and the SIM-KG-PAI application, they succeeded in strengthening relationships between supervisors and teachers and increasing the effectiveness of supervision of Islamic Religious Education. Open and transparent communication is the key to creating a dynamic and adaptive work environment that aligns with current developments. In this way, this supervision can run more efficiently and effectively, positively impacting the progress of Islamic religious education.

V. CONCLUSIONS

The use of information technology in supervising Islamic religious education in Banggai Regency has had a significant positive impact. Technology makes administration easier and increases the efficiency and effectiveness of teacher development. The system used, whether using a simple application or one that uses a particular application, facilitates mentoring activities and supervision of learning activities carried out by teachers. Online monitoring makes it easier and increases objectivity in assessing teacher performance, while transparency in the supervision process increases teachers' trust in supervisors. Collaboration and cooperation strengthened by technology are crucial in improving the quality of mentoring and supervision for Islamic Religious Education teachers.

The strategies implemented by Islamic Religious Education supervisors in facing obstacles and challenges in supervising Islamic Religious Education teachers in the era of information technology are a) decentralizing supervision, b) implementing a flexible and adaptive supervisory approach, c) strengthening communication and collaboration, and e) joining forces with provincial and national working groups as well as other professional communities. Another strategy is to use information technology to simplify and streamline supervisory tasks. In research findings, supervisors must increase competence in using educational technology and modern teaching methodologies through structured training and professional development. Better resource allocation and an increase in the number of supervisors are also needed to ensure adequate guidance for each teacher.

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Improving the Ilocano Phonological Awareness of Kindergarten Learners Using Indigenized Reading Materials



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ABSTRACT: The study aims to improve the Ilocano phonological awareness of kindergarten learners in Sto. Rosario Elementary School, Sigay, Ilocos Sur, using indigenized reading materials. The result shows a significant positive impact on learners' skills in Ilocano phonological awareness, as demonstrated by the scores from the post-test. A paired samples t-test confirmed that the difference between pre-test and post-test means was statistically significant, demonstrating the effectiveness of the intervention.

The increase in the mean posttest score further supports that learners have improved significantly in all factors of phonological awareness. These outcomes explain why indigenized reading material and environmental print are incorporated into early childhood education. The materials provided a culturally familiar context that added meaning to what had been learned and further directed learners' attention toward phonemic patterns through visual word forms.

KEYWORDS: Culturally Relevant Context, Ilocano Phonological Awareness, Indigenized Reading Materials, Phonological Awareness

I. INTRODUCTION

Literacy is a fundamental ability for a child and is the underpinning support to academic learning. It pertains to reading, writing, and counting and would thus be essential to the child's proper academic performance and life. For Philippine education, literacy skills are to be taught during kindergarten. During this early stage of development, knowledge about sound structure and the symbol-sound relationship must help the child read correctly.

The Department of Education (DepEd Order No. 14, s. 2018) in the Philippines has recognized the importance of literacy improvement and placed it high on the agenda through their flagship program, Every Child a Reader, to ensure every Filipino child can be a proficient reader and writer by end third grade. According to DepEd, kindergarten is the stepping stone from informal to formal literacy, as these are critical years and must encourage positive experiences to prepare children for school.

Specifically, most Ilocano Grade 1 learners need to achieve adequate reading fluency. In 2015, a USAID report disclosed that only 55 percent of these learners read at or above 10 correct words per minute, and hardly a percentage could boast reading fluency rates as high as 60 correct words per minute or more. Grade 1 Ilocano learners had an average oral reading fluency rate of 18 CWPM, slightly above the 2014 average of 14 CWPM. Further, it disclosed that 17% of learners could not read even one word of connected text, and 56% could not answer reading comprehension questions. These findings indicate a low level of reading fluency among regular grade 1 Ilocano learners, and what should be established is the essential skill of reading in kindergarten.

The essence of literacy is best grasped when setting the context of international assessments. In 2018, the Philippines was ranked at the bottom in terms of reading comprehension among 79 countries. In reading comprehension, it ranks last among its Southeast Asian neighbors. The Programme for International Student Assessment, administered by the Organization for Economic Cooperation and Development, tested some 600,000 15-year-old learners from various countries. That poses a concern regarding reading comprehension competencies because the inability to read is a disadvantage in other subjects, be it math, science, or humanities. What the World Bank's report points out in 2022 is the additional impact of the pandemic, as 90% of children aged 10 failed to read because of remote learning challenges.

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Low- and middle-income countries were already experiencing a learning crisis before the effects of the COVID-19 pandemic. The most profound effects of the disruption have been on early childhood learners, whose development has been halted in the most volatile aspects. Thus, the poor performance of the Philippines in international exams makes it urgent to read, comprehend, and engage in other literacy-related matters to enhance academic performance among learners. The improvement of reading skills among children needs to be done early, starting from kindergarten, so that they will continue to be proficient even to higher grade levels.

Language, literacy, and communication are vital developmental domains under the kindergarten curriculum. These include promoting early literacy learning and self-expression through language using the child's mother tongue or first language. This fosters a positive attitude toward reading and writing while encouraging children to view themselves as influential users and learners of language.

In language, literacy, and communication, phonological awareness is critical. It involves various skills, including oral identification of letter sounds, recognition of rhyming words, and words with the same beginning sound. Phonological awareness refers to the ability of the children to hear, identify, and manipulate sounds in spoken words. These include rhymes, syllables, and phonemes. Children performing adequately in phonological skills are generally better provided to read. Therefore, it is essential for all elementary teachers, above all kindergarten teachers, to explicitly instruct phonological awareness to all learners.

Research has indicated that a child's phonological awareness at the entry point of kindergarten is among the best predictors for the learner regarding literacy success or failure during their entire school career. Thus, phonological awareness needs to be assessed in learners so that areas of deficiency can be identified. By assessing phonological awareness, teachers can design focused and systematic instruction to target specific areas of need.

Teaching phonological awareness to all learners is a strategy that can contribute significantly to reading instruction. Phonological awareness skills have been consistently and extensively documented as essential to successful reading and spelling. Systematic phonological awareness instruction can give learners the foundation to become proficient readers and spellers.

Another important aspect of phonological awareness assessment by kindergarten is that it helps the teacher keep track of their learner's progress and adjust instruction appropriately. Through assessments, one can find where the learners require more support or even intervention while phonological skills are developed at optimal levels.

Sto. Rosario Elementary School is a multigrade and Indigenous People Education (IPEd) school in a geographically isolated upland municipality of Sigay, Ilocos Sur. It has faced very significant problems, in addition to those that are continuing, in providing quality education to kindergarten learners. This is because of limited access to resources, few instructional materials, and logistical difficulties in a very isolated area. Multigrade teaching and cultural requirements of IPEd create a new set of challenges within which the needs of this group bring problems in fully understanding their young children's learning requirements.

Based on the researcher's experience and observations in the classroom, almost all three learners still need to achieve familiarity with alphabet letters or the ability to produce their corresponding sounds. The time taken to read three-letter CVC words is also considerable, and they even exhibit inappropriate behavior to hide their reading struggles. Aware of the existing problem, the teacher-researcher seeks to create an indigenized reading material that only focuses on enhancing the phonological awareness of kindergarten learners.

Therefore, this study will augment the kindergarten learners' fundamental reading abilities and further enable them to grow their reading abilities and competencies to satisfy the minimum competencies for kindergarten and higher grade levels. This study has filled the gap by focusing on developing tailored reading materials based on the learners' cultural context and applying practical phonological awareness exercises.

This study, therefore, hopes to address the emerging concern of low performance and reading deficiencies among kindergarten learners in Sto. Rosario Elementary School, through the development and implementation of indigenized reading materials, will concentrate on tailoring them to the specific needs and challenges faced by the learners themselves. This would then ensure that enhancing their phonological awareness provides the learner with the ingredients needed to function successfully in the complex realm of reading and be set toward improved academic success.

In a nutshell, challenges in the instruction of kindergarten learners in Sto. Rosario Elementary School has led to a focused intervention on developing phonological awareness skills. The researcher's experience will illustrate the need for intervention for low learner performance. This study seeks to fortify the basic skills of kindergarten learners by developing indigenized reading materials appropriate for the cultural context of the learners, as well as using practical exercises that develop phonological awareness in preparation for future academic success.

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II. RESEARCH QUESTIONS

3.1 Research Design

This study aimed to improve the Ilocano phonological awareness of kindergarten learners of Sto. Rosario Elementary School, Sigay, Ilocos Sur, School Year 2023-2024 using indigenized reading materials.

Specifically, it sought to answer the following questions:

1. What is the learners' phonological awareness level in their pre-test and post-test?
2. Is there a significant difference between the learners' phonological awareness levels before and after the intervention?
3. What are the perceived benefits of using indigenized reading materials in improving learners' phonological awareness?

3.2 Participants

Three kindergarten learners from Sto. Rosario Elementary School in Sigay, Ilocos Sur, comprised the participants of this study. Upon entry, the researcher observed that the class had not yet mastered having familiarity with alphabet letters and could not produce their respective sounds. Reading three-letter CVC words took them a significant amount of time, and some learners even displayed inappropriate behavior to conceal their reading difficulties. The observations indicate a general need for more basic phonological awareness reading skills among the learners.

3.3 Intervention

The current study involved indigenizing a reading material that the teacher-researcher designed to target phonological awareness skills for kindergarten learners. "Indigenous instructional material" is an instruction material created by the teachers where consideration has been taken from the culture, Indigenous knowledge system, practices, and Indigenous learning system of the learners and community (Rivera & Sanchez, 2021; Tolentino et al., 2020; Hipolito, 2019).

Localized reading materials are effective in earlier studies. Navales and De Mesa (2019) developed localized reading material for Laguna Grade 8 learners and concluded that it appropriately triggered learners to read by helping them establish connections with the content. Pinoliad (2021) hypothesized that contextualization and localization of reading materials enhanced reading comprehension among learners. Building from these findings, this study centered on developing a decontextualized readers' input by implementing environmental print.

Exposure to environmental print, which includes words and graphic signs in the child's environment, enables children to live with written code in the concrete mode and is the first step toward interpreting abstract symbols. In addition, environmental print fosters early child literacy in the reading code (Morrison & Morrison, 2022). Qing et al. found the role of environmental prints in promoting early reading development. They suggested that using salient pictures within the environment could help children's eyes focus on the words themselves. Adding environmental print, this developed material hoped to give young children rich experiences of the visual forms of words.

According to Roe et al. (2019), most children learn to read environmental print even before attending school. This often occurs as they grow up with the surroundings they see each day. In this paper, the teacher attempted to bridge the home/community environment with the classroom environment by using environmental print in reading materials. This included ads and advertisements for items seen by children.

The reason is that phonemic awareness is a part of phonological awareness; the material's content was initiated by familiarizing the learner with the letter and its sound. Further activities included training in identifying words that rhyme, recognition of alliterations, segmentation of sentences into words, syllable finding in words, and blending and segmenting onset-rimes.

The indigenized reading material was developed through a process that involved the review and analysis of the reading competencies expected of the kindergarten learners, design and development of the material from the insights gathered, expert validation, and revamping of the activities based on the suggestions and comments of the validators. The validators were the school head, master teacher, and language teacher, who gave valuable insights and feedback to enhance the learning process.

3.4 Instrumentation and Data Collection

In this study, both quantitative and qualitative research methods were employed. A quasi-experimental one-group pretest-posttest design was utilized, involving a single intact class before and after the intervention. Researchers commonly use this design to assess the impact of a treatment or intervention on a specific sample (Cranmer, 2017).

After obtaining the necessary approval and permit from the school head, a formal letter was addressed to the participants' parents, seeking their permission for their children to be part of the study. It was emphasized that the learners' names would not be mentioned at any point in the research, and they would not be coerced or pressured to answer the test.

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To assess the participants' level of phonological awareness, a series of oral reading tests was administered using indigenized reading materials. These materials were designed to incorporate cultural elements familiar to the learners, creating a more engaging and relevant context for their reading assessments.

The oral reading tests evaluated the learners' ability to recognize and manipulate sounds within words. They were tasked with identifying rhyming words, recognizing alliteration, segmenting sentences into words, identifying syllables in words, and blending and segmenting onset-rimes. These assessments provided valuable insights into the learners' phonological awareness skills, allowing for a more comprehensive understanding of their reading abilities.

By utilizing indigenized reading materials and conducting oral reading tests, the study sought to gain a deeper understanding of the learners' level of phonological awareness. The findings from these assessments would inform the subsequent development of targeted interventions aimed at improving the learners' reading skills, particularly in phonological awareness.

During the Third Quarter of the School Year 2023-2024, indigenized reading material was used to teach kindergarteners reading. The researcher initially developed a 40-item Phonological Awareness Test in Ilocano that served as the primary research instrument for the pretest and posttest.

One day was allocated for the administration of the pretest and posttest. In addition to the quantitative data, field notes were taken to document the teacher's observations during monitoring and follow-up activities. These observations aimed to assess the suitability of the strategy employed in addressing the problem. The qualitative remarks derived from the field notes were considered in evaluating the effectiveness of the indigenized reading material in improving the phonological awareness of kindergarten learners.

3.5. Data Analysis

The recorded raw scores obtained before, during, and after the intervention were tabulated, graphed, and analyzed. The quantitative data collected in this study underwent descriptive and inferential statistical analysis. In addressing the first problem, the learners' phonological awareness level was determined using percentage and mean scores. The data categorization below was used to interpret the level of phonological awareness:

Level of Phonological Awareness

Score Range	Descriptive Rating
31-40	Very Good
21-30	Good
11-20	Average
0-10	Poor

For the second problem, the mean pretest and posttest scores in the Phonological Awareness Test were analyzed using the t-test for dependent samples to determine the presence of a significant difference. The hypothesis was tested at a significance level of .05. Regarding the third problem, qualitative data was gathered through field notes and subjected to content analysis. The data were assigned codes utilized in the content analysis to identify possible themes relevant to the study.

IV. RESULTS AND DISCUSSION

4.1 Level of Phonological Awareness of the Learners before and After the Intervention

The results of the pretest and posttest scores of the kindergarten learners are presented in Table 1.

Table 1. Level of Phonological Awareness of the Learners before and After the Intervention

Score Range	Pretest	%	Posttest	%
31-40 (Very Good)	0	0	3	100
21-30 (Good)	0	0	0	0
11-20 (Average)	0	0	0	0
0-10 (Poor)	3	100	0	0
Total	3	100	0	100
Level	Poor		Very Good	

The table shows that during the pretest, 100% of the learners (3 out of 3) scored within the lowest score range of 0-10, which pointed out that all the learners were at a "Poor" level of phonological awareness. The findings indicate learners needed

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more skills in phonemic discrimination; that is, few skills for perceiving and using sounds in language before intervention. It would be crucial for early literacy learning since the lack of foundational phonological skills may negatively impact their capacity to decode. Decoding is a critical early step in learning to read.

The post-test shows a drastic change; all the learners scored within 31-40, falling in the "Very Good" category. This drastic change, wherein all learners with "Poor" grades turned to "Very Good," raises high expectations that the intervention was compelling enough to enhance phonological awareness skills. Since no one learns at the score level of 0-10, 11-20, or 21-30, it can show that the learning intervention caused a total transformation of learners' capacities for phonological abilities.

In contrast, the mean score of learners on the posttest was 34.67, which indicates a dramatic performance improvement compared to their scores for the pretest. This dramatic increase proves how effective the instructional approach used to enhance phonological awareness has been. Therefore, from these results, the intervention involving local-variation reading material had some impact on learners' phonological awareness.

The intervention improved learners' phonological awareness skills from average to excellent performance. Notably, the positive change in phonological awareness among kindergarten learners after the intervention using indigenized reading materials is similar to what the other researchers have recently reported in studies like those of La Croix et al. (2023), Gillon (2023), Solis (2023), and Gurjar (2023). The above studies underlined the importance of adjusting the reading intervention, culturally embedded materials, and the strategy on phonological awareness in improving early literacy development.

Significant Difference in the Level of Phonological Awareness before and After the Intervention

Table 2 shows the result of the paired samples t-test of kindergarten learners' mean pretest and posttest scores in the Ilocano Phonological Awareness Test.

Table 2. Paired Samples T-test of the Mean Pretest and Posttest Scores

	Mean	Mean Difference	N	df	p (2-tailed)	Remarks
Pretest	8.67	26	3	2	<. 001	Significant
Posttest	34.67					

The mean pretest score was 8.67, which means that, on average, the learners had a low level of phonological awareness before the intervention through the indigenized reading materials. On the other hand, the mean post-test score significantly increased to 34.67, which means that, on average, the learners had a substantial improvement in their skills in phonological awareness as a result of the intervention.

The t-test showed that the p-value in this study was 0.001, which is less than the significance level of 0.05. This indicates that the mean pre-and post-test scores are insignificant when considering the learners. This study concludes that these results prove that the intervention through indigenized reading materials significantly positively affects kindergarten learners' phonological awareness skills. The most notable increase in the mean score during post-testing is observed in aspects such as rhyming discrimination, sentence segmentation, syllable segmentation, and phoneme blending, indicating the presence of a significant improvement among the learners.

The findings hold with research proving that positive outcomes make way through such interventions in phonological awareness in early childhood education. Research studies emphasize the importance of targeted interventions for enhancing the phonological awareness skills of young learners.

According to Jones and Christensen (2023), environmental prints are valuable instructional tools that support early reading development. These prints, like signs, labels, and logos in children's environments, offer them a vibrant perceptual experience about word forms at a very young age. This is further supported by Zoll et al. (2023), who found that early exposure to environmental print enables children to make meaning from abstract symbols and begin learning about written language.

Such strategies as word-salient pictures in the environment tend to foster the development of phonemic awareness by drawing children's attention to the words themselves. This makes environmental prints add meaning and context to kindergarten learners' learning and foster their phonemic awareness development. Similar observations from Netra and Eddy (2023) suggested that the localization and contextualization of reading materials can enhance reading comprehension.

Further, studies have substantiated the role of environmental print in early literacy development. Xiao et al. (2023) posit that early exposure to environmental print in the form of words and symbols in children's surroundings facilitates comprehension of written language, which naturally supports early reading development.

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Xue et al. (2023) emphasized the concept of phonemic awareness as a component of phonological awareness and its significance in reading development. The authors further pointed out that many children learn to read environmental print before they attend formal schooling.

The findings from these studies justify using the indigenized reading materials in the current study and emphasize the phonological awareness-based intervention to improve the reading skills of kindergarten learners. The posttest results, where all the learners scored high, indicate that the intervention implemented through the indigenized reading material enabled the participants to develop their phonological awareness abilities effectively.

It is based on previous studies and affirms the latter's results; therefore, the current research allows for an increase in support for the application of targeted interventions and Indigenous reading materials in developing phonological awareness and reading skills during early childhood education.

Perceived Benefits of Using Indigenized Reading Materials in Improving the Ilocano Phonological Awareness of Kindergarten Learners

From the field notes, analyzing the perceived benefits of using indigenized reading materials in enhancing the Ilocano Phonological Awareness of Kindergarten Learners was very much possible. In Week 1, the introduction of the materials was of high interest and enthusiasm among the learners. They were very active in all the tasks and yearned to open and discuss the materials. Their performance for phonological awareness tasks like rhyming and syllable segmentation improved compared to other lessons. This means the culturally relevant examples and images used in the materials were relevant and particularly evocative for the learners, creating an aura of relevance and connection.

With each successive week, phonological awareness remained a strong ability with the learners. For instance, by Week 2, they became more capable and more robust at accomplishing phoneme blending and tasks related to breaking a word into syllables. They grew more confident about participating in phonological awareness-related activities; such activities showed increased participation when learners gave their answers and ideas more freely. This is because the indigenized reading materials allowed them to create a positive attitude toward learning and a culturally inclusive classroom environment.

By Week 3, learners performed phonological awareness tasks at a new level of mastery. At this stage, many learners also displayed increased accuracy and automaticity in identifying initial sounds and blending to form words. Continued use of indigenized reading materials kept their attention for further engagement and active participation during lessons. Furthermore, incorporating culture-related material positively impacts the learner's disposition toward reading and thus becomes an advantage in the process.

In the fourth week, learners improved their phonological awareness skills very well. Their capabilities were marked in tasks such as rhyming discrimination, blending of syllables, and segmentation of phonemes. The transfer of phonological awareness to actual reading situations was noticeable, with these learners' improved reading fluency and accuracy. Importantly, however, the materials had positive spillovers because of the increased self-esteem of the learners and their lively interest in learning.

Week 5 allowed continued exposure to the same reading materials to deepen the learners' phonological understanding. They were also able to apply their skills to decoding and spelling without necessarily demonstrating the applicability of their learning, which shows that the identical learners' attitudinal positive remarks on reading and language learning tended to seek every event outside the schedule set aside for such activities. Therefore, integrating culturally relevant content into the materials continued to promote cultural pride and identity in the learners, making their learning experiences much more fulfilling.

During the sixth week, learners involved in the indigenized reading materials incessantly enhanced their skills relating to phonological awareness. They could read vowel sounds and manipulate phonemes in words without much struggle. This gave them more confidence in their phonological awareness skills, allowing them to ask for challenging work and foster teamwork with their peers. The use of indigenized materials continued to promote a connection to cultural relevance and meaning, as learners felt proud of their heritage and increased cultural sensitivity. The learners demonstrated an ability to connect more of their own experience with the concepts of phonology being taught by using culturally familiar examples and contexts in the materials. With the heightened positive attitude toward language learning, the learner's interest in learning new vocabulary and conversing using the target language intensified.

By week 7, learners' phonological awareness skills expanded and grew. This entailed more complex tasks- such as the ability to manipulate syllables and replace a phoneme in a word. Learners could also read more accurately and fluently with accurate CVC words and simple sentences. In this regard, these improvements resulted directly from using indigenized reading materials. The attitude of the learners toward reading and learning the foreign language was maintained as they were eager for opportunities to interact with the material and independently approach related sources. Applying indigenized materials for

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phonological awareness activities has enhanced learners' ownership of the intervention and cultural identity, creating a perfect configuration of a sound learning environment.

By the last week of the term, Week 8, phonological awareness was well beyond obvious and established by the advanced level abilities developed in rhyming, segmenting multisyllabic words, and identifying the sound patterns in words. Improved phonemic accuracy and awareness also aided spelling: they could now correctly apply phonological rules for spelling words. Most importantly, their positive attitude toward reading, language, and cultural heritage remained intact. The indigenized materials have inspired and motivated the learners, challenging them to sustain continued interest and enthusiasm.

Field notes indicate the perceived advantage of using indigenous readings during the phonological awareness improvement activity of Ilocano learners. The readings sparked the interest and eagerness of the learners, making them participate in the activities more actively. For instance, examples and images used to represent the culture of the learners made the activities more relevant and relevant. Indigenized material also rises with time, thus influencing the phonological awareness learners generally possess, such as blending, segmenting, and manipulating sounds in words.

Beyond academic performance, there was also a positive impact on learners' self-esteem, motivation, and cultural pride. The indigenized materials were also instrumental in acquiring a positive attitude toward learning and a culturally inclusive classroom environment. Increased exposure to indigenized materials deepened phonological awareness and applications of their decoding, spelling, and authentic reading knowledge. Culturally relevant content further enhanced the cultural identity and pride; for that reason, learners continued to engage with language with affirmative attitudes.

These results underscore the role of indigenized reading materials in providing a supportive environment for Ilocano learners to develop their phonological awareness and set up the classroom as a positive learning space. Project success was realized with the resulting benefits of enhanced academic performance, the development of language skills, and appreciation of their culture. Further research can be conducted to trace the long-term outcomes of using indigenized materials for learners' literacy development and continued engagement with their cultural heritage.

V. CONCLUSIONS

All learners' phonological awareness improved significantly, going from "Poor" on the pretest to "Very Good" on the posttest. Before the intervention, all scores fell into the lowest category, indicating that most students needed to improve their phonemic discrimination. However, all students achieved high scores on the posttest, demonstrating the remarkable improvement that occurred when indigenous reading materials were employed. This result indicates that the culturally appropriate approach improved their phonological abilities while reinforcing a positive attitude toward learning, demonstrating the efficacy of such treatments during the early stages of literacy development.

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Implementation of Education Re-Entry Policy for Adolescent Mothers in Urambo District, Tanzania



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ABSTRACT: In Tanzania, adolescent mothers were previously been prohibited from returning to public secondary schools particularly during the fifth government phase led by the late President John Joseph Pombe Magufuli. However, under his successor President Samia Suluhu Hassan, a new re-entry policy for adolescent mother has been re-introduced. The policy aims to address the challenges faced by adolescent mothers who drop out of school due to pregnancy. Although the policy granted the opportunities for adolescent mothers to continue with their studies after giving birth, its implementation in country is still uncertain. It is against this backdrop that the current study explored the perceptions held by selected educational stakeholders and adolescent mothers to appraise the extent to which the re-entry education policy has thus far been implemented, drawing on a case of the secondary schools sampled from Urambo District, in Tanzania. The study deployed the interpretivist approach and phenomenological research design. Purposive sampling was used to select ten study participants reflecting two counterfactual scenarios, namely: adolescent mothers who enrolled through re-entry program after delivery and who did not do so after delivery. The methods of data collection included in-depth interview with adolescent mothers and key informants; and focus grouped discussions with community members. The data were analysed through thematic analysis. The study findings revealed that implementation of the re-entry policy is marked with several challenges on part of the adolescent mothers which include: lack of support from families and schools. More to say, there prevails a stubbornly rigid and unchanging social stigma subjecting the typologies of the mothers into a state of dilemma, making it difficult for them to perform both the expected double roles of a mother and student simultaneously. The study also disclosed a lack of clarity on the re-entry policy guidelines, which has forced some of the re-entry policy implementers to use their own discretions. Additionally, the findings indicated that awareness creation was not sufficient enough to enable adolescent mother especially in remote areas to enrol back to school after pregnancy. The paper recommends that, for successful implementation of the re-entry policy, comprehensive counselling programmes for adolescent mothers and awareness creation among the educational stakeholders and community members are inevitable.

KEYWORDS: Re-entry policy, Education, Adolescents Mothers, Urambo, Tanzania

INTRODUCTION

Worldwide, early pregnancy is a hindrance to the completion of education by adolescent girls. Adolescent pregnancy and childcare have remained the biggest causes of school dropout and failed re-admission among girls (McFairland, Cui and Stark, 2018). In most research, it has been observed that adolescent pregnancies occur in both developing and developed countries. However, nearly a third of all women in developing countries, start having children at the age of 19 or younger, and almost half of the first birth to adolescent are younger than 17. Sub-Saharan Africa is riddled with the highest pregnancy rate of adolescent girls in the world. Each year, thousands of adolescent girls become pregnant (UNFPA, 2022). Ironically, the countries are characterized by lack of and inaccessibility to contraceptive methods, unfavorable community attitudes towards adolescent contraceptive use, and poor knowledge of sexual and reproductive health in adolescent, all of which leading to higher prevalence of adolescent pregnancies (Kassa *et al.*, 2018). Given the high rates of adolescent pregnancies in the Sub-Saharan Africa coupled with ineffective policies (Population Council, 2015), adolescent mothers find it hard to go back to school after birth in order to continue with their education. Their inability to complete the education circle diminishes their chances of engaging in meaningful employment in their

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adulthood which could ultimately lead to achieving socio-economic freedom (Undie *et al.*, 2015) and consequently a cycle of poverty.

Education is a globally appreciated human right and key for enabling every child to live to potential and contribute to the economic, societal, and civic growth of their countries (United Nations 2015). Education access and gender equity are guaranteed in the world vision articulated in the Sustainable Development Goals (SDGs) (UNFPA, 2022). Due to rising in wastage in education resulting from pregnancies, the focus on adolescent has moved to the center of the global agenda and is stipulated in the SDGs (Elfert, 2019). One of the strategies that is globally embraced to enhance gender equity in education is the policy on school re-entry. The strategy seeks to guarantee pregnant adolescent students continued learning while adolescent mothers re-enroll in schools after childbirth. The school re-entry policy has formed a foundation for regularization of the guidelines guaranteeing access and gender equity in education.

The World Education for All (EFA) is a policy framework which identifies a common ground around quality which includes respect for individual rights and improved quality education. Expelling and banning pregnant girls from returning to school were the normal practices happening despite the fact that Tanzania ratified both international and regional instruments that promote human rights, including the rights of the girl child to education (TEN/MET, 2021). The country ratified the Universal Declaration for Human Rights (UDHR), the Convention on the Rights of the Child (CRC), and the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW). All these conventions state that everyone, including pregnant schoolgirls, has the right to education. Ratification of these conventions was an indication of the governments' commitment to protecting the rights of her citizens, including pregnant girls. Furthermore, the 1977 Constitution of the United Republic of Tanzania (URT) recognises the rights of children to education and protects children against early marriages and harmful cultural and social practices (URT, 1977). Thus; banning pregnant and adolescent mothers from continuing with education after delivery was interpreted as a violation of children's rights to education. Martinez and Odhiambo (2018) argue that this discriminatory ban on pregnant girls and adolescent mothers badly impacts thousands of lives by forcing them to end their education.

The debate on re-admitting teenage pregnant mothers back to school was a major topic of contestation in the Parliament of the United Republic of Tanzania. The major shift on how adolescent mothers should be handled reached the public attention on 22nd June 2017. In one of his public speeches, the former President of the United Republic of Tanzania, His Excellency the late Dr. John Pombe Magufuli made it crystal clear that during his tenure as President, pregnant teenage girls in public primary and secondary schools in Tanzania would not be allowed to continue with normal schooling (Niboye, 2018). He emphasized that after delivery, such teen mothers will have to look for alternative education advancement options or engage outright in farming and other economic activities. The ban was justified by the argument that allowing such girls to go back to school particularly through fee free education would symbolise permission of immoral conducts sanctioned and sanctified by the State. Following the rulling, girls who happened to become pregnant while schooling had to look for alternative education advancement options.

After ascending the helms of power, Her Excellency Samia Suluhu Hassan, the first woman Head of the State of Tanzania effective from 2021, emphasized that there has been a notable increase of gestures clearly depicting discrimination faced by adolescent mothers in education provision. Responding to criticisms voiced by various internal and external organizations, the Minister of Education, Vocational and Training announced on November 24th, 2021, in a press conference held in Dodoma, Tanzania; that girls who had been forced to leave school due to pregnancy would be allowed to return to school to continue with their formal education within two years after giving birth (Issa and Temu, 2023). This pronouncement was succeeded by a set of re-entry guidelines created to realise the purpose, and started to be implemented by February 2022 (Kapiipi, 2022). This change allows girls to re-enrol to school within two years after giving birth. The re-entry guidelines foreshadow a significant commitment to protecting pregnant and adolescent mothers in Tanzania from self-opinionated political motives depriving women of their right for education. The effort is also supported by the United Nations principle of "leave no one behind" to achieve the 2030 Sustainable Development Goals (SDGs) (UN, 2021). It is against this background that the current study was rationalised. It is anticipated that the study will contribute to the existing empirical knowledge on the aspects of adolescent mothers and the education re-entry policy. The study sought to answer mainly two research questions, as follows: First, what are the experiences held by adolescent mothers during the implementation of the re-entry policy? Secondly, how do policy makers, local government official and community members handled the implementation process and acceptance of the re-entry policy? The paper is organised in six main sections, namely: general introduction, literature review and research methodologies. The remaining sections contain the study findings, conclusions and recommendations.

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LITERATURE REVIEW

This section contains a review of the literature related to the aspect of re-entry educational policies. The section begins with theoretical framework, followed by a review of empirical studies.

Theoretical Framework

The study was informed by the critical theory to explain the nexus between the tenets of re-entry policy for adolescent mothers and the actual implementation of the policy. One of the main tenets of the critical theory proposed by Habermas (1984) is that it advocates for liberation of people through making them aware of the basis of their misrepresentations through self-reflection and self-understanding of their situation. This liberation may lead to constructive engagement of individuals enabling them to pursue their goals in life. The theory is applicable to this study essentially because it emphasizes that key stakeholders in education such as policy makers, heads of schools, community leaders, parents and students should be engaged in free, open, and democratic decisions in order to move beyond basic information and communication (Waghid, 2002). Thus, critical theory provides a framework for thinking about re-entry policy in terms of engaging all stakeholders in discussion about how the policy could be better implemented. Equally importantly, the theory underscores a need for having in place educational policies tailored to attain inclusive and equitable representation for all. In the context of this study, the re-entry policy, mirrors succinctly other education policy framework provided for at global level, including: SDGs, EFA, UDHR and CEDAW.

Empirical Literature Review

Global literature related to the implementation of re-entry policy reveals different perspectives. To begin with, the United State of America (USA) and England have in place the policies that allow adolescent mothers to return to school (Namayuba, 2020). Paradoxically, though, Scholl (2007) report that school officials in USA were routinely fond of expelling pregnant girls from schools. Likewise, Dawson and Hosie (2005) reveal that learners in England were usually been side-lined in public institutions of learning. Even after the introduction of a number of policies initiatives in 1997 by the government of the United Kingdom (Selman, 2003), some social norms such stigmatization still existed. The literature reviewed from these countries indicates that in some schools, the re-entry policy was not implemented based on the law (Selman, 2003); thereby discouraging adolescent mothers from returning to school.

In Sub-Saharan Africa, there has been an ongoing debate on adolescent pregnancies policy for a long time. The trend in most countries is to move towards the policies that make it easier for adolescent mothers to continue with their education. Botswana is one of the first country to implement an education re-entry policy in sub-Saharan Africa since 1979 (Hamusonde, 2003). In South Africa, the re-entry policy came into effect in 1996, through School Act (No 84), which enacted an educational policy, with its commitment to gender equality in schools (Shefer *et al.*, 2013). This means before enactment of the Act, it was legal to expel pregnant learner from school. Another reference to the background on the implementation of re-entry policy in Sub-Saharan Africa are the studies conducted by Birungi *et al.* (2015) and Molosiwa and Moswela (2012). The findings of these studies were almost similar, reporting the re-entry policy was implemented with mixed feelings. The study findings disclosed that the Ministry of Education did not promote policy awareness activities in the communities. It was also established that the schools implementing the re-entry policy were hard to access due to poor record keeping by the Ministry.

Currently, Tanzania is among the countries in sub-Saharan Africa that has re-established a re-entry guideline. The guideline was re-affirmed in 2021 to allow adolescent mothers go back to school. This was meant to promote the education of girls and help the country move towards attaining education for all in Tanzanian. Due to its importance in education, a number of papers have been written to appraise its effectiveness. One such papers is Ngonyani (2022) who suggested that the government should make efforts to create awareness through counselling and prepare teachers and students to receive teenage mothers in their schools. Before the establishment of re-entry, Laiser and Muyinga (2017) revealed that some education stakeholders were opposing re-admission based on moral and traditional grounds, implying that they were not ready to welcome it. Since re establishment of the re-entry policy, no scholarly and empirical wrtings have documented revealing the views held by the educational stakeholders such as adolescent girls in secondary school, teachers, parents and education officers toward the re-entry policy. It is on this ground that this study explored the implementation of the educational policy for adolescent mothers who drop out of school after pregnancy in public schools in Urambo District, Tabora region. The focus was to understand the experiences of the adolescent mothers and hear the views of different stakeholders on the implementation process of the re-entry education policy. Two research questions were formulated in order to tap the respondents' points of view, namely: (i) What is the extent to which the respondents are aware of the re-entry education policy? and (ii) How different stakeholders in education sector and community handled the implementation process and acceptance of the re-entry policy in public schools.

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RESEARCH METHODOLOGIES

The study area

The study was carried out in Urambo district which is one among the eight districts of Tabora Region. Tabora ranked the second highest (43%) prevalence of adolescent pregnancy in Tanzania (Triantafyllidi *et al.*, 2024; UNFPA, 2022). Urambo district was randomly selected to represent other districts in Tabora region. The district is dominated by two tribes which are Sukuma and Nyamwezi, in which patriarchy cultural values are dominant especially in rural areas. These two tribes are known for adhering strongly to their culture. Usually, the father is the head of the family, and if they pass away, then the older brother becomes the head of the family, not a widow (Kapipi, 2022). The patriarchy nature of the study area has implication on girl child especially when it comes to decision making on their livelihood. Besides that, the girl child is considered a form of wealth for the family because bride price is paid upon marriage. Marrying their daughters, translates the family will earn twelve to fifty cattle. Principally, the younger the girl, the larger the number of cattle paid as bride price. This socio-cultural family set up encourages the tradition of early marriage, eventually leading to early parenting. This male chauvinist behaviour adds to the situation of girls tending to drop out of from school to fulfil their parents expected social roles and obligations.

Study Design

The study employed the case study approach which allowed the researcher to collect extensive contextualized information from the respondents. The study applied an interpretivist approach using the phenomenological research design to explore experiences, perceptions and attitudes held by the respondents. The design facilitated collection of data in form of the stories narrated by adolescent mothers who managed to return to school and those who were did not despite the presence of the re-entry education policy. Purposive sampling was used to collect the data from key informants and adolescent mothers in schools. In selecting adolescent mothers, the heads of schools were consulted to reach the right respondents. For non-student adolescent mothers who did not return to school after pregnancy, snowball sampling was employed to get them. In this case, the Community Social Welfare Officer (CSWO) were employed as the gatekeeper.

Data Collection

The study used a variety of data collection methods, including interviews and focus group discussions. In-person open ended interview were conducted to collect data from all adolescent mothers and all key informants. This was considered appropriate and convenient to the respondents because it gives them freedom and ample time to express themselves. It also allows flexibility and adjustment. The one-on-one questioning also allows the researcher to gain access to non-verbal cues from the respondents. The study conducted one focus group discussion (FGD) comprising six community members where adolescent mothers reside. Ten adolescent mothers were involved for interview, of which six were returnees through re-entry program while four were adolescent mothers who did not return to school after pregnancy. Seven key informant respondents (2 officer from district education office, 2 heads of schools, 2 school counsellors and 1 social welfare officer) were also involved in the interviews. Individual face-to-face interview with these officials were conducted using interview question guide. This method has advantage of giving chances to clarifies unclear issues and provide the opportunity for the researcher to request for elaboration.

Data Analysis Procedures

The data collected were scrutinised to identify themes and patterns of meaning that repeatedly came up, and thereafter were subjected to thematic analysis. The analysis procedure in relation to the study respondent's is summerze in Table 1. The analysis involved categorisation, arranging and presenting insights into the form of meaning or themes. The data collected were transcribed. Consistent patterns and themes related to the research objectives were identified through critical reading and analysis. Finally, descriptive narrative format with literary references was used because it is flexible and capable of providing in-depth information which was important for understanding the status and implementation of the re-entry policy in the study area.

Table 1: Data analysis from each study respondent

S/N	Respondents	No. of Respondents	Data Collection	Data Analysis
1.	Adolescent mothers	10	Interviews	Narrative and Thematic
2.	District Education Officials	02	Interviews	Thematic
3.	Heads of Schools	02	Interviews	Thematic
4.	School Counsellor	02	Interviews	Thematic
5.	Social Worker Officer	01	Interview	Thematic
6.	Parents	06	FGD	Thematic

Infering from Table 1, adolescent mothers were the majority. This selection was deliberate because they constitute the subject of the study.

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Consent and ethics

The researcher followed all the Mwalimu Nyerere Memorial Academy Research and Consultancy's processes and requirements. Permission was sought from the Mwalimu Nyerere Memorial Academy (MNMA) and the MNMA Research and Consultancy Committee (MRCC). The permission to conduct the study was also sought from the Office of the Regional Administrative Secretary in Urambo, from the Ward Executive Director and the heads of the schools where the study was conducted. In addition, the rights of respondents were upheld by notifying them of the purpose of the research before the commencement of the research. An introduction letter was presented to the participants in order for them to validate the research. Informed consent to participate in the study was obtained from all the participants, who were informed about the purpose of the study. The participants were informed that they were under no obligation whatsoever to answer the questions and that they could end the interview whenever they wished. Confidentiality was ensured throughout the study.

FINDINGS AND DISCUSSIONS

Demographic Information of the Adolescent Mothers

The intention of including demographic information in a study is to know the characteristics of the respondents in the study area. Ten adolescent mothers were approached during the study period, and all agreed to participate in the study. Their median age was 15 and 16 years old, ranging from 13 – 19 years old. Six of them were enrolled in education re-entry program, while one participant dropped out from school six months after the enrollment. Four of the adolescent mothers did not attend to school after becoming mothers. These were regarded as out of school (non-students) adolescent mothers. Table 2 provides a summary of all adolescent mothers who participated in the study. Furthermore, the results shows that most adolescent in the study group fell pregnant at the age of 17 with the lowest age being 13. Based on these results, it is notable that students at ordinary level, especially in Form One to Form Three are mostly affected by early pregnancies as compared to advanced level students. These findings coincide with what was reported by Tanzania Demographic Health Survey (TDHS/MIS, 2016), that most adolescent girls in Tanzania begin sexual relationship at the age of fifteen in which majority are at ordinary level of secondary education. Therefore, the education sector in various places in Tanzania needs to pay attention to this age category, hence play an important role in reducing pregnancies. This can be done through addressing some of the underlying causes of adolescent pregnancy, and targeting secondary schools as platforms for comprehensive sexuality education and health promotion. As emphasized by previous studies such as that of Vicent (2009) in Kenya and Hubbard (2008) in Namibia, girls are becoming mothers when they are too young to handle parenting roles. That helps justifying why the re-entry policy has emphasize professional counseling with a view to empowering adolescent students to take responsibility for their actions in order to avoid early pregnancies.

Table 2: Socio-demographic details of the adolescent mothers.

Participants	Age when 1 st pregnant (years)	Education level when pregnant	Current age (years)	Re-entry status	Current education level
Case 1	19	Form 4	20	In school	Form 5
Case 2	17	Form 4	19	In school	Form 4
Case 3	13	Form 1	15	Returned	Dropped out after 3 months
Case 4	15	Form 2	17	In school	From 3
Case 5	14	Form 1	16	In school	Form 2
Case 6	13	Form 1	15	In school	Form 1
Case 7	17	Form 3	19	Did not enrol	Did not return
Case 8	16	Form 3	18	Did not enrol	Did not return
Case 9	14	Form 1	16	Did not enrol	Did not return
Case 10	17	Form 4	20	Did not enrol	Did not return

Themes Emerging from Data Analysis

The thematic approach was used to ascertain the themes emerging from the research questions of this study. The analysis started by coding the transcribed responses from interview with the respondents. The process was intended to attach meaning to the collected information which allows summary of data by collapsing the codes into themes. Based on the study's objectives; three themes (Table 3) emerged from the collected information in conjunction with the research objectives and research questions.

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Table 3: Codes Construction

Research Question	Emerging Themes and Sub-themes
What is the extent to which the respondents are aware of the re-entry education policy?	Theme 1: Knowledge and awareness of the re-entry policy Awareness and experience. Incommunicable policy
	Theme 2: The Actual Practices and Implementation Challenges Dual responsibility - early motherhood and student. Sense of guilty (leaving a child while attending school) Social support and protection
How different stakeholders in education sector and community handled the implementation process and acceptance of the re-entry policy in public schools?	Theme 3: Stakeholders perceptions on re-entry policy Diverse perceptions of the education stakeholders Cultural norms and attitudes

Knowledge and awareness of the re-entry policy

Adolescent mothers had several views which shed light on their experience during the implementation of the re-entry policy. The knowledge of the existence of the policy was perceived by the respondents to be an indication of good news. It had brought about a sense of hope and encouragement to a number of adolescent mothers. They contended that the existence of the policy was a radical departure of the gender insensitive education policy that shuttered the hope of women continuation with education after becoming pregnant. However, the new policy brought new hope of completing their education journey. When asked about how they became knowledgeable of the existence of the policy, adolescent mothers were quoted as saying:

"...I heard about the policy from the school head, and that is what encouraged me to return to school; at first I thought my dreams were shuttered, but when I heard about the policy, it awakened and encouraged me to resume my studies after delivery..." (Case 6 interview; December, 2023).

"... When my class teachers established that I was pregnant, I was called to the matron's (school counsellor) office. I was asked a lot of questions and was subjected to a counselling session. Finally, I managed to open up and speak to them. They explained to me the circumstances leading to the pregnancy, but also the opportunity available to continue with my studies through the re-entry program..." (Case 2 interview; December, 2023).

The few adolescent mothers who were aware of the existence of the policy cited the head of schools, class teachers and school counsellors as sources of the information. This implies that these education officials played an important role in creating awareness to the adolescent mothers about the existence of the policy. Responding to a question on how she was feeling after the counseling session and the news about the re-entry policy, an adolescent mother commented:

"... I am contented with the government's reintroduction of the policy. I will not waste time and make similar mistakes this time. I want to put in more effort, finish my secondary education, and proceed with the higher levels until I get the job to sustain my needs and care for my family..." (Case 2 interview; December, 2023).

The above quotations shows that the introduction of the re-entry policy supported some adolescent mothers to continue with schooling after delivering. Hence, it increased the chances of developing their full potential. Girls' education has been perceived as one of the critical approaches for reducing high levels of poverty, high fertility rates, and achieving suitable development (Hamusonde, 2003). Similarly, Bhana *et al.* (2010) commented that offering adolescent mothers opportunities to continue with studies increased chances to proceed with higher education. It increased their economic standing and many other opportunities.

Contrary to the above finding, another respondent reported that awareness of the policy was insufficient to compel some of the adolescent mothers to resume studies after delivery. With regards to the existence of the education re-entry policy, an adolescent mother had this to say when asked about the policy:

"... "No one has ever mentioned about the policy. When I realized I was pregnant; I left the town where I was residing with my aunt and returned back to village. I came to learn about the policy during training on reproductive health services in the village, which was organized by CSW. I could not resume my studies after having stayed at home for more than two years..." (Case 10 interview; December, 2023).

Based on the above quote, it is observed that awareness of re-entry policy was not sufficient enough to enhance its implementation for some adolescent mothers in schools especially those in rural areas. This poses a challenge to the implementation of the re-entry policy; prompting an education gap among some adolescent girls. The main tenant of the critical

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theory which informed this study advocated for liberation of people in order to make them aware of the situation around them. Consistent with the theory, there is a need to sensitize the rural communities on the opportunities brought by the education re-entry policy for adolescent mothers so that they can exploit advantages available to complete their education.

Practice and Implementation Challenges

The study's findings demonstrated that adolescent mothers were struggling with school activities and assignment while also they are required to play the role of mothers and students concurrently. One adolescent mother who dropped out of school three months after registered to the re-entry program expressed the reasons for not continuing with the studies. She maintained that unavoidable dual responsibilities as a mother to her child care and student at the same was the main hindrance for opting not to continue with her studies. This she acknowledged as saying that:

"... it was too much to handle, making sure I attend my child before going to school and preparing myself for school. Sometimes my child does not sleep well at night, so by the time she gets some sleep, it's time for me to get everything ready for school. I regarded myself not only unproductive at school but also carelessly handling my child. I could not take it any more, so eventually I decided to quit..." (Case 3 interview; December, 2023).

Dedicating adequate time for school activities while simultaneously managing child care was a burden for some adolescent mothers who enroll back to school after pregnancy. In some instances, adolescent mothers are caught in between responsibilities while trying to balance between the two. Adolescent mothers who continued to pursue with studies admitted that; the situation of raising a child and attending school at the same time is not easy, as captured in the quote:

"... I have to wake up early in the morning to wash my child's clothes and prepare her meal. But I also have to help with the household chores so that my sister, who is helping me with my child, is left with few chores. There are certain situations in which I miss classes, examinations, or both..." (Case 1 interview; December, 2023).

Based on the challenged faced by early motherhood, adolescent students often find it detrimental to balance the dual roles of being both a mother and a student as revealed in above quotes. These dual responsibilities impose physical, emotional, and academic demands, making it difficult for adolescent mothers to fully engaged in their studies. The experience of navigating these roles simultaneously can impact their personal development, limit future opportunities, and, in many cases, lead to school dropout. In order to attend their tasks, adolescent mothers need assistance with day-to-day responsibilities such as the one provided by the adolescent mother as indicated in case (1). This may assist them balance between studies and maternal role. Bukhosin (2019) pointed out that, the burden of dual responsibilities may negatively impact student mothers' execution of both roles and ultimately predispose them to emotional and psychological risks.

Moreover, the adolescent student mothers' narratives of the conflicting demands of parenting and school also appeared to be heavily tinged with guilt. When parenting from a distance, the majority of adolescent mothers experienced a persistent sense of guilt because they were unable to actively participate in their children's care and development, which was contrary to the social norms in which mothers are regarded as the primary caregivers. The following quote illustrate some of the guilty that adolescent mothers expressed:

"... I sometimes feel disturbed when my child gets sick, and I know I need to take her to the hospital while at school there is an examination or test concurrently. I feel too bad when I am in class, but my mind is brooding both of the home unfinished commitments and my sick child..." (Case 1 interview; December, 2023).

The guilty expressed reflects the complex sentiments associated with physical and emotional distance from their children, and the competing demands of studying and mothering. The finding implies that the burden of responsibilities for adolescent mothers may hinder their capacity to return to school and cope with the school schedules, as the re-entry policy guideline requires. The expressed guilt might be a reflection of the contradictory moral judgement feelings linked to weighing up between emotional physical attachment to a child and the conflicting demands of accomplishing educational dreams. According to the aforementioned research findings, adolescent mothers' overwhelming workloads can make it more difficult for them to comply with the re-entry policy guideline and return to school. In Urambo district, like in any other parts of Tanzania, whereas patriarchy system is widely practiced, all domestic work is socially constructed as the women's responsibilities, including taking care of babies and young children. This observation acquiesced with what was reported by Bhana (2012); that adolescent mothers bear the full weight of raising and caring for their children due to the limited engagement of male partners in childcare.

Stakeholders' Perception of the Education Re-entry Policy

The stakeholders had different views reflecting their perspectives regarding the implementation of the re-entry education policy in Urambo district. In particular, the District Education Officers argued that the policy promoted advancement of adolescent mothers in education and in many other facets of development. They strongly argued that mandating adolescent mothers to return to school was the best option to enable the girls who fall pregnant complete their education circle, leading to secure their

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cherished bright future. This was revealed in one key informant interview (KII) with the Acting District Education Officer who ascertained that:

"... it was just fair to support and allow adolescent mothers to return to school because the boy who impregnated them usually continue schooling or with their businesses while girls were expelled from school. Re-entry will help to reduce the number of girls who drop out of school due to pregnancy since the policy gives them opportunity to complete their schooling after delivery..."

Supporting the statement, another education officer remarked:

"... Since most girls come from low-income households and are reliant on their parents, it is a good idea to readmit them after they become pregnant. When a girl becomes pregnant and gives birth, she adds another dependent to the family, and they lose all hope and hopes for a brighter future. However, if they are granted the opportunity to re-enter school, they will complete their education journey, position themselves for a career in the future, and be able to support their parents and the child..."

The quotes suggest the re-entry policy is unanimously supported and acceptance by the district education officers in Urambo District. While the implementation of the policy received a positive consideration from the district education officers, there were mixed perspectives on the part of heads of schools who are among the key stakeholders implementing the policy. Lack of preparedness and ignorance of their roles was among the major concern in the implementation of the policy. The verbatim below captures the sentiments held by one the head of school:

"... I was not given any training on the implementation of the policy. I only received education circular (Ministry of Education Science and Technology, Education Circular No.2, 2021) directing us to allow the pregnant adolescent in school and offer re-admission and continue with studies if they come after giving birth..." (Head of School, 01).

A similar concern was also shared by school counsellors who maintained that they had neither read the policy nor provided it by the responsible ministry. So, they were completely ignorant of it. They commented that they had no clear guidelines on what to do when pregnancy was discovered; when girls should leave school to deliver; how long should girls be absent from school and how adolescent mothers who returned to school should be treated. Lack of preparedness and ignorance on part of some stakeholders within the education cadre allows for both negative and positive responses from them. Similarly, lack of awareness of the same meant that the school counsellors were unable to provide proper guidance and counselling to the adolescent students who fall pregnant. This drawback is connected to the failure of the government to involve all stakeholders in communicating and implementing the policy. This finding amplifies what was reported in a study by Psaki (2016); that lack of guidelines on how re-entry policy of young mothers should be handled is one of the barriers to implementing the policy.

In order for the re-entry policy to be successfully implemented, parents must support the adolescent mother by covering her school expenses, giving her child support so that she can re-enter the workforce, ensuring that her child is in a safe and in supportive environment, and minimising disruptions from household duties (Kapiipi, 2022). However, social-cultural factors and community attitudes surrounding the adolescent pregnancy and motherhood is traditionally rooted in customary gender practice as pointed out by Bafi (2020). The study found that the reaction of community members is mixed with those who do not commiserate with the re-entry policy. In FGD; the community social welfare officer narrated that she encountered a case where the adolescent mother indicated interest in coming back to school, but the father said tradition did not allow the girl to stay with him in the same house after she had given birth. The only solution was for her to get married to the father of the baby. Supporting that, one participant commented :

"... I believe when a girl conceives, that marks the end of education. I don't believe in the policy. If she fails to stay at school while alone, how can she manage to study while leaving a child at home..."

Another participant added:

"... it is against our culture to have a mother attending school with other normal students. Her place is a home with the rest of women who are already mothers." (Participants with adolescent mothers not in school, FGD; December 2023).

The quotes confirm that the families with deep rooted cultural norms are likely to continue perpetuating stigmatization even when the government resolutely stand against such anti-development cultures. Notably, such adamancy jeopardizes the re-entry policy for adolescent students.

While some parents had negative perception of the policy, others parents were happy to see their daughters getting the second chance to continue with studies. To complement their support on the re-entry policy, one parent said: *"...I am happy that my daughter has returned to school. I will provide her with all the necessary support she may need until she completes her studies so that she can fend for herself and the child in the future..."* (Participants with adolescent mothers in school, FGD; December 2023). Some parents reported that they were still hopeful that their daughters will complete their education after being given the chance to return to school. They seemed to realize that their daughters could have better future by completing their formal education. The narration of participants from FGD shows a mixed reactions that community and families have towards the policy. Other insult

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them for becoming mothers at a young age while in school, while others encourage and support them to continue with studies. Thus, this study has revealed that just like others stakeholders, parents and other community members are among the key stakeholder for the implementation of the re-entry policy. Their role in providing social support to adolescent mothers is very important for them to cope with early motherhood because social support is a critical element required for adjustment to motherhood.

CONCLUSION AND RECOMMENDATIONS

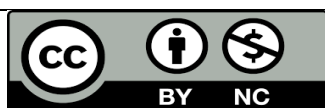
It is concluded that there is lack of awareness of the re-entry policy among the participants except a few (such as education officers) at the district level. This means that the policy guidelines and the implementation protocol is only known by the top education officers while other stakeholders are not well informed. Stakeholders varied views are linked to the poor implementation of the re-entry policy. Lack of preparedness amongst the stakeholders such as head of schools and school counsellors seem to stagnate the implementation of the policy. Few parents who should take the lead in the implementation seem to uphold their cultural values at the expense of the re-entry policy. Some of community members view the policy as supporting and nurturing the moral decay among youth in the community. Regarded from the point of view of the ideas espoused by the critical theory advanced by Habermas (1984) regarding the successful implementation of the education re-entry policy, this study suggests that all stakeholders in education should be fully engaged in free, open, and democratic decision on how the policy should be implemented. The theory insists on the liberation of the people by making them aware of what is required of them. This was very important for the saucerful implementation of the re-entry policy that all key stakeholders of the policy in education cadre (students, educations offices, parents and other community members) should be actively involved as suggested by the theory.

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Evaluation of Physical Education Learning for Children with Special Needs in Inclusion-Based Elementary Schools in Sindang Plains District, Rejang Lebong Regency, Bengkulu Province



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ABSTRACT: This research aims to determine the results of evaluating the context, input, process, product of the implementation of Physical Education learning for children with special needs in inclusion-based elementary schools in Sindang Darat District, Rejang Lebong Regency, Bengkulu Province. The evaluation model used in this research is the CIPP model. The results of the research show that the evaluation of the implementation of physical education learning for children with special needs in onclusion-based elementary schools in Sindang Plains District, Rejang Lebong Regency, Bengkulu Province, results in the poor category. Next, each aspect of the evaluation is explained, namely. (1) Context evaluation is in the good category. Indicators of learning materials and formulation of objectives were 3.14 in the good category. (2) Input evaluation is in 3.29 the good category. (3) Process evaluation results are in the poor category. (4) Product evaluation in 1.83 in the poor category.

KEYWORDS: Children with Special Needs, Evaluation, Physical Education.

I. INTRODUCTION

Evaluation is an inseparable thing in measuring the success or feasibility of a program or policy issued by those who have the authority in this case, namely the government (Akbar & M ohi, 2020, p.118). In another sense, policy evaluation is an activity designed to assess the results of different government programs specifically in terms of conformity with predetermined criteria, as well as having a real impact on the audience as desired.

Evaluation can later help in determining policies at the policy assessment stage of the policy-making process and provide appropriate information about the achievement of policy objectives. Evaluation not only produces conclusions about how far the problem has been resolved, but also contributes to clarification and criticism of the values underlying the policy, helping to adjust and reformulate the problem Dunn, (2003, p.24).

Education is the right of every citizen, meaning that citizens are entitled to a proper education. Every individual is entitled to education services regardless of their condition. Social, economic and health disabilities, both physical and mental, are not a reason for reducing education (Abdullah, 2013, p. 196).

Social and economic inability, for example, the child comes from a family with a socially capable or less capable status, while the health condition in question is that the child is declared healthy or has a physical or mental disability, as a citizen of the Republic of Indonesia, these circumstances do not eliminate their right to education Abdullah, (2013, p. 204).

The birth conditions of each child are not always the same as what is expected. In some cases, the expected child born with more genetic characteristics than their parents are actually born different. Differences such as limb deficiencies, deficiencies in intelligence or even blessed with above-average intelligence, thus requiring special guidance in accordance with their abilities. Children like this can be called children with special needs, because they have abnormalities in terms of physical, mental and social behavior characteristics (Desiningrum, 2016).

Children with special needs are isolated from social life. Society assumes that they do not play a role, do not socialize and cannot do their job like normal children. Basically, children with special needs have the same opportunities as normal children to self-actualize, it's just that many people doubt the ability of children with special needs Rahardja, (2017, pp. 711).

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The government provides special education for students with special needs with specially designed and built learning designs in various regions in the form of special schools (SLB), although it does not reach remote areas. These educational services are still very few, so the opportunities for children with disabilities are minimal and seem neglected in the formal world. In addition to the existence of special schools that do not reach remote areas, the high cost of school fees is also an obstacle to children with special needs obtaining proper education. This made the government come up with a new idea, namely the existence of inclusive education so that children with special needs can more easily get educational services like normal children in general (Ilahi, Smart, 2013, pp.27-30).

Inclusive education is an innovative and strategic education to expand access to education for all children with special needs. This education is implemented in regular schools, the aim is that children with special needs can socialize with normal children in the surrounding environment and train normal children to appreciate their special needs. Differences so that both can coexist (Mahabbati, 2013).

Inclusive schools use a modified regular school curriculum, such as the results of research from Sukmawati (2014), that the curriculum used as a reference in learning physical education for students with special needs is a modified curriculum. Physical education materials given to students with special needs are the same as regular students, except that the level of difficulty is lowered.

Learning planning in inclusive schools is in accordance with the circumstances of the students. As the results of research from Nurussalihah (2016), that in inclusive schools using the KTSP curriculum and in the implementation of physical education refers more to an individualized approach. The implementation of the inclusive approach in learning from the results of Kharisma's research (2017), states that a manifestation of a series of efforts to educate and teach students is by exploring existing potential, with efforts to adjust the curriculum, strategies, methods, media and infrastructure as learning support.

Inclusive education is expected to harmonize the curriculum, facilities and infrastructure as well as a learning system that suits the conditions of students with special needs. The implementation of inclusive education is a concern for the right to education for children with special needs. Researchers found the problem that there is no definite learning evaluation standard for children who have advantages and disadvantages, even though they receive education services in inclusive classes at primary schools in Sindang Dataran sub-district, Rejang Lebong district, Bengkulu province.

Therefore, this research aims to find a solution to the problem of how the learning evaluation planning system, the form of evaluation, the form of reporting the results of the evaluation contained in the inclusion class, the focus of the research was carried out at an Inclusion-Based Primary School in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province. The data obtained from the Rejang Lebong Regency Education Office Children with special needs in this school consist of several categories, namely tunagrahita, slow learner, and socio-emotional.

Evaluation is an effort to determine the level of implementation of a policy carefully by knowing the effectiveness of each component. Context, Input, Process, Product (CIPP) evaluation is the CIPP evaluation model in implementation is more widely used by evaluators, this is because this evaluation model is more comprehensive when compared to other evaluation models (Rocha, et al., 2021, pp. 1-19). The CIPP model is consistent in principle with the committee's definition of educational program evaluation as a level to describe achievement and provide information for alternative decision-making. Context evaluation involves analyzing issues related to program environment or objective conditions to be implemented. It contains an analysis of the strengths and weaknesses of a particular object. Input evaluation provides effective planning for the successful implementation of the curriculum. The main orientation of input evaluation is to propose a plan that can achieve what the institution wants. Process evaluation (process) can only be done if the curriculum innovation has been implemented. Evaluation of results (product) is to determine the extent to which the implemented curriculum has been able to meet the needs of groups that use after the program runs and the level of success that has been achieved or what will be produced.

One of the steps to achieve the learning objectives of PJOK is to know how high the performance of the components that support the PJOK learning program, especially for children with special needs by evaluating the components of these components.

II. METHOD

Type of Research

This type of research is evaluation research that uses mixed quantitative and qualitative methods. Sukmadinata (2017, p. 68) states that evaluative research is a research activity that evaluates an activity/program which aims to measure the success of an activity/program and determine the success of a program and whether it is as expected. This research is also directed at assessing the success of the benefits, usefulness, contribution and feasibility of a program of activities of a particular unit / institution. This research refers to a systematic scientific procedure carried out to measure the results of a program or project (the effectiveness

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of a program) in accordance with the planned objectives or not, by collecting, analyzing and reviewing the implementation of the program carried out objectively. Then formulate and determine policies by first considering the positive values and benefits of a program. Based on the above opinion, this research is able to obtain real data in accordance with the results of the evaluation of the implementation of physical education learning for children with special needs in Inclusion-based State Elementary Schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province.

The evaluation model that will be used in this research is the CIPP model because the CIPP model is a complex evaluation that includes Context, Input, Process, and Product. The CIPP model is seen as one of the most comprehensive evaluation models, meaning that it can obtain more accurate and objective information.

Place and Time of Evaluation

This evaluation was conducted in inclusion-based public primary schools in Rejang lebong Regency, Bengkulu Province, totaling 6 schools. The evaluation time was conducted from November-December 2023. Data on inclusion-based public primary schools in Sindang Dataran sub-district, Rejang Lebong Regency, Bengkulu Province are shown in Table 1 as follows.

Table 1. Data and Addresses of Inclusion-Based Public Elementary Schools in Sindang Dataran Subdistrict, Rejang Lebong Regency, Bengkulu Province.

No	School Name	Address
1	SDN 84 Rejang Lebong	Dataran Air Rusa 2
2	SDN 142 Rejang Lebong	Desa Airusa 1
3	SDN 143 Rejang Lebong	Desa IV Suku Menanti
4	SDN 132 Rejang Lebong	Desa Bengko
5	SDN 153 Rejang Lebong	Desa Talang Belitar
6	SDN 164 Rejang Lebong	Desa Warung Pojok

Research Subjects

Table 2: Research subjects at inclusive primary schools in Sindang Dataran sub-district, Rejang Lebong district, Bengkulu province.

NO	School Name	Head School	Teacher	Students
1	SDN 84 Rejang Lebong	1	1	3
2	SDN 142 Rejang Lebong	1	1	2
3	SDN 143 Rejang Lebong	1	1	6
4	SDN 132 Rejang Lebong	1	1	4
5	SDN 153 Rejang Lebong	1	1	3
6	SDN 164 Rejang Lebong	1	1	4
	Total	6	6	22

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Data Collection Technique

Data collection techniques are used to collect data according to the research procedures so that the required data is obtained. Sugiyono (2017, p. 224) states that data collection techniques are the most strategic step in research, because the main purpose of research is to collect data. In simple terms, data collection is defined as a process or activity carried out by researchers to reveal or capture various phenomena, information or conditions of the research location in accordance with the scope of the research. Another opinion according to Budiwanto (2017, p. 183) states that data collection methods are techniques or methods used to collect data.

The data collection technique refers to a method, the form of which is shown in its use in collecting data using questionnaire instruments, interviews, observations, tests, documentation and so on. Meanwhile, data collection instruments are tools used to collect data. Because it is a tool, the instrument can be a check list sheet, questionnaire guidelines, interview guidelines, observation guidelines, photo cameras and other instruments.

The steps taken in collecting data in this study are as follows. (1) Researchers made observations in each SDN school in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province regarding the implementation of physical education learning for children with special needs. (2) Researchers documented the learning process while in the school environment, and infrastructure in Physical Education Learning. (3) Researchers asked for a research permit. (4) Researchers gave research instruments in the form of questionnaires to subjects who became research samples directly. (4) Researchers conducted interviews with subjects who became samples. (5) Researchers recorded and summarized the results of the data obtained.

Research Instruments

Research instruments according to Hardani, et al., (2020, p. 284) is "a measuring tool used to obtain quantitative information about variations in variable characteristics objectively, so it is necessary to develop a scale or measuring instrument to measure variables in more systematic data collection". The instrument emphasizes its meaning and understanding as a tool for collecting and obtaining the necessary data (Budiwanto, 2017, p. 183). These instruments will be used to obtain data on the evaluation of the implementation of physical education learning for children with special needs in SDN Se- Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province. a. Observation

Observation is an effort to collect data when researchers go directly to the field to observe the behavior and activities of individuals at the research site (Creswell & Poth, 2016, p. 42). Observation in a study is defined as focusing attention on an object by involving all the senses to get data. So observation is a direct observation using sight, smell, hearing, touch, or if necessary with taste. Instruments used in observation can be in the form of observation guidelines, tests, questionnaires, image recordings, and sound recordings. Observation instruments in the form of observation guidelines are usually used in systematic observation where the observer works according to the guidelines that have been made. The guidelines contain a list of types of activities that are likely to occur or activities to be observed (Siyoto & Sodik, 2015, p. 82). Observations were made by researchers by observing and recording the implementation of learning. b. Interview

Interview is a data collection technique by which researchers can conduct face-to-face interviews with participants (Creswell & Poth, 2016, p. 48). Furthermore Sugiyono (2017, p. 317) defines an interview as a meeting between two people to exchange information and ideas through questions and answers, so that meaning can be constructed in a certain topic. Herdiansyah (2015, p. 31) states that an interview is a process of communication interaction conducted by at least two people, on the basis of availability and in a natural setting, where the direction of the conversation refers to a predetermined goal by prioritizing trust as the main foundation in the process of understanding. In this study, interviews were conducted with all research respondents. Interviews will be conducted with PJOK teachers, Principals, Students. c. Documentation

There are two types of documentation instruments, namely documentation guidelines that contain outlines or categories for which data will be sought, and check-lists that contain a list of variables for which data will be collected. The difference between these two forms of instruments lies in the intensity of the symptoms studied. In the documentation guideline, the researcher simply writes a check mark in the symptom column, while in the check-list, the researcher gives a tally on each symptom occurrence (Siyoto & Sodik, 2015, p. 82).

Documentation is used to strengthen the data obtained by interviews and direct observation and data collection techniques. This is to complement the lack of data from observations, interviews and questionnaires. The documentation in question relates to the school profile, the list of students' grades, the attendance list of students, the teaching plan/RPP made by the teacher, the form and type of learning evaluation, and the results of the assessment The documentation guidelines are made in the form of a check list. d. Questionnaire

Siyoto & Sodik (2015, p. 79) questionnaire is a data collection method, the instrument is called according to the name of the method. The form of the questionnaire sheet can be a number of written questions, the aim is to obtain information from the

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respondent about what he experiences and knows. Sugiyono (2017, p. 162) argues that a questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to answer.

The questionnaire used is a closed questionnaire. Arikunto's opinion (2015, p. 102-103) that a closed questionnaire is a questionnaire that is presented in such a form that the respondent only needs to give a check list (v) in the appropriate column or place, with a direct questionnaire using a graded scale. The questionnaire was made by the researcher himself with the questions adjusted to the instrument grid that had been made previously based on the literature review and then validated by experts who were considered to understand this type of research. The questionnaire used is in the form of a rating scale, with a scale range of 1-4. After making the statement items, then the research conducted validation to expert lecturers.

Data Analysis Technique

1. Quantitative

Quantitative analysis serves to describe or describe the object under study through sample or population data as it is, without analyzing and making general conclusions (Sugiyono, 2017, p. 29). After all the data is collected, the next step is to analyze the data, so that the data can be drawn a conclusion with category calculations. The data obtained is then processed with the help of the SPSS version 20 computer program. Calculation of data analysis by finding the relative frequency percentage. With the following formula (Sudijono, 2015, p. 40):

$$P = \frac{F}{N} \times 100\%$$

Keterangan: P= Persentase

F= Frequency

N= Number of Respondents

2. Qualitative

In accordance with the research objectives, the data analysis technique used to analyze the data in this study is an interactive qualitative analysis model as proposed by Miles and Huberman (in Sugiyono, 2017, p. 78), namely as follows. a). Data Collection Data obtained from observations, interviews and documentation are recorded in field notes which consist of two aspects, namely description and reflection. Description notes are natural data that contains what is seen, heard, felt, witnessed and experienced by the researcher without any opinions and interpretations from the researcher about the phenomena encountered. Reflection notes are notes that contain impressions, comments and interpretations of researchers about the findings encountered and are material for data collection plans for the next stage. To get this record, the researcher conducted several informant interviews.

b). Data Reduction

Data reduction is a process of selection, focusing, simplification and abstraction. How to reduce data is by making selections, making summaries or brief descriptions, classifying into patterns by making research transcripts to emphasize, shorten make focus, discard unimportant parts and organize so that conclusions can be drawn. c). Data Display (Presentation of Data)

Presentation of data is a set of information arranged so that it provides the possibility of drawing conclusions and taking action. So that the presentation of data does not deviate from the main problem, data presentation can be realized in the form of matrices, graphics, networks or charts as a guide to what information is happening. Data is presented in accordance with what was researched. d). Conclusions / Verifying (Drawing Conclusions)

Drawing conclusions is an attempt to find or understand meaning, regularity of explanatory patterns, causal flow or propositions. effect or proposition. The conclusions drawn are immediately verified by looking and questioning again while looking at field notes in order to obtain a more precise understanding, besides that it can also be done by discussing. This is done so that the data obtained and the interpretation of the data have validity, so that the conclusions drawn become solid. Determining the validity of data, researchers need to convey the steps taken to check the reliability and validity of the results of their research. According to Gibbs (Creswell & Poth, 2016, p. 53), qualitative reliability is an approach that researchers use consistently if applied by other researchers for different projects. Success Criteria

Determining success criteria is very important in evaluation activities because without criteria, an evaluator will have difficulty in considering a decision. Without criteria, the consideration that will be given has no basis. Therefore, determining the criteria that will be used will make it easier for evaluators to consider the value or price of the program components they assess, whether they are in accordance with what was previously determined or not.

Success criteria need to be created by the evaluator because the evaluator consists of several people who need agreement in assessing. Other broader and more justifiable reasons include:

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1. With benchmarks, the evaluator can better assess the object to be assessed because there is a benchmark to follow.
2. The benchmarks that have been made can be used to answer or account for the results of the assessment that has been carried out if there are people who want to learn more or even want to review it.
3. Benchmark criteria are used to minimize the non-subjective elements of the assessment. With the criteria, in conducting an evaluation, the evaluator is required by these criteria and follows each item as a reference so that it is not based on personal opinion.
4. Criteria or benchmarks will provide direction to the evaluator if there is more than one evaluator, so that the criteria are interpreted together.

Table 3. Success Criteria

No	Interval	Criteria
1	3,26-4,00	Very Good
2	2,51-3,25	Good
3	1,76-2,50	Less
4	1,00-1,75	Very Less

III. RESEARCH RESULT

Table 4. Average results of evaluation context for contemporary education learning for ABK.

1. Context Evaluation

Indicator	Head School	Teacher PJOK	Total	Mean	Category
Learning materials and formulation of objectives	3,17	3,11	6,28	3,14	Good
Organizing materials, media and other learning resources	3,00	2,56	5,56	2,78	Good
Designing teaching and learning activities	3,28	3,39	6,67	3,34	Very Good
Class Management	3,44	3,22	6,66	3,33	Very Good
Assessment	3,37	3,33	6,70	3,35	Very Good
context component				3,19	Good

Table 5. Average Results of Evaluation Input for the Implementation of Physical Education Learning for ABK

2. Input Evaluation

Indicator	Head School	Teacher PJOK	Total	Mean	Category
Suitability of learning materials with KI and objectives	3,25	3,33	6,58	3,29	Good

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Learner Characteristics	2,33	2,48	4,81	2,41	Less
Input component				2,85	Good

Table 6. Average Results of Evaluation Process Indicators for the Implementation of Physical Education Learning in Inclusion-based State Elementary School ABKs in Sindang Plains District

3. Process Evaluation

Indicator	Head School	Teacher PJOK	Total	Mean	Category
Learning Activities	2,30	-	2,30	2,30	Less
Activity learners	1,75	1,97	1,86	1,86	Less
Process component				2,08	Less

Table 7. Average Results of Physical Education Learning Evaluation Products for Children with Special Needs

4. Product Evaluation

Indicator	Head School	Teacher PJOK	Total	Mean	Category
Learning Results	1,72	1,93	3,65	1,83	Less
Product component				1,83	Less

DISCUSSION

Program evaluation is a systematic and subjective assessment of an object, program or policy that is ongoing or has been completed, both in its implementation design and results, where the purpose of program evaluation is to determine the relevance and achievement of goals, efficiency, effectiveness, impact and sustainability, where an evaluation must provide reliable and useful information to be able to take lessons for the decision-making process. Based on the results of the study, it shows that the evaluation of the physical education learning implementation program for children with special needs in inclusion-based State Elementary Schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province, the results are in the insufficient category.

The lack of implementation of physical education learning for children with special needs in inclusion-based State Elementary Schools in the Sindang Dataran District of Rejang Lebong Regency, Bengkulu Province is due to several obstacles. The obstacles faced by teachers and parents in assisting children to learn as described, namely the lack of understanding about children with tunagrahita and materials that can make children with tunagrahita understand it, the difficulty of parents in assisting children to learn.

It is hoped that in the future this will no longer be an obstacle in learning at school and at home for children so that children are able to get optimal learning services, because good and optimal services for children in learning are the main key to successful learning goals (Wardani & Ayriza, 2021, p. 779). 779).

1. Context Evaluation

Based on the results of the study, it shows that the evaluation of the implementation of physical education learning for children with special needs in inclusion-based State Elementary Schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province is good.

Context evaluation is a description and specification of the program environment, unmet needs, population and sample characteristics of the individuals served and the objectives of the program itself. In other words, context evaluation is an evaluation of needs, the purpose of meeting needs, and the characteristics of the individual handling (evaluator) (Gandomkar, 2018, p. 95; Umam & Saripah, 2018, p. 20).

Indicators of learning materials and formulation of objectives amounted to 3.14 in the good category. The teachers prepare lesson plans in accordance with the competency standards and core competencies contained in the guidelines. From the SKKD, sports teachers compile indicators that are in accordance with the conditions of students with special needs, including the selection of

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materials and learning principles that are tailored to the conditions of students. This is also confirmed by research from Paradipta & Dewantoro (2019) which states that each type of disorder or problem faced by children with special needs requires different services. Likewise in physical education, each type of disorder requires its own form of physical education service. Therefore, ideally the physical education program is an individual service program.

2. Input evaluation

Based on the results of the study, it shows that the input evaluation of the program for evaluating the implementation of physical education learning for children with special needs in inclusion-based State Elementary Schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province is good.

Haryanto (2020, p. 97); Gunung & Darma (2019, p. 34).

Darma (2019, p. 34); Sopha & Nanni (2019, p. 136) explain that input evaluation provides information about selected inputs, points of strength and weakness, strategies, and designs for realizing goals. Santiyadnya (2021, p. 4) explains that the purpose is to help organize decisions, determine what alternative sources will be taken, what are the plans and strategies to achieve the needs, and what are the work procedures to achieve them. The input evaluation component itself consists of several, namely human resources, supporting facilities and equipment, funds or budgets, and various procedures and rules needed. Indicators of learner characteristics of 2.41 in less. This is indicated by the lack of enthusiasm of students during learning, participants do not understand every lesson, some students are late for school, students also feel bored quickly with learning due to lack of appropriate material. These results are supported in the research of Bahasoan, et al., (2020);

Suryaman, et al., (2020); Tratnik, et al., (2019); Jack, et al., (2018) that students are less enthusiastic in learning. that students are less enthusiastic in learning. In the learning process carried out at school, all elements of education are asked to be able to provide effective learning facilities for students.

3. Process Evaluation

Based on the results of the study, it shows that the process of evaluating the implementation of physical education learning for children with special needs in inclusive-based primary schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province, the results are in the insufficient category. Indicators of learning activities amounted to 2.30 in the deficient category. In the implementation of special learning for children with disabilities, there are often obstacles or discrepancies with the learning that should be.

Many assume that the responsibility of teachers in carrying out special learning for children with special needs is much lighter than learning for other children (Semradova & Hubackova, 2016, p. 11; Budi Lestari, et al., 2021, p. 3; Wahyuni, et al., 2021). Moreover, Syahfitri et al., (2020, p. 3) explained that special learning carried out by teachers is currently limited to knowledge transfer activities. Students lack deep understanding, decline in thinking levels and the inability of teachers to see the extent to which teaching material can influence behavior is a new challenge for teachers to understand each learner. The indicator of learner activities is 1.86 in the insufficient category. Not all students or do every lesson the teacher provides. Specialized learning that requires support is not without problems that will hinder the learning process. Carrying out special learning requires facilities that support and meet the standards of children with special needs. As stated by Lestari & Gunawan (2020: pp. 59); Garaus (2018, p. 447); Alalwan, et al., (2018, p. 100) Another obstacle found is the ability of parents to provide special education facilities for children with special needs, such as the use of special equipment. educational facilities for children with special needs such as the use of learning equipment and which requires a lot of money (Zara, et al., 2020, p. 70; Lone, et al., 2020).

4. Product Evaluation

Based on the results of the study, it shows that the evaluation of the program for evaluating the implementation of physical education learning for children with special needs in inclusion-based public elementary schools in the Sindang Dataran subdistrict of Rejang Lebong Regency is 1.83 in the insufficient category.

Facts in the field, show that all students get the maximum score when given questions at home not at school. This is a question for teachers, whether students really understand the material or students get help from adults when doing assignments. Teachers cannot objectively assess learning achievement according to students' abilities. From the affective side, teachers also experience difficulties in assessment.

Similarly, organizing online learning requires a lot of money, needing various supporting components such as gadgets, electricity, and so on. Overcoming these obstacles, teachers should implement a manual learning program, namely home visits, namely learning visits from home to home (Atsani, 2020, p. 82; Nadeak, 2020: p. 176; Usman & Huda, 2021, p. 3; Mantara, et al., 2020, p. 446). The findings above are also reinforced by views that say that it is not only able to portray obstacles from the perspective of students, but it can also highlight the aspects of teachers, through learning, teachers can improve their professionalism in the field

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of specialization in children with different needs, teachers will be more skilled in providing learning materials for children with disabilities (Jamilah, 2020, p. 238; Cahapay, 2020, p. 4; Moyo, 2020, p. 536).

IV. CONCLUSIONS

Based on the results of the research and the results of the data analysis that has been carried out, it is concluded that the evaluation of the implementation of adaptive physical education learning for children with special needs in inclusion-based State Elementary Schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province the results are in the insufficient category. Furthermore, each evaluation aspect is explained as follows.

1. Context evaluation of the implementation of physical education learning for children with special needs in inclusion-based State Elementary Schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province is in the good category. Indicators of learning materials and formulation of objectives of 3.14 in the good category, organizing materials, learning media, and other learning resources of 2.78 in the good category, designing teaching and learning activities of 3.34 in the very good category, classroom management of 3.33 in the very good category, and assessment of 3.35 in the very good category.

2. Input evaluation of the implementation of physical education learning for children with special needs in inclusion-based public elementary schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province is good. Indicators of suitability of learning materials with KI and Learning objectives of 3.29 in the good category and the characteristics of students of 2.41 in the less.

3. Process evaluation of the implementation of physical education learning for children with special needs in inclusion-based public elementary schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province the results are in the less category. Indicators of learning activities amounted to 2.30 in the deficient category and student activities amounted to 1.86 in the deficient category.

4. Product evaluation of the implementation of physical education learning for children with special needs in inclusion-based public elementary schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province the results are in the insufficient category. Indicators of achievement learning outcomes in inclusion-based State Elementary Schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province amounted to 1.83 in the insufficient category.

SUGGESTIONS

Based on the results of the study, the following suggestions can be given.

1. The CIPP evaluation should be applied by inclusion-based public elementary schools in Sindang Dataran Sub-district, Rejang Lebong Regency, Bengkulu Province so that it can be taken into consideration in making decisions related to PE learning for children with special needs.

2. Teachers should continue to develop knowledge by attending special trainings to develop the characteristics of children with other special needs, so that they can implement effective PE learning for children with special needs.

3. Schools should provide support both in the form of policies and in the form of adequate sports facilities and infrastructure that can support PE learning for children with special needs in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province.

4. This study evaluates the implementation of PE learning for children with special needs in inclusion-based public elementary schools in Sindang Dataran District, Rejang Lebong Regency, Bengkulu Province, future researchers should be able to research the analysis of the motor development of each child with all their disabilities in special needs schools throughout Indonesia, so that it can be used as a guideline for school principals and PE teachers in developing effective PE learning, especially for children with special needs.

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Determinants of the Sustainability of Laying Hen Farming Business



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ABSTRACT: The agricultural sector as a pillar of development together with the tourism sector and small industries. As part of the agricultural sector and the livestock subsector, the laying hen farming business is growing in line with the increase in egg production in Indonesia. However, during 2020 – 2022 egg production decreased in several districts in Bali Province and had an impact on the sustainability of the business. The leading factor that affects business sustainability is entrepreneurial orientation. The application of entrepreneurial orientation to companies is more about holding product market innovations, daring to run risky businesses and starting proactive innovations that will affect the performance and sustainability of their business. This article intends to describe the sustainability of the laying hen farming business and the things that affect it so that it can provide a direction for future studi in maintaining the sustainability of the laying hen farming business.

KEYWORD: Farming, Entrepreneurship Orientation, Business Sustainability

I. INTRODUCTION

In Indonesia, the agricultural sector in 2022 contributed 13.12 percent to the formation of the national Gross Domestic Product (GDP) and absorbed the largest workforce, which was 38.7 million people or 28.60 percent of the total labor absorption in 2022 (BPS, 2023). In the 2020-2021 period, the agricultural sector contributed an average of around 9.93 percent to the GDP of Bali Province, under the contribution of the accommodation, beverage and food supply sector, and the construction sector. The livestock subsector made the largest contribution to the GDP of the agricultural sector, with an average of 4.67 percent. In Bangli Regency, the contribution of the agricultural sector to GDP is greater than the average district/city in Bali Province during 2018 – 2022. During this period, the agricultural sector in Bangli Regency on average contributed 27.48 percent. As part of the agricultural sector and the livestock subsector, the laying hen farming business is growing in line with the increase in egg production in Indonesia.

The laying hen business also supports the government in meeting the animal protein needs of the Indonesian people. Although Bangli Regency controls most of the egg production in Bali, egg production during 2020 – 2022 has declined as was experienced in several other districts and cities in Bali Province during that period. Many farmers in Bangli Regency have succeeded in developing their businesses so that they can increase the population which has an impact on increasing egg production. However, there are also not a few farmers who are not able to run their businesses properly so they have to reduce the population and even close their businesses. There are several things that affect the success and failure or sustainability of the chicken farming business in Bangli Regency. The performance or survival of a business, especially Micro, Small and Medium Enterprises, is greatly influenced by internal and external factors, which can be seen from its sustainability both in the short and long term.

Based on this phenomenon, it can be seen that one of the factors that affect business sustainability is entrepreneurial orientation. Furthermore, Kantis (2005) mentioned several factors that can affect entrepreneurial orientation, including socio-economic conditions, socio-culture, production structure, personal aspects, cooperation networks, market factors, as well as government regulations and policies. Ahmad and Richard (2008) define entrepreneurship orientation as the action of business owners in implementing the entrepreneurial spirit which in generating business value through the creation or expansion of economic activities, by identifying and exploiting new products, as well as market expansion.

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Soegoto (2009) stated that entrepreneurship is business creativity built on innovation to produce something new, have added value, provide benefits, create jobs and the results are beneficial to others. According to the Commission of the European Communities (2003), entrepreneurship contributes to job creation and growth, it is important to create competitiveness, unlock personal potential, and benefit the community. Entrepreneurial orientation, also called entrepreneurial activity, is the implementation of the entrepreneurial spirit as a strategic resource of the organization that has the potential to be a competitive advantage (Gutterman, 2021). Entrepreneurship is able to motivate people to create breakthroughs in commercial and social innovation. Some of the key dimensions of entrepreneurial orientation are independence, a willingness to innovate and take risks, an aggressive attitude towards competitors, and proactively facing market opportunities. Management plays an important role in organizing and incorporating other production factors in running the company. Good management is one of the keys to success in all types of production, including agriculture. Untuk mengembangkan usaha, petani sebagai produsen harus mendedikasikan banyak waktu dan perhatian saat membuat keputusan manajemen. Selain itu, mereka harus fokus pada proses pengembangan keterampilan manajemen (Franks, 2006).

Drucker (1994) stated that an entrepreneur is someone who is able to take advantage of opportunities. Entrepreneurship is the main factor that drives the growth of the company. Miller (1983) and Covin and Slevin (1989) formulated the dimensions of entrepreneurial orientation, namely proactiveness, innovativeness, risk taking and all of these dimensions have an effect on business sustainability. Meanwhile, Lumpkin and Dess (1996) added that there is a relationship between entrepreneurship and entrepreneurial orientation. Entrepreneurial orientation consists of 5 dimensions including: (a) innovation, (b) risk-taking, (c) reactivity, (d) autonomy, and (e) competitive aggressiveness. Entrepreneurial orientation can be defined as a strategic process that encourages entrepreneurial actions, such as recognizing and taking advantage of new business opportunities (Lumpkin and Dess, 2001). More specifically, entrepreneurial orientation is a key factor that influences organizational strategy, corporate culture, leadership, and marketing (Tuan, 2015). As a consequence, it has been proven that companies with a higher level of entrepreneurial orientation perform better (Keh et al., 2007).

Aspects of the company are closely related to entrepreneurial orientation and business sustainability. Miller (2011) states that entrepreneurial orientation is a combination of three dimensions, namely innovation, proactivity, and risk-taking. These three dimensions are based on the characteristics of being engaged in product market innovation, doing rather risky business, and generating proactive innovations to beat competitors. SMEs collectively realize efficiency through specialization support, social relationships, and synergy with other parties (Zeng et al., 2010).

Dess, Lumpkin and Covin (1997) who stated that the relationship between entrepreneurial orientation and strategy has a positive effect on business sustainability. Miller and Friesen (1984) suggest that companies that have an entrepreneurial orientation are more likely to carry out product market innovations, dare to run risky businesses and initiate proactive innovations. Schumpeter's theory of entrepreneurship in 1934 was first conceptualized from an innovation perspective to determine how different factors can influence entrepreneurs to succeed or fail. Schumpeter defines an entrepreneur as an innovator, whose function is to reform production patterns by producing new commodities or organizing new industries or creating new ways to achieve something. Kumaraswamy et al. (2018) and Schumpeter (1934) argue that economic orientation strategies such as innovation, risk-taking, and competitive aggressiveness can play an important role in the sustainability of small business entrepreneurs.

The results of Lee and Tsang's (2001) research on 168 Chinese-owned SMEs in Singapore show that entrepreneurial orientation has a positive effect on business growth and sustainability. Covin and Slevin (1991) found that companies that have an Entrepreneurial Orientation will make companies find new opportunities and strengthen their competitive position in conducting business activities in the market. Research related to Entrepreneurship Orientation and corporate sustainability has been conducted by several researchers such as Keh et al. (2007) who conducted research on Small and Medium Industries in Singapore, found that Entrepreneurship Orientation has a positive and significant effect on Financial Performance.

II. METHOD

This study seeks to study the relationship between variables so that it is included in relational research. The research and development process is used to combine and assess research relating to the core of a particular topic in this systematic assessment of the literature. A comprehensive evaluation of the literature looks, identifies, assesses, and exhausts all studies on topics of interest with a variety of questions in the relevant study (Sugiyono, 2015). In order to provide the collected data to the reader logically and subsequently to explain and defend it, this study uses descriptive analysis.

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III. RESULT AND DISCUSSION

A. Development of the Agricultural Sector

The agricultural sector plays a very important role in economic development, especially in developing countries as stated by Arsyad (1999), and Todaro (2017). Kuznets' view cited by Ghatak (1984) and Tambunan (2003) states that the agricultural sector in developing countries has four potential capabilities in contributing to national growth and development. The four contributions are:

- 1. Product contributions.** Expansion in the non-agricultural sector is closely related to the agricultural sector. The agricultural sector is not only continuously increasing food supplies, but also providing raw materials for industrial products, such as textiles. The contribution of agricultural sector products is shown by the contribution of the agricultural sector to the formation of Gross Domestic Product (GDP) and also the linkages coefficient of the agricultural sector with other sectors.
- 2. Market contribution.** Due to economic bias in the early stages of development, the agricultural sector substantially contributes to the market. This contribution is shown by farmers' expenditure on industrial goods both for consumption and as an intermediate input. On the other hand, the agricultural sector also sells its output for the needs of other sectors
- 3. Contribution factors.** As the oldest sector, the agricultural sector contributes its output to other sectors. These contributions can be in the form of capital and also labor including human resources. Capital transfer occurs because the surplus in the agricultural sector is contributed to the non-agricultural sector, this is because the non-agricultural sector generally has a more elastic demand for capital than the agricultural sector. Labor transfer from the agricultural sector is contributed to the non-agricultural sector, this is because the agricultural sector generally has an abundant supply of labor. With low wage levels in the agricultural sector, the workforce will be encouraged to move from the agricultural sector to the non-agricultural sector.
- 4. Foreign exchange contribution.** In developing countries, the agricultural sector plays a very important role in contributing foreign exchange, because the main export of developing countries is agricultural commodities. Foreign exchange from agricultural commodity exports is generally used to finance the development of non-agricultural sectors. This is first because the expansion of production in agricultural export commodities such as coffee, cocoa or cotton can be carried out with a largely subsistence cropping system to avoid new investment. Second, because the agricultural sector generally often uses relatively little additional capital.

In relation to the role of the agricultural sector, in developing countries, the agricultural sector is generally made a top priority in development programs. Raharjo (1984) added that the reason why the agricultural sector was built first compared to the industrial sector is: First, industrial goods need the support of people's purchasing power. Since most of the potential buyers are farming communities who make up the majority of the population of developing countries, their income levels need to be increased through agricultural development. To build modern and efficient factories, a minimum size is required, namely an optimal production area. Therefore, a wider group of people with adequate purchasing power is needed here. Second, to reduce production costs from the wage and salary components, it is necessary to have the availability of cheap foodstuffs, so that the wages and salaries received can be used to meet the basic needs of workers and employees. This can be achieved if the production of agricultural products, especially food, can be increased so that the price can be cheaper and affordable by purchasing power. Third, industry also needs raw materials derived from the agricultural sector, and therefore the production of industrial materials provides the basis for the growth of the industry itself.

In addition to the above goals, Todaro (2017) also added that the purpose of agricultural development is to balance regional development, namely between urban and rural development, because agricultural businesses are generally located in rural areas. To increase agricultural production, especially small-scale ones, technological innovation is needed.

B. Sustainable Agricultural Development

Sustainable development is defined as development to meet the needs of the present without compromising the ability of future generations to meet their needs. According to FAO (Food and Agriculture Organization) from the United Nations, sustainable agriculture is the management of natural resources and the orientation of technological and institutional changes that are carried out in such a way as to ensure the sustainable fulfillment and satisfaction of human needs for current and future generations. Mary V. Gold (1999) stated that sustainable agriculture combines three goals which include: environmental security, profitable agriculture and the welfare of farming communities. These goals have been defined variously by various disciplines, but the key word is: benefits for farmers and consumers. Sustainable agriculture is a model of socio-economic organization based on a vision of equitable and participatory development, which affirms that natural resources and the environment are the basis of economic activity.

Agriculture will be sustainable when it pays attention to ecology, is economically viable, socially accountable and culturally appropriate, and is based on a holistic scientific approach. Sustainable agriculture is one of the whole-of-system approaches to food, feed, and other fibre products that is balanced with environmental security, social equity, and economic viability between all sectors

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of society, including the international and cross-generational community. Operationally, sustainable development is defined as an effort to maximize the net benefits of economic development on the condition that it can maintain and improve the services, quality and quantity of natural resources at all times. Furthermore, the Agricultural Research Service (USDA) defines sustainable agriculture as agriculture that in the future can be competitive, productive, profitable, conserve natural resources, protect the environment, and improve health, food quality, and safety (Saptana and Ashari, 2007).

C. Sustainability of Livestock Business

The achievement of corporate sustainability refers to the level of achievement of performance or achievements of the company in a certain period of time. The sustainability of a company is very decisive in the development of a company. The company's goals, which consist of: standing or surviving (survive), to obtain profits (benefits) and to be able to develop (growth), can be achieved if the company has good performance. The sustainability of a company can be seen from the level of sales, profit rate, return on capital, turnover rate and market share achieved (Jauch and Glueck, 1988). Corporate sustainability is seen as a measure of how well an organization or entity is achieving its goals (Gonzales and Gonzales, 2005). The company's sustainability should include three specific areas of the company's outcomes: financial performance (such as profitability), marketing performance (such as customer growth) and profits received by shareholders. Business sustainability evaluation activities can usually be known through the success of measuring product market performance, customer growth and sales ups and downs (Richard et al, 2009).

The sustainability of the laying hen business is influenced by social and economic factors of farmers, such as low education levels, who do not dare to take risks because there is no guarantee from the government on production input factors such as capital, availability of feed ingredients, grains and medicines, while economic factors are related to production outputs such as egg prices and marketing. The sustainability of a business is supported by several factors (Ligthelm, 2010), while these factors are a strong cause for a business to survive, namely the compilation of a business plan, regular business plan updates, analyzing competitors, ease of entering a new business, the ability to calculate or calculate income risk.

D. Entrepreneurial orientation

Entrepreneurial orientation has a positive influence on the implementation of sustainable development in a company, namely when it is supported by a high level of initiative and innovation, moderate risk-taking and competitive aggressiveness and low autonomy (Gawel, 2012). Schumpeter in 1934 first conceptualized the theory of entrepreneurship from the perspective of innovation to determine how different factors can affect entrepreneurs to succeed or fail. Schumpeter defines an entrepreneur as an innovator, whose function is to reform production patterns by producing new commodities or organizing new industries or creating new ways to achieve something. Kumaraswamy et al. (2018) and Schumpeter (1934) argue that economic orientation strategies such as innovation, risk-taking, and competitive aggressiveness can play an important role in the sustainability of small business entrepreneurs.

From the perspective of the individual, the factors that drive the success of the business, are mainly influenced by the personality of the entrepreneur himself. In general, successful personal profiles are those who meet the main requirements to become a successful entrepreneur, including; Passionate attitude in doing business, strong willingness, in-depth knowledge, perseverance, having technical skills to run their business and confident. Successful entrepreneurs who are able to bring their business sustainable are usually innovative and creative. Innovative ability is the ability to see, imagine and create unique new products, processes or services, as well as being able to seize market opportunities and visualize creative new ways to profit.

IV. CONCLUSIONS

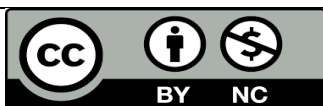
Entrepreneurial orientation is very important in the laying hen farming business in Bangli Regency in overcoming problems in business management. The ability to manage a business is one of the important factors that support the success of farmers, something that farmers who are less successful are not able to do. Managing a laying breed chicken farm certainly requires an entrepreneurial spirit that is implemented into an entrepreneurial orientation in order to run a business well, achieve production targets that will affect the performance and sustainability of the business. The special job of entrepreneurs in a running company is to enable existing companies, especially those that have succeeded, to continue to run and to remain successful in the future

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Consumer Protection in Business Law: Conflict of Norms and its Implications under Article 18 of Law No. 8 of 1999 on Consumer Protection



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ABSTRACT: Consumer protection is an important aspect of business law that often clashes with the principle of freedom of contract. This paper analyzes the conflict between Article 18 of the Consumer Protection Law (UUPK) and Article 1320 of the Civil Code (KUHPPerdata) in the context of consumer protection in Indonesia. The norm conflict arises mainly in the use of standard clauses in standard contracts, which can harm consumers. John Rawls' theory of justice and Gustav Radbruch's theory of legal certainty are used to understand how the law can balance the interests of consumer protection and freedom of contract. In addition, technological developments and globalization also complicate the application of GCPL in electronic and cross-border transactions. The author suggests several legal strategies to address this conflict, including revision of laws, integration of technology, and harmonization of international law. In conclusion, effective consumer protection requires a balance between substantive justice and legal certainty and adaptation to technological change and market dynamics.

KEYWORDS: Consumer protection; Freedom of Contract; UUPK (Consumer Protection Law); Normative Conflict.

I. INTRODUCTION

Consumer protection is one of the fundamental pillars of business law, serving to maintain a balance between the rights and obligations of businesses and consumers. In the era of globalization and the digital revolution, the transactions between businesses and consumers have undergone significant transformation, creating new complexities in business-consumer relationships. The development of information and communication technology has introduced digital platforms that broaden the scope of commerce, enabling cross-border transactions that were previously unimaginable (Riefa, 2015). In this context, consumers no longer deal solely with goods and services offered conventionally, but also through online transactions that often involve standard contracts with pre-formulated clauses. This phenomenon has shifted the paradigm of consumer protection, demanding legal adaptation to the new realities in the global business landscape (Micklitz et al., 2017).

Law No. 8 of 1999 on Consumer Protection (UUPK) was introduced in response to the need for legal protection for consumers in Indonesia. UUPK is designed to safeguard consumers' rights from harmful business practices, establish standards of conduct for businesses, and provide fair dispute resolution mechanism (Shidarta, 2000).. One crucial aspect of UUPK is the regulation of standard clauses that are often used in standard contracts.

Article 18 of the Consumer Protection Law (UUPK) explicitly prohibits businesses from including standard clauses that disadvantage consumers. This prohibition covers various forms of clauses deemed unfair, such as the transfer of business liability, refusal to accept the return of purchased goods, or granting authority to businesses to take unilateral actions that harm consumers (Widjaja & Yani, 2001). However, the implementation of Article 18 of the Consumer Protection Law (UUPK) often conflicts with the principle of freedom of contract as stipulated in Article 1320 of the Indonesian Civil Code (KUHPPerdata). This principle, which is one of the fundamental tenets of contract law, grants parties the freedom to determine the content and terms of a contract according to their mutual agreement (Badruzaman, 2001). The inconsistency between consumer protection and freedom of contract creates a normative conflict that significantly impacts the effectiveness of consumer protection in Indonesia.

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This normative conflict becomes increasingly complex in the context of electronic transactions and cross-border trade. The development of e-commerce has introduced new challenges in enforcing consumer protection laws, particularly when dealing with businesses operating from different jurisdictions (Smedinghoff, 2008). This situation raises questions regarding legal jurisdiction and the application of the Consumer Protection Law (UUPK) in international transactions. Furthermore, the evolution of technology has given rise to new forms of digital contracts, such as blockchain-based smart contracts, which challenge traditional concepts of agreement and contract execution (Werbach & Cornell, 2017). This raises questions about how consumer protection principles can be applied in the context of these rapidly advancing technologies.

On the other hand, the rise of the sharing economy, as represented by platforms like Airbnb and Uber, has blurred the line between consumers and businesses, creating a new category of "prosumer" that requires a different legal protection approach (Cohen & Sundararajan, 2015). This situation calls for a reinterpretation and potentially a reformulation of the consumer protection concepts within the Consumer Protection Law (UUPK).

In the Indonesian context, the implementation of the Consumer Protection Law (UUPK) also faces structural and cultural challenges. The wide digital and informational gap across various regions in Indonesia leads to unequal access to consumer protection information and mechanisms (Nasution, 2002). Additionally, the legal culture in Indonesia, which tends to avoid conflict and prefer informal resolution, can affect the effectiveness of the dispute resolution mechanisms outlined in the UUPK (Lev, 2000).

The normative conflict between consumer protection and freedom of contract also reflects a broader dilemma between state intervention and market autonomy. On one hand, consumer protection represents the role of the state in safeguarding the weaker party in economic transactions. On the other hand, freedom of contract emphasizes individual autonomy and market efficiency (Trebilcock, 1993). Balancing these two interests is a key challenge in the formulation and implementation of consumer protection policies. The implications of this normative conflict are evident in various legal cases involving standard clauses. For example, in the case of Anny R. Gultom and Hontas Tambunan versus PT. Securindo Packatama Indonesia (Secure Parking Case) in 2007, the Supreme Court ruled that a standard clause that absolves parking operators from responsibility for vehicle loss is null and void. This decision affirms the supremacy of the Indonesian Consumer Protection Law (UUPK) over the principle of contractual freedom in the context of consumer protection (Putusan MA No. 2078 K/Pdt/2009).

However, the implementation of this decision in everyday business practices still faces challenges. Many business operators continue to include similar clauses in their agreements, relying on consumers' lack of knowledge or their reluctance to file legal lawsuits. This situation highlights the gap between law in theory and practice, which requires more effective law enforcement strategies. Furthermore, the development of technology and new business models has created a "grey area" in the application of the Indonesian Consumer Protection Law (UUPK). For instance, in the case of online transportation services like Gojek and Grab, questions arise regarding the legal status of drivers, whether they are considered employees of the company or independent contractors, which has implications for the company's responsibility towards consumers (Nastiti, 2017).

In the realm of e-commerce, the practices of collecting and using consumer data by digital platforms also raise new issues related to consumer privacy protection that are not yet fully accommodated in the Indonesian Consumer Protection Law (UUPK) (Dewi, 2015). This indicates the need for harmonization between the UUPK and other related regulations, such as Law No. 11 of 2008 concerning Electronic Information and Transactions.

This normative conflict also has an international dimension. As Indonesia becomes increasingly integrated into the global economy, harmonizing consumer protection standards with international practices becomes increasingly important. For example, in the context of the ASEAN Economic Community, differences in consumer protection standards among member countries can become barriers to regional market integration (Rachagan & Kanniah, 2015).

Facing this complexity, a holistic and adaptive approach is needed in interpreting and applying consumer protection principles. Innovative legal strategies are required to bridge the gap between consumer protection and contractual freedom, while still maintaining the necessary flexibility to accommodate technological developments and new business models.

In this context, this study aims to conduct an in-depth analysis of the normative conflict between consumer protection as regulated in Article 18 of the Indonesian Consumer Protection Law (UUPK) and the principle of contractual freedom in Article 1320 of the Civil Code. Furthermore, this study will explore legal strategies that can be implemented to address this normative conflict, taking into account technological developments, global market dynamics, and the specific socio-cultural context of Indonesia.

Through this comprehensive analysis, it is expected that policy recommendations can be formulated to enhance the effectiveness of consumer protection in Indonesia, while still maintaining a balance with the principle of contractual freedom and encouraging innovation in business practices.

The questions that arise and subsequently form the problem formulation based on the background of the issue are as follows:

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1. How does the normative conflict between Article 18 of Law No. 8 of 1999 concerning Consumer Protection and the principle of contractual freedom in Article 1320 of the Civil Code affect the effectiveness of consumer protection in Indonesia, particularly in the context of technological development and economic globalization?
2. What legal strategies can be implemented to address this normative conflict to ensure more effective consumer protection, considering the balance between the interests of consumers, business operators, and the development of business innovation?

This study is based on a normative juridical research approach, which is a type of research aimed at examining and studying the reform of transportation law in the era of disruption with the goal of achieving legal certainty and justice. This normative research focuses on normative legal science, a discipline of law characterized by its specific nature where the analysis is centered on positive law.

Normative legal research has long been a method used by legal scholars to investigate various legal issues. This research method includes the exploration of:

- a. Legal principles
- b. Legal systematics
- c. Legal synchronization
- d. Legal comparison
- e. Legal history

The distinctive feature of normative legal research can also be recognized through its legal sources, which consist of legal materials containing normative regulations, rather than legal materials in the form of information and social facts.

II. RESULT AND DISCUSSION

A. Normative Conflict between Consumer Protection and Contractual Freedom

John Rawls' Theory of Justice, known as "justice as fairness," offers a valuable perspective in analyzing the normative conflict between consumer protection (Article 18 of Law No. 8 of 1999 concerning Consumer Protection, UUPK) and contractual freedom (Article 1320 of the Civil Code). Rawls proposed two principles of justice: first, each person has an equal right to the most extensive basic liberties compatible with similar liberties for others; second, social and economic inequalities must be arranged so that:

1. They are to the greatest benefit of the least advantaged, and
2. They are attached to offices and positions open to all under conditions of fair equality of opportunity (Rawls, 1971).

In the context of this normative conflict, Rawls' first principle supports contractual freedom as part of individual basic liberties. However, Rawls' second principle justifies the restriction of this freedom to protect the weaker party (consumers) from inequalities that may arise from the abuse of contractual freedom by the stronger party (business operators).

Article 18 of the UUPK can be seen as a manifestation of Rawls' second principle. By prohibiting standard clauses that disadvantage consumers, this law seeks to create greater equality in the consumer-business operator relationship. This aligns with Rawls' idea that inequalities are only justifiable if they benefit the least advantaged in society (Freeman, 2007).

However, the application of Rawls' theory also faces challenges in this context. First, there is a question of how to define "benefit for all" in the context of business transactions. Overly strict limitations on contractual freedom may benefit consumers in the short term but can hinder innovation and market efficiency, ultimately harming consumers (Trebilcock, 1993).

Second, Rawls' principle of "positions and offices open to all" may conflict with the market reality where business operators possess significant information advantages and bargaining power. Although the Indonesian Consumer Protection Law (UUPK) strives to balance these powers, in practice, consumers often remain in a less advantageous position (Shidarta, 2000).

Furthermore, Rawls' concept of the "veil of ignorance," where principles of justice must be chosen without knowing one's position in society, offers an intriguing perspective. If we imagine a situation where an individual does not know whether they will be a business operator or a consumer, which principles would they choose? Most likely, they would opt for a system that balances consumer protection with contractual freedom, similar to what is sought by the combination of the UUPK and the Civil Code (Rawls, 2001).

However, criticisms of Rawls' theory suggest that this approach may be too abstract and overlook the complexities of social and economic realities (Nozick, 1974). In the context of consumer protection in Indonesia, factors such as gaps in legal knowledge, access to justice, and rapidly changing market dynamics may not be fully captured within the Rawlsian framework.

Nevertheless, Rawls' theory provides a strong ethical justification for state intervention in protecting consumers while still acknowledging the importance of contractual freedom. This indicates that the normative conflict between Article 18 of the UUPK

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and Article 1320 of the Civil Code is not an irreconcilable contradiction but rather reflects a legal effort to balance various interests in a complex society.

Gustav Radbruch, in his theory of the purpose of law, identifies three fundamental elements: justice (*Gerechtigkeit*), legal certainty (*Rechtssicherheit*), and purposiveness (*Zweckmäßigkeit*). Radbruch argues that legal certainty is the most important aspect because, without it, people do not know what to comply with, leading to chaos (Radbruch, 1999).

In the context of the normative conflict between Article 18 of the UUPK and the principle of contractual freedom in Article 1320 of the Civil Code, Radbruch's theory offers a valuable analytical framework. Legal certainty requires that legal rules be clear, consistent, and predictable in their application. However, the conflict between these two legal norms creates significant uncertainty.

On one hand, Article 1320 of the Civil Code affirms the principle of contractual freedom, providing certainty that legally formed agreements are binding as law for the parties involved. This principle has long been a cornerstone in Indonesian civil law and offers predictability in business transactions (Badruzaman, 2001).

On the other hand, Article 18 of the Indonesian Consumer Protection Law (UUPK) restricts this freedom by prohibiting certain standard clauses. Although aimed at protecting consumers, these restrictions can create legal uncertainty. Business operators may be unsure whether the clauses in their contracts will be deemed valid, while consumers might be unaware of the extent of their rights protection (Widjaja & Yani, 2001).

This conflict reflects the tension between formal certainty (supported by the principle of contractual freedom) and substantive certainty (pursued through consumer protection). According to Radbruch, when a conflict arises between legal certainty and justice, legal certainty should take precedence. However, when injustice reaches an intolerable level, unjust law must yield to justice (Radbruch, 2006).

In this context, the question arises: has the potential injustice resulting from the unrestricted application of contractual freedom reached an intolerable level? If so, the restrictions in Article 18 of the UUPK can be justified even at the expense of certain aspects of legal certainty.

However, the implementation of Article 18 of the UUPK also faces challenges regarding legal certainty. Terms such as "abuse of circumstances" or "unreasonable clauses" within the UUPK can have varying interpretations, creating uncertainty in their application (Shofie, 2000). This highlights the need for a balance between the flexibility to protect consumers and the clarity needed to provide predictable guidance for business operators.

Furthermore, in the context of the digital economy and globalization, legal certainty becomes increasingly complex. Cross-border transactions and new business models create grey areas in the application of the UUPK. For instance, how is Article 18 of the UUPK applied to electronic contracts involving parties from different jurisdictions? This uncertainty can hinder innovation and economic growth (Smedinghoff, 2008).

On the other hand, an argument can be made that Article 18 of the UUPK actually enhances legal certainty in the long run. By establishing minimum standards for consumer protection, the UUPK creates clear "rules of the game" for all business operators, reducing the uncertainty that may arise from varied interpretations of what constitutes fair business practices (Miru & Yodo, 2015).

Furthermore, legal certainty in Radbruch's theory is not only about predictability but also about legitimacy. Laws perceived as unjust by society lose their legitimacy and ultimately threaten legal certainty itself. In this context, Article 18 of the Indonesian Consumer Protection Law (UUPK) can be seen as an effort to maintain the legitimacy of the legal system by responding to society's need for greater protection in consumer transactions (Sidharta, 2006).

However, Radbruch also emphasizes the importance of purposiveness as one of the objectives of law. In this context, it is necessary to consider whether the restriction of contractual freedom produces greater benefits for society as a whole. This requires empirical analysis of the impact of the UUPK on market behavior, innovation, and consumer welfare (Cooter & Ulen, 2016).

In short, the analysis based on Radbruch's theory of legal certainty shows that the normative conflict between Article 18 of the UUPK and the principle of contractual freedom reflects a broader tension between various legal objectives. Resolving this conflict requires a balanced approach that considers the need for legal certainty, substantive justice, and social utility.

The normative conflict between Article 18 of the UUPK and the principle of contractual freedom in Article 1320 of the Civil Code through the lens of Rawls' theory of justice and Radbruch's theory of legal certainty demonstrates the complexity and nuances of this issue. Both theories offer complementary perspectives in understanding the implications of this normative conflict on the effectiveness of consumer protection in Indonesia.

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Rawls' theory of justice provides an ethical justification for restricting contractual freedom to protect the weaker party, in line with the objectives of Article 18 of the UUPK. However, this theory also reminds us of the importance of maintaining a balance between consumer protection and economic freedom that can benefit all parties in the long term.

On the other hand, Radbruch's theory of legal certainty highlights the challenges in aligning consumer protection with the need for clear and predictable rules. This normative conflict creates legal uncertainty but can also be seen as an effort to achieve a better balance between formal certainty and substantive justice.

The synthesis of these two perspectives indicates that the effectiveness of consumer protection in Indonesia depends not only on the substance of the law but also on how the law is applied and interpreted. A flexible yet consistent approach is required in implementing Article 18 of the Indonesian Consumer Protection Law (UUPK), which takes into account both the need for justice and legal certainty.

Furthermore, this highlights the necessity for ongoing evaluation of the impact of the UUPK in practice, as well as adaptations to technological developments and new business models. Only in this way can the framework of consumer protection laws in Indonesia remain relevant and effective in balancing various interests within an ever-evolving business landscape.

B. Legal Strategies to Address Normative Conflicts and Enhance the Effectiveness of Consumer Protection

To address the normative conflict between consumer protection (Article 18 of the Indonesian Consumer Protection Law, UUPK) and contractual freedom (Article 1320 of the Civil Code), as well as to enhance the effectiveness of consumer protection in Indonesia, several legal strategies can be implemented.

Rawlsian Distributive Justice Approach can be one of the solutions. John Rawls' theory of justice emphasizes the importance of distributive justice and protection for the least advantaged in society. In the context of consumer protection, consumers often find themselves in a weaker position compared to business operators. By adopting a Rawlsian approach, several legal strategies can be applied, including strengthening the principle of balance. This can be realized by revising the UUPK to more explicitly adopt Rawls' "difference principle," which allows for inequalities only if they benefit the least advantaged. This can be translated into provisions that require business operators to prove that their standard clauses not only benefit them but also provide advantages to consumers (Rawls, 1999). Additionally, mechanisms to balance information asymmetry can be developed, mandating business operators to provide more comprehensive and easily understandable information about their products and services. This aligns with Rawls' concept of the "original position," where all parties have equal access to information (Freeman, 2007). Strengthening consumer protection institutions is also necessary, such as enhancing the role and capacity of institutions like the National Consumer Protection Agency (BPKN) to act as an institutional "veil of ignorance," ensuring that policies and business practices do not disadvantage the most vulnerable consumers.

Radbruch's Legal Certainty Approach can also be utilized. Gustav Radbruch emphasized the importance of legal certainty while acknowledging that, in certain situations, justice can override legal certainty. Strategies based on this theory include codification and harmonization. Codifying the consumer protection principles scattered across various regulations into a comprehensive consumer protection code will enhance legal certainty by providing a clear single source for business operators and consumers (Sidharta, 2006). Developing consistent jurisprudence through court decisions that interpret and apply the UUPK is also crucial. This will help create reliable precedents, increasing predictability in the application of consumer protection laws (Mertokusumo, 2010). Additionally, applying the principle of proportionality in assessing standard clauses by considering the balance between the interests of business operators and consumers aligns with Radbruch's idea of balancing legal certainty and justice (Radbruch, 2006).

Integration of Technology and Legal Innovation is another important strategy. Given the advancements in technology and new business models, legal strategies must incorporate innovation. The use of blockchain-based smart contracts can be explored to enhance transparency and certainty in consumer transactions, helping to address information asymmetry issues and strengthen the enforcement of contract clauses (Werbach & Cornell, 2017). Furthermore, implementing "regulatory sandboxes" for innovative business models can allow limited experimentation under regulatory supervision, helping to balance innovation with consumer protection (Zetzsche et al., 2017). Developing AI systems to analyze and assess the fairness of standard clauses is also a significant step, aiding consumers and regulators in identifying potentially harmful clauses (Surden, 2014).

By implementing these legal strategies, Indonesia can effectively navigate the normative conflicts between consumer protection and contractual freedom, ensuring that consumer rights are safeguarded while maintaining a conducive environment for business innovation and economic growth.

Strengthening Alternative Dispute Resolution Mechanisms should also be a priority. Given Indonesia's socio-cultural context, which tends to avoid direct confrontation, enhancing alternative dispute resolution mechanisms is crucial. Developing accessible,

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swift, and effective Online Dispute Resolution (ODR) platforms for resolving consumer disputes, especially for e-commerce transactions (Cortés, 2018), as well as implementing mandatory mediation systems for consumer disputes before cases are brought to court, can improve efficiency and reduce the burden on the judicial system (Boulle, 2011). Strengthening the Consumer Dispute Resolution Agency (BPSK) by increasing its capacity and reach, including training mediators and arbitrators in contemporary consumer issues, is also an important step (Nugroho, 2015).

Consumer Education and Empowerment are equally important. Legal strategies should include efforts to enhance legal literacy and consumer awareness. Legal literacy programs that develop public education on consumer rights and how to enforce them align with Rawls' principle of equal opportunity (Rawls, 2001). Collaborating with educational institutions to integrate consumer protection materials into school and university curricula can help build a generation of more rights-aware consumers (Howells, 2020). Additionally, utilizing social media to disseminate information about consumer protection and report harmful business practices is essential (Lim, 2017).

International Legal Harmonization must also be considered, given the global nature of many modern consumer transactions. Ratifying international conventions on consumer protection, such as the United Nations Guidelines for Consumer Protection, can align Indonesia's consumer protection standards with global best practices (United Nations, 2016). Cooperation within the ASEAN framework for harmonizing consumer protection laws is also important to facilitate consumer protection in cross-border transactions (Rachagan & Kanniah, 2015). Furthermore, integrating consumer protection principles into international trade agreement negotiations is necessary (Howells & Wilhelmsson, 2018).

These legal strategies, informed by Rawls' theory of justice and Radbruch's theory of legal certainty, aim to create a better balance between consumer protection and contractual freedom. By adopting a multi-dimensional approach that includes legal reform, technological integration, strengthening dispute resolution mechanisms, consumer empowerment, and international harmonization, the effectiveness of consumer protection in Indonesia can be significantly enhanced. Implementing these strategies requires close coordination among various stakeholders, including policymakers, business operators, consumer organizations, and academics. Regular evaluations of the effectiveness of these strategies are also necessary to ensure that Indonesia's consumer protection legal framework remains responsive to technological developments and changing market dynamics.

III. CONCLUSIONS

- a. The normative conflict between consumer protection (Article 18 of the Indonesian Consumer Protection Law, UUPK) and contractual freedom (Article 1320 of the Civil Code) can be analyzed through the lenses of John Rawls' theory of justice and Gustav Radbruch's theory of legal certainty. Rawls provides an ethical justification for restricting contractual freedom to protect consumers as the weaker party, while Radbruch emphasizes the importance of legal certainty in creating clear and predictable rules. To achieve effective consumer protection in Indonesia, a balance between substantive justice and legal certainty is necessary, along with adaptation to technological developments and the ever-evolving market dynamics.
- b. Legal strategies grounded in Rawls' distributive justice theory and Radbruch's legal certainty theory can create a better balance between consumer protection and contractual freedom in Indonesia. This approach involves legal revisions, technological integration, strengthening dispute resolution mechanisms, consumer education, and international harmonization to enhance the effectiveness of consumer protection. Implementing these strategies requires coordination among policymakers, business operators, consumer organizations, and academics, as well as regular evaluations to adjust to technological advancements and changing market dynamics.

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The Influence of Political Culture on Youth Officials' Leadership Styles and Civic Engagement



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ABSTRACT: Recognizing the underlying cultural factors that influence political attitudes can aid in resolving conflicts and promoting social cohesion. This study explored the influence political culture on Youth Officials' leadership styles and civic engagement. The study was conducted in one of the universities in Ozamiz City, Misamis Occidental. The descriptive-correlational design was used in the study. There were 135 students who served as the respondents selected through a purposive sampling technique. The researcher-made Youth Officials Political Culture, Youth Officials' Leadership Styles, and Youth Officials' Civic Engagement Questionnaires were used as research instruments. Weighted Mean and Pearson Product-Moment Correlation Coefficient were used as statistical tools to analyze the data gathered. Results revealed that the youth officials perceived political culture in their respective barangays was very highly participant. The youth officials' leadership style was democratic, while their civic engagement was to a very great extent. The perceived political culture generally influenced the respondents' leadership styles and civic engagement. Political culture holds a major factor on how the youth officials lead their constituents and engage themselves in civic activities. It is recommended that youth officials sustain their democratic practices in governance to encourage citizens to participate freely in collective political action and influence decision-making processes.

KEYWORDS: democracy, leadership style, participation, political culture, Youth Officials

INTRODUCTION

In a society where the spread of knowledge, technology, and information exchange in the era of globalization is prevalent, which gives a multifaceted and complex meaning to politics, political culture is an important template to look into in understanding government and political phenomena (Jordan et al., 2021). It provides a deeper understanding of the complex interactions between society, politics, and governance, making it a fundamental concept in the study of political science and its sub-field of public administration (Kozacov, 2023).

Political culture refers to the attitudes, beliefs, and sentiments that shape and give meaning to the political process (Outram, 2022). It includes the underlying assumptions and rules that influence behavior within the political system (Paden 2023). It is not the same as public opinion; instead, it is concerned with what is considered normal and acceptable, as well as what is abnormal and unacceptable (Schilling 2022).

In the field of political science, it is articulated as collective opinions and normative judgments that a population holds about its political system (Shively & Schultz, 2022). It is important to note that political culture is not about attitudes toward specific individuals like a president or prime minister (Go, 2020). Instead, it encompasses how people perceive the political system as a whole and their belief in its legitimacy (Winkler, 2024).

Hence, political culture, in its most generic sense, refers to a set of interconnected cognitive and evaluative models that provide individuals within a political community with a framework to understand their role as political actors, as well as the roles of others, the community itself, and the institutional structure they are a part of (Rose et al., 2019). Therefore, individuals' views, attitudes, and feelings about their government constitute the foundation of political culture (Kitromilides, 2024).

With this, there might be a lack of comprehensive research that specifically examines how political culture influences the leadership styles and civic engagement of youth officials. Existing studies focused more broadly on youth participation or political culture at the national level, overlooking the unique dynamics within youth leadership structures (Weiss, 2020; Kitanova, 2020).

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This study intended to contribute to filling this gap by providing nuanced insights into the contextual factors influencing youth leadership.

Several scholars have advocated categorizing a wide range of leadership styles used by leaders in politics, industry, and other sectors. Psychologist Kurt Lewin developed his framework in the 1930s, which has since influenced many different approaches. Previous studies focused broadly on youth participation in politics or leadership styles in general (Omotayo & Folorunso, 2020; Pontes et al., 2019) but lacked an emphasis on the relationship between political culture and leadership among youth officials.

This study was chosen to explore how the prevailing political culture in different localities influences the leadership styles adopted by youth officials. It sought to investigate the values, norms, and practices embedded in political culture that shape the leadership approaches of youth leaders. It aimed to identify how the values, attitudes, and expectations inherent in political culture impact the willingness and ability of youth leaders to actively participate in community governance and decision-making processes.

Civic engagement among youth is vital for the development of democratic societies. By examining the relationship between political culture and civic engagement among youth officials, the study identified strategies to promote active citizenship and participation in governance processes among young people. Ultimately, the study may empower youth officials by providing them with a deeper understanding of the factors that influence their leadership roles and civic engagement. The knowledge can aid youth leaders in navigating the complexities of local politics more effectively and contribute meaningfully to community development and social change.

Objectives of the Study

This study explored influence of political culture on youth officials' leadership styles and civic engagement.

METHODS

Research Design. The descriptive-correlational design was used in the study. The descriptive method is a purposive process of gathering, analyzing, classifying, and tabulating data about prevailing conditions, practices, processes, trends, and cause-effect relationships and then making adequate and accurate interpretation of such data with or without or sometimes minimal aid of statistical methods (Calderon, 2006).

Research Setting. The study was conducted at one of the universities in Ozamiz City. This institution has been granted Autonomous Status by the Commission on Higher Education (CHED) and a certified ISO 20001:2018 Quality Management System by DNV-GL Australia Pty Limited.

Respondents. The respondents of this study were the youth elected Officials from different barangays in the province of Misamis Occidental and neighboring provinces. The respondents were enrolled in general education courses in the university during the Second Semester, School Year 2023-2024. A total of 135 students served as the respondents who were selected using a purposive sampling technique.

Research Instruments. This study used a researcher-made instruments namely: Political Culture Questionnaire, Level of youth Officials' Leadership Styles Questionnaire and Extent of Youth Officials' Civic Engagement Questionnaire with a 4-point Likert scale.

Data Gathering Procedure. Before the gathering of the data, the researcher sought permission from the Dean of the Graduate School of Misamis University. After approval was obtained, the researcher asked permission from the instructors teaching General Education courses for the conduct of the study among the target respondents. After obtaining the necessary approval, the researcher prepared the consent form for the respondents and explained the importance of the study to them. The data gathering was conducted within the premises of the research locale. The researcher personally administered the survey questionnaires to the respondents. The answered instruments were retrieved immediately. The data gathered were tallied for statistical analysis, and interpretation of the results followed.

Ethical Considerations. The paper was submitted to the Misamis University-Research Ethics Board (MUREB) for review and approval before the start of the data gathering. The researcher asked the respondents for voluntary participation to ensure the ethical aspect of the study's conduct. The participants were informed that they would not be harmed in any way. Respect was prioritized for the dignity of the respondents. Security of the respondents' information, the utmost degree of confidentiality of study data, and the anonymity of research participants were guaranteed.

Data Analysis. The study used the following statistical tools in analyzing the data gathered: *Weighted Mean* and *Standard Deviation*. These tools were used to determine the level of perceived political culture, the youth officials' leadership styles, and civic engagement. *Pearson Product-Moment Correlation Coefficient*. This tool was used to explore the relationship of political culture to leadership styles and civic engagement among the youth elected officials.

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RESULTS AND DISCUSSIONS

Level of Youth Officials' Perceived Political Culture

The overall level of political culture among youth officials, as shown in Table 1, is rated as "High" (M=3.13, SD=0.50). Among the specific constructs, the highest mean score is observed in the "Participant" construct (M=3.37, SD=0.43), indicating that youth officials perceive themselves as highly involved in and supportive of the political system. The "Parochial" construct follows with a mean score of (M=3.05, SD=0.56), while the "Subject" construct has the lowest mean score of (M=2.98, SD = 0.52), yet still falls within the "High" range.

The findings suggest that youth officials generally perceive their political culture as active and engaged, with a particularly strong sense of participation in the political process. This high level of political culture, especially in the "Participant" construct, implies that youth officials are not only aware of but also involved in political activities, which is crucial for their role in local governance. The relatively lower score in the "Subject" construct, while still high, might indicate a lesser degree of passive compliance or acceptance of authority without active involvement. The balance between these constructs reflects a healthy engagement in civic duties while maintaining an awareness of the broader political system.

The high level of political culture among youth officials underscores the importance of fostering political awareness and active participation among youth leaders (Guarino, 2019). University programs aimed at enhancing civic engagement and political education could further strengthen these qualities. For the concerned personnel, such as university administrators and local government units, this implies a need to support initiatives that encourage active political participation and leadership development among young officials. By doing so, they can ensure that future leaders are well-prepared to engage with and contribute positively to the political landscape (Bashir et al., 2023).

Table 1: Level of Youth Officials' Perceived Political Culture

Constructs	M	SD	Remarks
Participant	3.37	0.43	High
Subject	2.98	0.52	High
Parochial	3.05	0.56	High
Overall Level of Political Culture	3.13	0.50	High

Scale: 3.25-4.0(Very High); 2.50-3.24(High); 1.75-2.49 (Low); 1.0-1.74 (Very Low)

Level of Youth Officials' Leadership Styles

Table 2 presents the level of leadership styles among the respondents, with an overall leadership style rated as "High" (M=2.82, SD=0.87). Among the specific leadership styles, the "Democratic" style is rated "Very High" with a mean score of (M=3.56, SD=0.59), indicating a strong preference among the respondents for participative decision-making and inclusive leadership. The "Laissez-faire" style follows with a "High" rating (M=2.56, SD=0.97), suggesting that respondents also exhibit a tendency towards a more hands-off approach in leadership. The "Autocratic" style, however, is rated "Low" with a mean score of (M=2.35, SD=1.05), reflecting a minimal inclination towards authoritarian leadership among the respondents.

The data suggests that the respondents predominantly favor a democratic leadership style, emphasizing collaboration, consultation, and collective decision-making. The very high rating for the democratic style aligns with contemporary leadership ideals that value team input and shared responsibility. The high score for the laissez-faire style indicates that while respondents prefer a democratic approach, they are also comfortable with allowing their team members autonomy, possibly fostering innovation and self-directed work. On the other hand, the low rating for the autocratic style implies a limited reliance on top-down decision-making and control, which might reflect a leadership environment that values openness and participation over rigid authority.

The preference for democratic leadership among the respondents suggests that leadership development programs should focus on enhancing skills in communication, team-building, and inclusive decision-making (Vutula, 2021). University administrators and leadership mentors could benefit from promoting these values, ensuring that future leaders are equipped to manage teams effectively in a collaborative and participative manner. The relatively high laissez-faire style also indicates the need to balance autonomy with guidance, ensuring that leaders can delegate effectively while maintaining accountability. By de-emphasizing autocratic tendencies, leadership training can further cultivate an environment that fosters creativity, engagement, and mutual respect among team members.

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Table 2: Level of Youth Officials' Leadership Styles

Constructs	M	SD	Remarks
Autocratic	2.35	1.05	Low
Democratic	3.56	0.59	Very High
Laissez-faire	2.56	0.97	High
Overall Leadership Style	2.82	0.87	High

Scale: 3.25-4.0(Very High); 2.50-3.24(High); 1.75-2.49 (Low); 1.0-1.74 (Very Low)

Extent of Youth Officials' Civic Engagement

Table 3 illustrates the extent of civic engagement among the respondents, with the overall engagement rated as "Very Great Extent" (M=3.54, SD=0.60). Among the specific constructs, "Community Service" ranks highest with a mean score of (M=3.59, SD=0.58), suggesting that respondents are highly involved in activities that benefit their community. "Political Involvement" and "Social Change" both have a mean score of (3.53), with standard deviations of 0.57 and 0.63, respectively, indicating strong participation in political activities and efforts to bring about social change. The "Collective Action" construct, while slightly lower, also reflects a "Very Great Extent" of engagement with a mean score of (M=3.51, SD=0.63).

The findings indicate a robust level of civic engagement among the respondents, with all constructs being rated as "Very Great Extent." The highest level of engagement in community service suggests that respondents are particularly committed to contributing to their communities, which could be reflective of a strong sense of social responsibility. The high scores in political involvement and social change imply that respondents are not only aware of but also actively participating in the political process and advocating for societal improvements. The engagement in collective action further demonstrates a willingness to collaborate with others in achieving common goals, emphasizing the respondents' commitment to civic duties.

The high level of civic engagement among the respondents points to a well-developed sense of civic responsibility and active participation in societal issues (Dang et al., 2022). For university administrators and community leaders, this suggests an opportunity to further harness this engagement by providing more avenues for students and young leaders to participate in community service, political activities, and social change initiatives. Programs that support civic education, leadership development, and community involvement could help sustain and even enhance this level of engagement, ensuring that these individuals continue to contribute positively to their communities and society at large.

Table 3: Extent of Youth Officials' Civic Engagement

Constructs	M	SD	Remarks
Community Service	3.59	0.58	Very Great Extent
Collective Action	3.51	0.63	Very Great Extent
Political Involvement	3.53	0.57	Very Great Extent
Social Change	3.53	0.63	Very Great Extent
Overall Extent of Engagement	3.54	0.60	Very Great Extent

Scale: 3.25-4.0(Very Great Extent); 2.50-3.24(Great Extent); 1.75-2.49 (Less Extent); 1.0-1.74 (Least Extent)

Relationship between Perceived Political Culture and the Youth Officials' Leadership Styles

Table 4 presents the test of significant relationship between the respondents' level of political culture and their leadership styles. Several variables show a significant relationship, leading to the rejection of the null hypothesis (Ho). Specifically, a highly significant positive relationship is observed between the "Subject" construct and the "Autocratic" ($r = 0.44, p = 0.00$) and "Laissez-faire" ($r = 0.39, p = 0.00$) leadership styles. Similarly, the "Parochial" construct has a highly significant positive relationship with both the "Autocratic" ($r = 0.40, p = 0.00$) and "Laissez-faire" ($r = 0.41, p = 0.00$) leadership styles. Additionally, the "Participant" construct is significantly related to the "Democratic" ($r = 0.32, p = 0.00$) and "Laissez-faire" ($r = 0.20, p = 0.02$) leadership styles.

The significant relationships suggest that respondents with higher levels of "Subject" and "Parochial" political culture tend to adopt more autocratic and laissez-faire leadership styles. The positive correlation with the "Autocratic" style might indicate that respondents who view themselves more as subjects within the political system may prefer a more directive approach to leadership. Likewise, those with a parochial political culture, who may be more locally or narrowly focused in their political engagement, might also lean toward more authoritative or less interventionist leadership styles. On the other hand, the significant relationship

The Influence of Political Culture on Youth Officials' Leadership Styles and Civic Engagement

between the "Participant" construct and the "Democratic" leadership style suggests that individuals who are actively involved in the political process tend to favor collaborative and inclusive leadership approaches. The significant association with the "Laissez-faire" style may imply that these individuals also value autonomy in leadership, allowing team members more freedom.

The non-significant relationships observed include the "Participant" construct with the "Autocratic" leadership style ($r = 0.13$, $p = 0.12$) and the "Subject" construct with the "Democratic" style ($r = 0.05$, $p = 0.55$). Additionally, the "Parochial" construct shows no significant relationship with the "Democratic" style ($r = 0.01$, $p = 0.90$). These non-significant findings suggest that these specific aspects of political culture do not strongly influence the preference for these particular leadership styles among the respondents. For instance, the lack of a significant relationship between the "Participant" construct and the "Autocratic" style might indicate that those who are more engaged in the political system do not typically prefer a top-down leadership approach. Similarly, the absence of a significant relationship between the "Parochial" construct and the "Democratic" style might suggest that a narrow or localized political focus does not necessarily correlate with a preference for participative leadership.

The findings of this study have important implications for both youth officials and those involved in their leadership development. The significant correlations between certain political culture constructs and leadership styles suggest that the political beliefs and engagement levels of young leaders can influence how they choose to lead. For university administrators and local government units, these results highlight the need to tailor leadership training programs to address the specific political culture of youth officials. Programs that emphasize the importance of democratic and participative leadership could help mitigate the tendencies toward more autocratic or laissez-faire approaches that are associated with certain political culture traits. Additionally, understanding these dynamics can help in designing interventions that encourage a more balanced leadership style, promoting both effective governance and positive civic engagement.

Table 4: Relationship Between Perceived Political Culture and the Youth Officials' Leadership Style

Variables		<i>r</i> value	<i>p</i> value	Decision
Participant	Autocratic	0.13	0.12	Do not reject Ho
	Democratic	0.32**	0.00	Reject Ho
	Laissez-fair	0.20*	0.02	Reject Ho
Subject	Autocratic	0.44**	0.00	Reject Ho
	Democratic	0.05	0.55	Do not reject Ho
	Laissez-fair	0.39**	0.00	Reject Ho
Parochial	Autocratic	0.40**	0.00	Reject Ho
	Democratic	0.01	0.90	Do not reject Ho
	Laissez-fair	0.41**	0.00	Reject Ho

Ho: There is no significant relationship between the level of political culture and the respondents' leadership styles.

*Note: Probability Value Scale: ** $p < 0.01$ (Highly Significant); * $p < 0.05$ (Significant); $p > 0.05$ (Not significant)*

Relationship between Perceived Political Culture and the Youth Officials' Civic Engagement

Table 5 presents the relationship between the respondents' level of political culture and their extent of civic engagement, with a focus on identifying significant relationships where the null hypothesis (H_0) is rejected.

The results show highly significant positive relationships between the "Participant" construct and all dimensions of civic engagement: "Community Service" ($r = 0.42$, $p = 0.00$), "Collective Noun" ($r = 0.49$, $p = 0.00$), "Political Involvement" ($r = 0.50$, $p = 0.00$), and "Social Change" ($r = 0.53$, $p = 0.00$). These findings suggest that respondents who are actively involved in the political process are also more likely to engage in various forms of civic activities. The strong correlations with "Social Change" and "Political Involvement" indicate that participants who perceive themselves as active members of the political culture are likely to take initiatives that contribute to societal transformation and participate in political actions.

In the "Subject" construct, there are significant relationships with "Collective Noun" ($r = 0.18$, $p = 0.04$) and "Social Change" ($r = 0.21$, $p = 0.01$). These correlations suggest that respondents who see themselves as subjects within the political system, though less actively engaged compared to participants, still show some level of civic involvement, particularly in collective and social change activities.

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Regarding the "Parochial" construct, there are significant relationships with "Community Service" ($r = 0.21, p = 0.02$) and "Social Change" ($r = 0.25, p = 0.00$). This indicates that those who are more parochial in their political culture, possibly focused on local or narrow concerns, are nonetheless likely to engage in community service and contribute to social change.

The non-significant findings are seen in the relationships between the "Subject" construct and "Community Service" ($r = 0.13, p = 0.12$) and "Political Involvement" ($r = 0.12, p = 0.17$), as well as the "Parochial" construct with "Collective Noun" ($r = 0.22, p = 0.10$) and "Political Involvement" ($r = 0.12, p = 0.16$). These results indicate that for those with a subject or parochial political culture, engagement in community service and political involvement is not significantly influenced by their political beliefs. The lack of significant relationships suggests that these respondents might not see a direct connection between their political culture and their involvement in these specific civic activities.

The findings have important implications for those involved in civic education and political engagement programs, particularly within the context of youth officials. The significant relationships highlight the need to foster a more active political culture among the youth to enhance their civic engagement. For instance, training programs that encourage participation in the political process could lead to greater involvement in community service, political activities, and efforts toward social change. Moreover, understanding the different ways in which political culture influences civic engagement can help tailor these programs to address the specific needs and tendencies of different groups, whether they identify more as participants, subjects, or parochials. This can ultimately contribute to more effective leadership and community involvement among young leaders.

Variables		<i>r</i> value	<i>p</i> value	Decision
Participant	Community Service	0.42**	0.00	Reject Ho
	Collective Action	0.49**	0.00	Reject Ho
	Political Involvement	0.50**	0.00	Reject Ho
	Social Change	0.53**	0.00	Reject Ho
Subject	Community Service	0.13	0.12	Do not reject Ho
	Collective Action	0.18*	0.04	Reject Ho
	Political Involvement	0.12	0.17	Do not reject Ho
	Social Change	0.21**	0.01	Reject Ho
Parochial	Community Service	0.21*	0.02	Reject Ho
	Collective Action	0.22	0.10	Do not reject Ho
	Political Involvement	0.12	0.16	Do not reject Ho
	Social Change	0.25**	0.00	Reject Ho

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the Youth Officials exemplify a deep commitment to fostering an inclusive and participatory political culture within their communities. Their active engagement in political processes reflects a recognition of the importance of citizen involvement in decision-making, which they prioritize by valuing the input and participation of both their team members and constituents. This approach to leadership not only strengthens collaboration but also enhances the overall effectiveness of governance.

Furthermore, their roles and responsibilities are significantly influenced by the prevailing political culture, which serves as a guiding framework for how they perform their civic duties and interact with their communities. They see political culture as essential to shaping their leadership, decision-making, and engagement in governance initiatives. By actively participating in and promoting activities that benefit the common good, they help cultivate a political environment where shared responsibility, accountability, and civic participation are the cornerstones of community development. This dedication underscores the pivotal role the youth plays in strengthening democratic values and governance at the grassroots level.

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Planning And Installation of Water Spray System in The Underground for The Fire Hazard Prevention in PC. GKBI Production Unit



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ABSTRACT: Fire is a serious risk that can cause great losses, both moral and material. This study evaluates fire prevention and control at PC. GKBI Medari, which recently experienced a major fire due to lack of fire detection. Using the AS/NZS 4360: 2004 method, nine hazards with high, medium, and low risks were found. In the underground area of the cambric factory, there are deficiencies in the existing fire extinguishing system, especially in dealing with invisible fires. Hot and dirty air is sucked and channelled through PVC ducts to the air filter, but this system is not effective in extinguishing fires. This study recommends the installation of water spray at several underground points to improve fire protection.

KEYWORDS: fire protection, hazard, water spray

I. INTRODUCTION

Industrial development in various sectors is expected to provide benefits for the nation's progress. Existing industries can be divided into large, medium and small industries. Industrial development aims are to increase employment opportunities, improve the quality of development, and improve the welfare of society. However, efforts to implement and prevent the risk of danger occurring in the workplace are often inadequate, one of which is the risk of accidents. One of the dangers that can occur in the workplace is fire. According to Tarwaka (2012), fires can occur at any time and anywhere, because of many opportunities that can trigger them. Many accidents are currently occurring, including fires in several large and small industrial companies. Various factors could be the cause of this incident. It is not only companies that experience losses, but workers also experience damage and loss. This creates a big problem that must be overcome by preventing and controlling the sources that can cause this problem.

Several fires have hit factories both domestically and abroad, including a fire at a furniture factory in northern Egypt in 2015 that killed at least 25 workers (Islam Pos, 2015). Furthermore, a fire that occurred at PT Mandom Indonesia Tbk in the Jakarta area in 2015 killed six people and injured 52 other workers (Islam Pos, 2015). A similar incident also happened to a factory in PC.GKBI is a textile factory located in Sleman, Yogyakarta. This incident occurred on 16 May 2023, according to the data obtained there were no fatalities, but six employees suffered respiratory problems and were referred to Sleman Regional Hospital (Sutriyanta, 2023). It is suspected that the fire originated from an electrical short circuit on a machine in the factory. The fire was first noticed from the ACL JC4 machine by the operator. The operator then reported the incident to the head of maintenance (Sutriyanta, 2023).

Although some factories have implemented fire prevention and suppression systems, fires can still occur. Poorly monitored sources of fire hazards allow this to happen. With the issuance of the Regulation of the Minister of Manpower of the Republic of Indonesia No. 186 of 1999 on Fire Fighting Units in the Workplace, Regulation of the Minister of Manpower and Transmigration No. 4 of 1980 on Requirements for the Installation and Maintenance of Light Fire Extinguishers, and Regulation of the Minister of Manpower No. 2 of 1983 on the Installation of Automated Fire Alarms, shows that fire is a very important issue to be addressed. PC.GKBI Indonesia is a textile factory. Located at Jalan Magelang Km 14 Sebayu Medari, Sleman, Yogyakarta, Indonesia.

During the production process, the use of materials and equipment can easily cause fires and explosions. Continuous operation of the machine can also create a fire hazard. In the production room, textile machines in their operations generate heat and dirt in the form of flying waste or dirt that flies around. The waste is flammable and must be removed to fresh air. The process is like that, the hot and dirty air in the production room is sucked in by the return motor through the PVC air duct which is placed under the

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machine, centrally going into the underground (bottom of the floor). Then it will be pulled into the rotary air filter and thrown out. So, there is a lot of dirt on this route which, if there is a fire, is difficult to extinguish. Therefore, fire prevention and extinguishing to minimize the risk of fire and explosion is very necessary. In the production room, special installations need to be made to protect against fire. For example, making water installations from iron pipes with diameters of 3" and 4".

Fire prevention and control facilities such as light fire extinguishers (APAR), hydrants, sprinklers, and fire alarms are available, APAR is provided in every room of the company. Two fire extinguishers and fire alarms are installed in the security room. Fire extinguishers are also available in every production area of the company. Fire extinguishers are used to control small fires and with fire alarm detection in each production area of the company.

Electrical short circuits can also occur and cause sparks and small fires. Continuous use of machines for 24 hours is also one of the factors causing fire problems in the company. A hot engine exposed to flammable materials will cause smoke and sparks.

This prevention and control is by maximizing the performance and function of fire prevention and control facilities. If it is functioning optimally, then the occupational health and safety of workers can be fulfilled and implemented. Based on the description above, the author is interested in analyzing the availability of fire prevention and control facilities as an effort to reduce losses due to fires in PC.GKBI, Indonesia.

The purpose of this case study is to find answers to the problems formulated to find out how to prevent and control fires that have been implemented at PC.GKBI Medari, because some time ago there was a fire at the cambric factory which allegedly no one knew about the fire and it caused a large fire.

II. METHOD

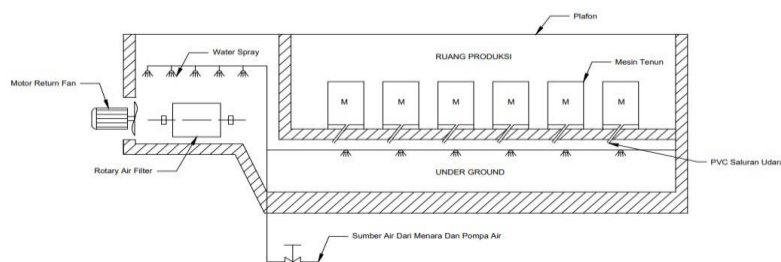
The research method is a structured and systematic work step to solve the problems found in this research. These stages include literature study and field study of research objects, formulation of research problems, literature study, finding out research objectives, collecting and processing data, and making conclusions and suggestions. In addition, risk assessment analysis was carried out using the AS/NZS 4360: 2004 method.

III. RESEARCH RESULT The Implementation of Planning and Installation of Water Spray System in the Underground for Fire Hazard Management in PC.GK Production Unit 1. Planning

A textile industry will generate hot air, especially in parts of the production room where there are operating machines and cause dirt in the form of flying waste or dirt that flies and pollutes the air in the production room. The nature of the dirt itself is very flammable so it must be removed indoors and replaced with fresh air so that air circulation runs smoothly. Therefore, it is necessary to create and install a security system against fire hazards.

This project is an update of the previous system, where hot and dirty air in the production room is sucked in by the return fan motor through PVC air ducts which are placed at the bottom of the machine in the production room. The dirty air that is sucked in is channeled and concentrated into the underground (hallway under the production floor) to the rotary air filter to be thrown out of the room. There is a drawback to this system, namely that when a fire occurs underground, the fire is difficult to extinguish.

Therefore, it is necessary to plan the manufacture and installation of water spray underground at several points according to the number of PVC air ducts. The first thing to do in planning is determine the materials that will be used, the materials that will be used are iron pipes with diameters of 3 and 4 inches. The second is making a water spray channel installation plan in the form of a drawing of the system to be created.



Picture 1 Production Room of PC.GKBI

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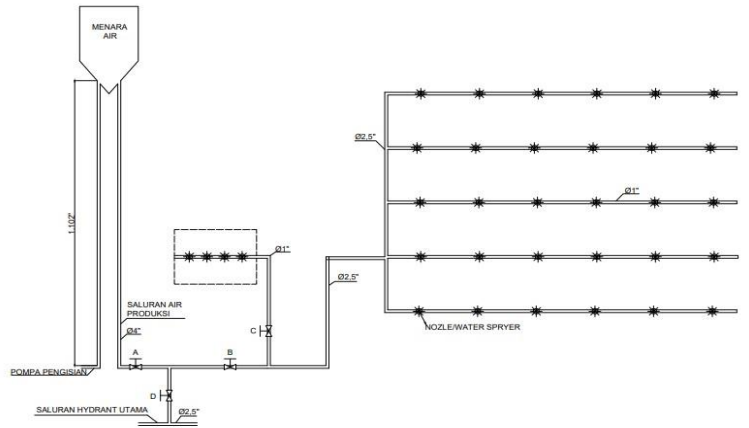


Figure 1. Manual Working System

2. Organizing

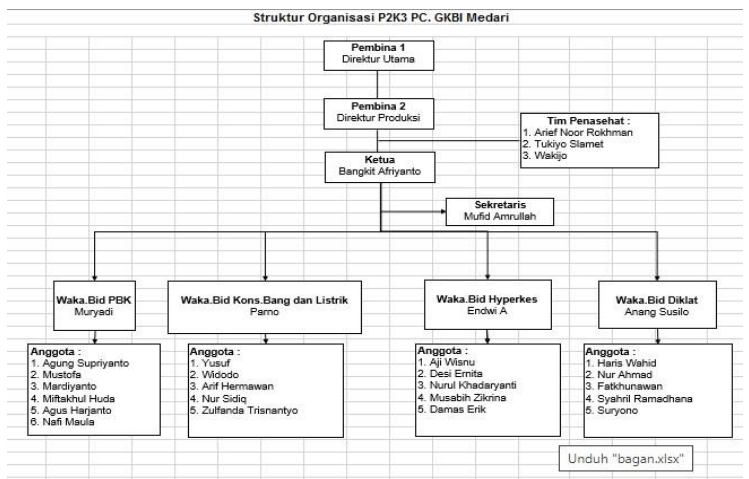


Figure 2. Organizing

3. Actuating

After determining the materials and making installation drawings, the next step is the process of making a water spray system in the hallway under the production floor. In this system the working mechanism is manual, when smoke and the smell of fire are detected in the underground passage by the five senses, the first thing to do is open the water spray flow valve manually.



Figure 3. Water Installation' on the Divider to Each Unit



Figure 4. Water Tower' for Production and Hydrant



Figure 5. Hydrant Pump



Figure 6. Water Spray Installation' in Underground

4. Controlling

Fire risk control in production rooms includes several key aspects. First, identify the type of fire extinguisher used, such as a light fire extinguisher (APAR), portable fire extinguisher, sprinkler system, smoke detection system, and fire alarm system. Regular maintenance is an important step to ensure all equipment is in good condition; this includes periodically checking expiration dates, pressure and physical integrity as well as ensuring tools come with clear labels and usage guidelines. Employee training is crucial, so they can use fire extinguishers correctly, follow evacuation procedures, and take other emergency actions. Regular inspection of the fire suppression system is also necessary to ensure optimal function, with repair or replacement if problems are discovered. Placement of fire extinguishers must be in a location that is easily accessible and visible, without being obstructed by objects. In an emergency, immediately activate the fire alarm, call the fire service, and use extinguishers with caution if safe. If a fire cannot be controlled, the top priority is employee evacuation by following established procedures. After a fire incident or drill, conduct an evaluation to improve the response and update the contingency plan according to changes in production conditions or technology. Controlling fire extinguishers in the production room is a crucial step in maintaining safety and reducing the risk of fire.

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Outcomes and Impacts of Planning and Installation of Water Spray Systems In Underground for Overcoming Fire Hazards in PC.GKBI Production Unit

This project aims to improve the fire extinguishing system in the factory by focusing on several key aspects. First, updating the fire extinguishing system includes identifying critical areas, such as production rooms, that require additional protection, in particular through the installation of a water spray system in the hallway under the production floor. Second, the effectiveness analysis aims to evaluate the extent to which the installation of underground equipment has succeeded in preventing and overcoming fires, including comparing the level of damage before and after the implementation of the new system. Third, policy recommendations will be developed to provide advice to companies, governments or regulatory bodies on how to improve safety and fire protection standards in similar factories. Fourth, risk identification from case studies will help identify specific risks associated with a particular type of factory or industry and provide suggestions for mitigating them. At this risk assessment stage, the level of risk can be determined in terms of the chance of a work accident occurring (probability) and the severity of the hazard (severity). The probability measurement parameter used in this case study is how often activities occur which include unsafe acts and unsafe conditions which could have the potential to become work accidents/fires. The impact of potential hazards discovered in the previous stage is then analyzed using a risk matrix table to obtain a risk rating for each hazard by considering its probability and severity.

Table 1. Risk Assessment

No.	Hazard Identification	Risk	Rating Risk (Scale)		Risk Rating
			Probability	Severity	
1.	Burnt capacitor in lighting lamp TL AJL Line 3 RS 190	Fire and smoke in lighting area and Mablo	Often (4)	Weight (4)	Hight
2.	Tyng cable short circuit / chafing cable peeling off at Loom 2 Machine Number 31 N	Fire / burning warp in the weaving beam and fabric in the machine	Moderate (3)	Moderate (3)	Moderate
3.	A short circuit in Box Panel Loom II	Fire in machine number 8 H	Moderate (3)	Moderate (3)	Moderate
4.	Cable chipped due to friction with side lever cup	Fire in machine number 3 S Loom III	Moderate (3)	Moderate (3)	Moderate
5.	The cable peeled off due to friction with the belt protector	Fire in Loom II Engine number 4 H	Moderate (3)	Moderate (3)	Moderate
No.	Hazard Identification	Risk	Rating Risk (Scale)		Risk Rating
			Probability	Severity	
6.	Friction between pulley and machine body due to bearing failure	Fire in pallet machine set 15	Moderate (3)	Moderate (3)	Moderate
7.	Friction between axle and jack lever due to nonoptimal lubrication, worn bearings, dirty	Fire in Engine H 3 AJL	Moderate (3)	Moderate (3)	Moderate
8.	Cable chafing in the cable terminal box area behind the engine motor	Fire at machine 32 H Loom II	Moderate (3)	Moderate (3)	Moderate
9.	Loose picking parts fell on a running machine causing sparks	Fire on Machine number 8H Loom II	Rare (2)	Low (2)	Low

Planning And Installation of Water Spray System in The Underground for The Fire Hazard Prevention in PC. GKBI Production Unit

This project includes several important outcomes to improve the fire extinguishing system systems in the factory. First, comprehensive fire data collection and analysis will be carried out to plan further prevention measures and track safety trends. This data will help in understanding fire patterns and determining areas for improvement. Second, this project aims to increase awareness among factory personnel about the importance of fire safety, including evacuation procedures and the use of fire extinguishing systems. Effective training and communication will be key in ensuring that all employees understand their responsibilities in emergencies. Third, the project will assist in the development or updating of emergency plans appropriate to the case study findings, including evacuation procedures, emergency communications, and actions to be taken during a fire. This plan will ensure that the factory has a clear and coordinated strategy to deal with fire situations effectively.

The planning and installation of water spray system in underground for fire hazard management in the PC.GKBI Production Unit has the following impacts:

1. Fire Risk Reduction

Implementation of an effective fire management system can significantly reduce the risk of fire in a textile factory. This can involve the use of modern fire-fighting equipment, reliable fire-detection systems, and strict safety procedures.

2. Improved Employee Safety

The most important impact is the improvement of employee safety. With a good system in place, employees will be better prepared for emergencies and quicker to take appropriate action in the event of a fire.

3. Asset Protection

An effective fire management system can help protect plant assets, such as machinery, equipment, raw materials, and finished products, from fire damage. This can save the cost of repairing or replacing damaged assets.

4. Improved Company Reputation

Companies that demonstrate a commitment to employee safety and asset protection have a better reputation in the industry and with consumers. This can help retain and attract customers and investors.

5. Regulatory Compliance

The project can ensure that the plant complies with all applicable regulations and safety standards. This can save the company from legal sanctions and fines that may be imposed if they violate safety regulations.

6. More Efficient Emergency Investigation and Response

A good fire management system can speed up the process of investigation and emergency response in a fire situation. This can reduce losses and risks that may arise.

7. Improved Operational Efficiency

A well-integrated fire management system can also improve operational efficiency. This can include faster incident reporting, early warnings that enable faster intervention, and faster restoration of operations after a fire incident.

8. Less Downtime

In some cases, the project can reduce plant downtime due to fire. This can save time and money spent on full recovery from the incident.

9. Improved Crisis Readiness:

Factories that have a good fire management system are also better prepared for other crises, such as natural disasters or other security incidents.

10. Decreased Insurance Costs

A company with a robust fire management system may get lower insurance premiums as it is considered a lower risk. In addition, the obstacles and challenges in the planning and installation of the underground water spray system for fire hazard prevention in the PC.GKBI Production Unit includes:

1.Constraints: Not having adequate planning for fire pipe maintenance. Pipes that are not maintained can experience corrosion or other damage over time. This damage can lead to water leakage or even structural damage to the pipes.

2.Countermeasures: Create a scheduled maintenance plan and ensure all staff are trained in the use of fire equipment. Then, conduct regular visual inspections and checks of the pipe wall thickness. Damaged or corroded pipes should be replaced immediately. Painting pipes to prevent corrosion can also be a preventive measure.

IV. CONCLUSIONS

Based on the explanation that has been explained, the conclusions are as follows:

1. A new system has been found related to fire prevention that occurs in the underground area of the production machine section at PC GKBI. The system used is the installation of pipes under the ground with iron pipes with a diameter of 3 and 4 inches.

Planning And Installation of Water Spray System in The Underground for The Fire Hazard Prevention in PC. GKBI Production Unit

With this system, it can prevent fires, because if a hot engine or spark is detected, it can immediately turn on this installation and water will automatically flow and extinguish the fire without having to have workers enter the underground area.

2. GKBI Medari Cambric Factory using AS/NZS 4360: 2004 has hazard factors that have a high rating, from the identification of hazards carried out in unsafe conditions and unsafe acts, 9 (nine) hazards were found, namely cables on machines that were peeling off, damaged capacitors on TL lamps, and friction between machine parts that caused sparks that had the potential for fire, of the 9 (nine) hazards there were 11.1% conditions and or activities that had a high risk (High), 77.7% conditions or activities that had moderate risk, 11.1% conditions and or activities that had a low risk. The implementation of an underground water spray system for fire suppression in the PC.GKBI Production Unit significantly reduces fire risk, increases employee safety, protects assets, and improves the company's reputation, as well as ensuring regulatory compliance. Pipeline maintenance constraints were overcome with a scheduled maintenance plan and staff training, as well as inspection and replacement of damaged pipework.

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Analysis of External Environmental Design Factors on Mosquito Breeding in Sikka Regency, East Nusa Tenggara



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ABSTRACT: Factors such as environmental temperature, rainfall, location of waste disposal sites, sunlight exposure, water flow, as well as chemical, biological, and socio-cultural conditions play a crucial role in the development of malaria cases. This study specifically aims to analyze the influence of environmental elements on the number of malaria and dengue fever (DF) cases in Sikka Regency, as well as to evaluate the physical design elements of the area that can reduce DF cases in the region. The research was conducted in several locations within Sikka Regency, taking into account the differences in location and the distance between buildings in relation to thermal characteristics. The results indicate that areas located more than 500 meters above sea level did not experience malaria or DF cases, which is also influenced by the outdoor environmental design, such as building density and vegetation size, affecting light intensity. Lower light intensity increases humidity, which accelerates mosquito breeding.

KEYWORDS: Environmental Design, Mosquitoes, Sikka Regency

I. INTRODUCTION

The environment is considered a more dominant factor in influencing the development of malaria and Dengue Hemorrhagic Fever (DHF) cases compared to behavioral factors, health services, and genetics. The environmental factors in question include air temperature, rainfall, location of waste disposal sites, sufficient sunlight, water flow, and chemical, biological, and socio-cultural conditions (Yunita et al., 2012). Dinata et al. (2012) also highlighted that house density, air temperature, room humidity, the presence of mosquito nets, and the yard are variables that influence the spread of mosquitoes that cause DHF and malaria.

The environment has long been considered as one of the key elements in reducing the spread of malaria and dengue fever cases, as discussed in various previous studies (Rianasari et al., 2016; Handoyo et al., 2017; Sari et al., 2017; Ayun & Pawenang, 2017; Murwanto et al., 2019). Based on this trend, an effective environmental design approach in minimizing the spread of malaria and dengue fever can be a practical solution that needs further research. By referring to the literature review and analysis of the distribution locations of malaria and dengue fever cases, a physical environmental design standard free of malaria and dengue fever in Sikka Regency can be prepared. This standard can be an important guideline in efforts to create a healthy environment that can reduce the number of malaria and dengue fever cases, both locally and nationally.

Dengue Hemorrhagic Fever (DHF) and malaria are diseases that threaten areas in Sikka Regency every year, causing anxiety due to the high number of cases. In early 2022, the Sikka Regency Health Office reported that 40 residents were infected with DHF, one of whom died. The high number of cases, according to the explanation of the Secretary of the Sikka Health Office, Clara Francis, was caused by irregular and poorly maintained environmental conditions, which created unhealthy places and supported the development of mosquito larvae *Aedes aegypti* (Gabriel, 2022). Meanwhile, based on data from 2023, the incidence of malaria has also increased in Sikka Regency.

Data from various other sources also show that there is awareness of dengue fever. From January 1 to March 9, 2020, 1,195 dengue fever sufferers were recorded spread across several districts and cities in NTT Province. The Directorate General of Disease Prevention and Control reported a total of 31 deaths due to dengue fever from the number of sufferers (Bureau of Communication and Public Services, 2020). In 2020, the Ministry of Health of the Republic of Indonesia announced that there were 25,693 cases of dengue fever in 30 provinces. In the data, Sikka Regency recorded the most cases with a total of 1,292 cases (Figure 1). Antara

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reported that dirty and untidy environmental conditions were the main causes of the high spike in cases in Sikka. Poor drainage problems and ineffective waste management also contributed to unhealthy environmental conditions (Yosepha, 2020).



Figure 1. Districts/Cities with the Highest Dengue Fever Cases

Source: Ministry of Health, 2020

A well-maintained, healthy, and orderly environment is a key factor in reducing, or even eliminating, the possibility of dengue fever cases. Didik Budijanto, Director of Prevention and Control of Vector-Borne and Zoonotic Diseases at the Directorate General of Disease Prevention and Control, Ministry of Health, revealed that there are various causes of the spike in dengue fever cases in the last five years, and the community and environmental conditions are the main factors in efforts to suppress the spread of this disease. He explained that an unhealthy environment supports the development of the mosquito vector *Aedes aegypti* (Ananda, 2021).

The high number of spikes in dengue fever cases and various references showing the importance of the role of the environment indicate the need for research into the form of a physical environment that is free from dengue fever.

According to Sains et al. (2005) and Suyasa et al. (2008), housing quality, including the distance between houses, lighting, building shape, and materials used, can affect the rate of dengue fever transmission. Zulfikar (2019) also explained that the condition of water reservoirs, as well as humidity and rainfall, can affect the growth and lifespan of *Aedes aegypti* mosquitoes. This is in line with research by Ayumi et al. (2016) which shows that rainfall, temperature, and humidity are related to the incidence of dengue fever in various seasonal zones. In addition, Sari et al. (2017) added that there is a significant relationship between the intensity of light entering an area and the incidence of dengue fever.

II. METHODOLOGY

This study was conducted in several villages located in Sikka Regency, based on data on DHF and malaria cases sorted from the highest to the lowest or without cases. Observations were differentiated based on the height of the area and the distance between buildings in the area. Several specific characteristics of the area were also recorded as additional findings in the study, related to the external environment, such as the position of the bathroom, the location and condition of the animal pen, and the condition of the drainage.

The steps taken in this research include:

1. Literature Review: Previous studies focusing on the environment related to dengue cases were analyzed to formulate appropriate design standards. The field of public health plays a major role in research examining the relationship between the environment and dengue cases, and has produced several conclusions regarding environmental settings that influence dengue cases.
2. Field Observation: Based on available data, the focus of field observation is to compare the physical environment between areas with the lowest and highest distribution of DHF cases in Sikka Regency. Measurements taken include air temperature and humidity (using a thermo hygrometer), wind speed (using an anemometer), and light intensity (using a lux meter) installed at several points outside the building.
3. Analysis of Research Results: The results obtained are analyzed based on the similarities and differences in environmental conditions in each region. These findings are then compared with theories that have been proposed by previous experts.

III. RESULTS AND DISCUSSION

The study was conducted in three sub-districts located in Sikka Regency. This study is based on data obtained from the Sikka Regency Health Office, where the three sub-districts recorded the highest incidence of DHF in the Sikka Regency area.

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Waigete District

Waigete District is one of the districts in Sikka Regency, East Nusa Tenggara, located about 27 kilometers east of the capital of Sikka Regency. To the north, this district borders directly on Maumere Bay. The topography of the villages in this area consists of mountains, plains, and beaches, with an altitude of about 750 meters above sea level (Wikipedia, 2022). Based on data from the Sikka Regency Health Office in 2022, there were 58 cases of dengue fever distributed across eight villages in this district, with Hoder Village recording the highest number of cases and having an altitude of 22 meters above sea level.

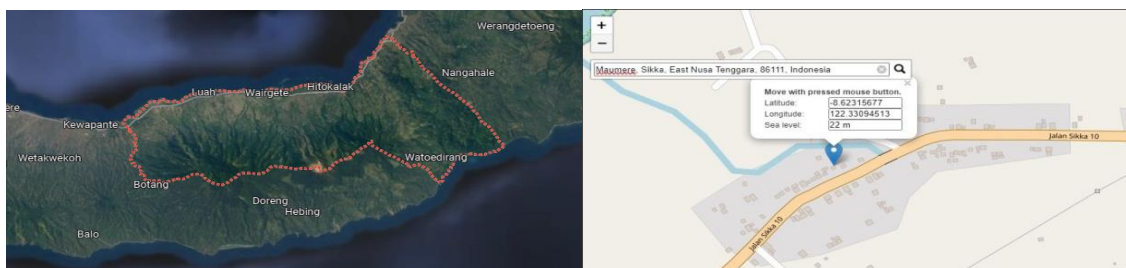


Figure 2. Administrative map of Waigete District (top) and the height of the research location (bottom)

Source: googlemap, 2022

Based on the research that has been conducted, it was found that there are external environmental design conditions that encourage an increase in DHF cases. The research conducted in Hoder Village focused on areas experiencing DHF cases, which are located close to the coastal area. These conditions can be seen in Table 1.

Table 1. External Environmental Conditions in Hoder Village

External environmental conditions	Information
Thermal characteristics (average)	Temperature 31.05oC, humidity 67.1%, wind speed 1.24 m/s, light intensity 200-250 lux
Distance between houses	The distance between houses is 72.8% more than 4 meters
Types of vegetation	Mango and coconut
Vegetation Location	Located in front of the residence and used as shade
Vegetation distance	1-2 meters
Bathroom location	56.4% are outside the building at a distance of 1-2 meters
Location of the well	75% are at the front of the building in open conditions
Location of animal cages	Located at the back of the house. Distance 1-3 meters
Garbage dump	It is not a permanent place but a collection of rubbish that can be burned.
Drainage conditions	Generally there is no drainage from the waste. In the bathroom or from the well (left dry in the yard).

Source: personal research, 2023

Waiblama District

Waiblama District is a district in Sikka Regency, which is approximately 57 kilometers from the capital of Sikka Regency, namely Maumere City. This district directly borders Talibura District. This area is recorded as an area with no cases of DHF.

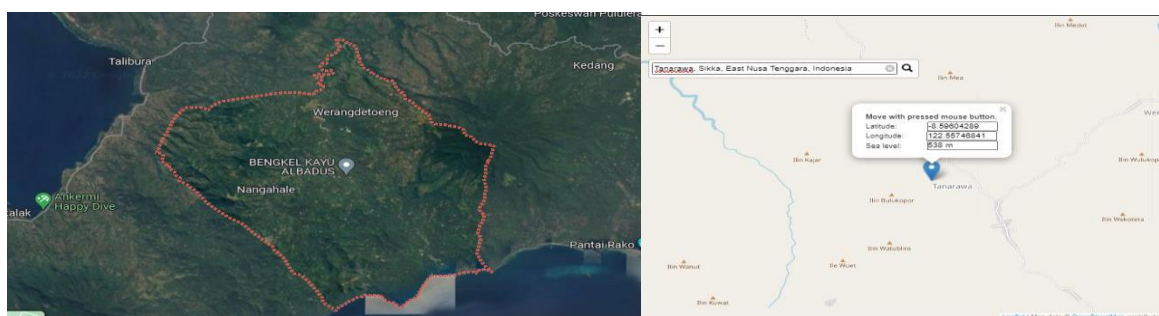


Figure 3. Administrative map of Waiblama District (top) and the height of the studied location (bottom)

Source: Googlemap, 2023

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The research conducted in Tuabao Village, is a representative of Waiblama District, considering that in this area there are no DHF incidents and it is far from the coastal area so that it can be used as a comparison with other areas. Environmental conditions in the area can be described in table 2.

Table 2. External Environmental Conditions in Tuabao Village

External environmental conditions	Information
Thermal characteristics (average)	Temperature 29.4oC, humidity 67.05%, wind speed 1.36 m/s, light intensity 260 lux
Distance between houses	The distance between houses is 72.8% more than 4 meters
Types of vegetation	Sour, and mango
Vegetation Location	1-2 meters from the house
Bathroom location	Located behind the house 2-3 meters away
Location of the well	-
Location of animal cages	2-3 meters from the residence, dry conditions at the disposal
Drainage conditions	There are no drainage channels for rain or dirty water disposal

Source: personal research, 2023

East Alok District

East Alok is a sub-district in Sikka Regency, East Nusa Tenggara, Indonesia. This sub-district is about 5 kilometers from the capital of Sikka Regency to the east. The center of government is in Waioti Village. East Alok District is part of Maumere City. In this sub-district, the Sikka Police dormitory is the location with the highest number of dengue fever cases in 2022.



Figure 4. Map of the police dormitory (top) and the height of the location studied (bottom)

Source: Googlemap, 2023

The research conducted at the Sikka Police Dormitory is not much different from the research conducted in the two previous areas, where this area is the area with the highest number of cases. The following are the environmental conditions in the area which can be described in table 3.

Table 3. External environmental conditions at the Sikka Police dormitory

External environmental conditions	Information
Thermal characteristics (average)	Temperature 28.4oC, humidity 73.55%, wind speed 0.1 m/s, light intensity 120-200 lux
Distance between houses	1-1.5 meters
Types of vegetation	Mango functions as a protector
Vegetation Location	1-2 meters from the house
Bathroom location	Being in a residence
Location of the well	-
Location of animal cages	-
Drainage conditions	Damp, there are 40% drainage conditions that are not smooth/clogged for more than 1 day.

Source: personal research, 2023

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Measurement of tools and observations in the field are then separated based on areas affected by DHF cases (Hoder and Polres Dormitory) that are not affected by DHF cases (Waiblama/Tuabao). Where the analysis begins by finding differences and similarities from each location. The results of the research from these three areas, namely:

Table 4. Similarities and differences in external environmental conditions in each research area

	Aspol and Hoder	Old man
Location	22-24 m above sea level	538 m above sea level
Thermal characteristics	Humidity ranges from 67-73.55%, light intensity 120-250 lux	humidity 67.05%, wind speed 1.36 m/s, light intensity 260 lux
Distance between houses	1-4 meters	More than 4 meters
Types of vegetation	Functions as a shade	Functions as a shade
Vegetation Location	1-2 meters from the house	1-3 meters from the house
Bathroom location	Mixture (outer and inner)	Mixture (outer and inner)
Location of the well	Generally located in the residential yard (front)	-
Location of animal cages	1-3 of the dwelling (hoder)	
Drainage conditions	Damp, drainage conditions that are not smooth/clogged for more than 1 day and open.	There is no drainage channel

Based on The findings in table 4, can be explained that the influence of the location's height on sea level, can have an influence on the high incidence of DHF. This is in line with research conducted Tamengkel, Sumampouw, and Pinontoan (2019) in Minahasa, which explains that the spread of mosquitoes is influenced by the height of the location, especially those close to coastal areas because vegetation is rarely found and air humidity is high.

While the distance of the dwelling, as well as the location of vegetation is known to have an effect on the thermal characteristics that occur in the environment, where the closer the distance of the dwelling, supported by vegetation that functions as shade is within a distance of less than 2 (two) meters, it can have an impact on humidity and light intensity. Where humidity will increase and light intensity will decrease. This is in line with research conducted Herawati and Utomo (2014), which explains that the higher the humidity in an area, the longer the life of mosquitoes.

The location of the bathroom and the location of the cage towards the occurrence of DHF is more influenced by the condition of the drainage. Where areas that do not have drainage but the absorption of water into the soil is not more than 1 (one day) / not flooded, can minimize mosquito breeding. According to Nasution and Naria (2012), there is a significant relationship between the Wastewater Disposal System, lighting in the environment and mosquito breeding.

IV. CONCLUSION AND SUGGESTIONS

A. Conclusion

Based on the discussion that has been carried out, the following results were obtained:

1. Air humidity and light intensity affect mosquito breeding.
2. The height of the location to sea level, the distance between residences, the type and distance of vegetation and drainage conditions are factors in the external environment that influence mosquito breeding. This can be seen from the development of data from the Sikka Regency Health Office which shows that the incidence of malaria and dengue fever in 2024 is more common in coastal areas than in hilly areas.

B. SUGGESTIONS/RECOMMENDATIONS

There needs to be a standard design for healthy, dengue-free homes that is specific to local conditions or areas such as Sikka Regency.

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Multilevel Environmental Governance in Indonesia: Analysis of Implementation Pathways and Institutional Dynamics



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ABSTRACT: This study examines Indonesia's environmental governance framework, focusing on the complex interplay between global environmental imperatives and local implementation challenges. Through a qualitative analytical approach utilizing comprehensive secondary data, the research investigates how Indonesia navigates environmental governance while balancing economic development priorities. The study analyzes the integration of traditional ecological knowledge with modern environmental management approaches and examines the effectiveness of adaptive governance mechanisms in addressing diverse environmental challenges. The findings reveal that Indonesia's multilevel governance system, while facing coordination challenges, demonstrates significant potential in developing comprehensive environmental frameworks. The research highlights the critical role of institutional capacity building and stakeholder engagement in environmental governance, particularly in balancing economic development with environmental protection. The study also identifies key challenges in implementing environmental policies across Indonesia's diverse archipelagic territory, including intergovernmental coordination issues and resource allocation barriers. Furthermore, the research emphasizes the importance of context-specific approaches in environmental governance, particularly in integrating traditional knowledge systems with modern environmental management practices. This study contributes to the broader understanding of environmental governance in developing nations and provides valuable insights for policymakers seeking to enhance environmental governance effectiveness while maintaining sustainable development objectives.

KEYWORDS: Environmental Policy Implementation, Local-Global Governance Interface, Adaptive Environmental Management Stakeholder Coordination, Ecological Knowledge Integration

I. INTRODUCTION

The global landscape exhibits an increasingly evident interconnected network of nations, societies, and governmental systems, demonstrating unprecedented levels of interdependence. This phenomenon is exemplified through international frameworks such as the Sustainable Development Goals (SDGs) and the Paris Climate Agreement, which represent collective acknowledgment of shared global objectives and interlinked national interests. This interconnectivity is particularly salient in the domain of environmental governance, where transboundary challenges necessitate coordinated global policy initiatives. The trajectory of global environmental consciousness can be traced back to the seminal work "The Limits of Growth" by Meadows et al. (1972), which coincided with the inaugural high-level environmental conference in Stockholm during the same year. This period marked the commencement of systematic documentation and analysis of environmental degradation patterns and their corresponding socioeconomic ramifications (Glemarec & Puppim de Oliveira, 2012). The subsequent decades have witnessed the emergence of complex, interconnected environmental challenges that transcend national boundaries. Contemporary environmental challenges, encompassing climate change phenomena, marine ecosystem degradation, and unprecedented biodiversity reduction, present novel complexities in governance frameworks. These challenges necessitate both robust political commitment and innovative approaches to global public policy formulation and implementation. The multifaceted nature of these environmental issues demands sophisticated policy instruments that can effectively address both the direct environmental impacts and their broader societal implications. The evolution of global environmental governance reflects a progressive recognition of the intricate relationships between environmental systems and human societies. This understanding has catalyzed the development of more

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comprehensive and integrated approaches to environmental policy-making, acknowledging the need for collaborative international efforts in addressing these pressing global challenges.

The contemporary landscape of decision-making processes exhibits a complex interplay between global imperatives and domestic considerations, while maintaining the fundamental principle of national sovereignty. The absence of a unified global public policy framework for environmental governance presents a significant challenge, as the implementation of international environmental agreements remains predominantly dependent on domestic policy mechanisms, supplemented by international support systems such as climate finance initiatives (Qian et al., 2023). The interaction between global and domestic institutional frameworks manifests through multiple channels, notably market mechanisms (Chen & Xie, 2023) and the Para diplomacy conducted by non-state actors (Macedo et al., 2023). These dynamics, while important, underscore the pressing need for more sophisticated global environmental governance frameworks and policy instruments capable of effectively harmonizing local and global public interests. This necessity is particularly acute given the current inadequate pace of climate policy implementation relative to the urgency of addressing global environmental change. The path toward establishing effective global environmental governance encounters numerous obstacles, primarily due to the multifaceted nature of successful global solutions, which necessitate the coordination of diverse stakeholders and variables. A significant impediment to progress is the reluctance of nations to assume substantial financial burdens for mitigating pollution that affects neighboring territories (Ali & Puppim de Oliveira, 2018). This challenge is further complicated by the asymmetrical distribution of power in international decision-making processes. A particularly poignant example of this disparity is evident in the case of small island states, which face disproportionate vulnerability to climate change impacts despite their minimal contribution to global emissions, while simultaneously wielding limited influence in international climate negotiations.

The complexity of these challenges necessitates a comprehensive examination of environmental governance mechanisms across local, national, and international dimensions, with particular emphasis on multilevel governance structures and innovative policy approaches. This analytical framework requires the integration of diverse disciplinary perspectives and methodological approaches to generate evidence-based policy recommendations for enhancing global environmental governance effectiveness.

The interconnected nature of environmental challenges demands a paradigm shift in how we conceptualize and implement governance mechanisms. This transformation must address the current limitations of international cooperation while respecting national sovereignty, incorporating market dynamics, and ensuring equitable representation in decision-making processes. The development of more effective governance frameworks requires careful consideration of power dynamics, economic incentives, and the diverse needs of affected communities.

This critical examination of global environmental governance highlights the urgent need for innovative solutions that can bridge the gap between local implementation and global objectives. The complexity of environmental challenges requires a sophisticated understanding of multilevel governance mechanisms and their interaction with various stakeholders. Future research and policy development must focus on creating more inclusive, effective, and equitable governance frameworks that can address the pressing environmental challenges facing our global community. Furthermore, the evolution of global environmental governance must consider emerging technological capabilities and their potential role in facilitating more effective policy implementation and monitoring. These technological advancements could potentially revolutionize how we approach environmental challenges and provide new avenues for international cooperation and policy enforcement. The development of robust monitoring systems, data-sharing platforms, and standardized reporting mechanisms could significantly enhance transparency and accountability in global environmental governance. Such innovations could help address the current limitations in policy implementation and provide more accurate assessments of progress toward environmental goals. A critical aspect of improving global environmental governance lies in strengthening the capacity of developing nations to participate meaningfully in international environmental decision-making processes. This includes not only providing financial and technical support but also ensuring that governance frameworks adequately reflect the diverse perspectives and needs of all participating nations. The success of future environmental governance frameworks will largely depend on their ability to balance competing interests while maintaining sufficient flexibility to adapt to changing circumstances and emerging challenges. This requires careful consideration of both short-term implementation challenges and long-term sustainability goals, ensuring that governance mechanisms remain relevant and effective over time. The study aimed to analyze the evolution of environmental governance implementation and examine institutional capacity-building mechanisms in Indonesia's multilevel governance system.

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II. RESEARCH METHOD

This research implements a sophisticated qualitative analytical framework to examine environmental governance in Indonesia, utilizing comprehensive secondary data methodologies as established by Dawadi (2021). The methodological approach synthesizes two critical data streams: environmental policy documentation and statistical indicators. The first stream encompasses Indonesia's engagement with international environmental frameworks, including the SDGs and Paris Climate Agreement, building upon the foundational environmental consciousness research of Meadows et al. (1972). The second stream incorporates vital statistical data from the Indonesian Central Statistics Agency (2020), examining environmental degradation patterns, socioeconomic implications, and cross-sectoral impacts. Following Sandelowski's (2001) rigorous verification protocols, the study evaluates the intricate relationships between global environmental imperatives and Indonesia's domestic policy implementation, particularly focusing on market mechanisms and paradiplomacy practices within the Indonesian context. The analytical framework integrates diverse perspectives on local implementation challenges, power dynamics, economic incentives, and stakeholder engagement in environmental governance. This comprehensive approach facilitates a nuanced examination of Indonesia's environmental governance mechanisms across multiple scales, ultimately providing evidence-based policy recommendations tailored to Indonesia's specific environmental challenges and development objectives, while maintaining methodological rigor and validity in accordance with international research standards.

III. RESULT AND DISCUSSION

1. Indonesia's Experience in Policy Implementation and Stakeholder Integration Complex Dynamics of Environmental Governance

The complexity of environmental governance in Indonesia exemplifies the broader challenges of global environmental management, transcending the conventional boundaries of national governance systems (Lemos & Agrawal, 2006). Indonesia's experience demonstrates the intricate nature of addressing environmental externalities within a diverse archipelagic nation while simultaneously engaging with global environmental frameworks, presenting unique opportunities for analyzing the effectiveness of environmental governance mechanisms at multiple scales.

The primary challenge in Indonesia's environmental governance framework revolves around the collective action dilemma, where the divergence between local stakeholder interests and global organizational objectives creates significant implementation barriers (Pinto & Puppim de Oliveira, 2008). This is particularly evident in Indonesia's decentralized governance system, where regional autonomy often complicates the uniform application of environmental policies. The application of polycentric governance theory offers valuable insights into managing Indonesia's environmental challenges across its diverse geographical and administrative regions (Carlisle & Gruby, 2019; Ostrom, 2010).

A second critical dimension emerges from the knowledge asymmetry among various stakeholders within Indonesia's environmental governance framework. This asymmetry significantly affects the effectiveness of collaborative environmental governance, particularly in balancing traditional ecological knowledge with modern scientific approaches (Bodin, 2017; Guttman et al., 2018). These knowledge gaps substantially influence the implementation of environmental policies across different administrative levels within Indonesia's complex governance structure (Young, 2021).

Indonesia's experience with long-term environmental challenges, particularly climate change mitigation and adaptation, necessitates the establishment of sustained collaborative networks that incorporate diverse stakeholders to maintain common environmental stewardship norms (Dietz et al., 2003). Conversely, addressing acute environmental issues in Indonesia requires more centralized collaborative approaches, emphasizing the need for adaptive management strategies (Puppim de Oliveira, 2005; Bodin, 2017).

The evolving dynamics of collaborative governance regimes in Indonesia demonstrate the importance of flexible and responsive environmental management systems (Ulibarri et al., 2023). This evolution highlights the urgent necessity of integrating diverse knowledge systems in environmental governance, particularly in the context of a developing nation managing complex environmental challenges (Jabbour & Flachsland, 2017). Indonesia's experience provides valuable insights into how developing nations can navigate the complex interplay between local environmental management imperatives and global environmental governance frameworks, while addressing the inherent challenges of stakeholder coordination and knowledge integration.

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nations can navigate the complex interplay between local environmental management imperatives and global environmental governance frameworks, while addressing the inherent challenges of stakeholder coordination and knowledge integration.

The Indonesian context further reveals the critical importance of institutional capacity building in environmental governance. The nation's efforts to strengthen environmental institutions while balancing economic development priorities demonstrate the complex challenges faced by developing countries in implementing effective environmental policies (Chen & Xie, 2023). This institutional development process becomes particularly crucial when considering Indonesia's role in global environmental initiatives and its commitment to international environmental agreements (Qian et al., 2023). Furthermore, Indonesia's experience highlights the significance of multi-stakeholder engagement in environmental governance. The country's diverse geographical and cultural landscape necessitates a nuanced approach to environmental management that considers both local wisdom and scientific expertise (Ali & Puppim de Oliveira, 2018). This integration becomes particularly relevant in addressing issues such as forest conservation, marine protection, and climate change adaptation, where local communities play a crucial role in implementation success. The emergence of innovative governance mechanisms in Indonesia's environmental management system demonstrates the potential for developing nations to create effective solutions that bridge global environmental objectives with local implementation realities (Macedo et al., 2023). These mechanisms often incorporate traditional knowledge systems while adapting to modern environmental challenges, creating a unique hybrid approach to environmental governance that could serve as a model for other developing nations.

Moreover, Indonesia's progress in environmental governance underscores the importance of adaptive management strategies that can respond to changing environmental conditions while maintaining consistency with international environmental frameworks (Sandelowski, 2001). This adaptive approach enables the country to address both immediate environmental concerns and long-term sustainability goals, while building resilience in its environmental governance systems. Indonesia's engagement with global environmental governance has undergone significant transformation since the adoption of the 17 Sustainable Development Goals (SDGs) in 2015, marking a pivotal shift in the nation's approach to environmental management and sustainable development (Agrawal et al., 2022). The country faces unique challenges in balancing environmental protection with its ambitious economic growth objectives, particularly given its status as one of Southeast Asia's largest economies (Zhang, 2021).

The implementation of SDGs in Indonesia presents multifaceted challenges that extend beyond traditional environmental governance frameworks, requiring innovative approaches to policy integration and implementation across various sectors (Li & Puppim de Oliveira, 2021). The nation's public administration system has demonstrated relatively slow progress in incorporating comprehensive sustainable development principles into its governance framework (Puppim de Oliveira et al., 2015).

Indonesia's experience highlights the critical importance of equity considerations in environmental governance, particularly in addressing disparities between urban and rural regions, as well as between developed and developing provinces within the archipelago. The nation's environmental governance strategies have increasingly focused on generating co-benefits across multiple domains, including poverty reduction and inequality mitigation (Campagnolo & Davide, 2019). These efforts have demonstrated significant positive impacts on public health outcomes through improved environmental quality and access to clean resources (Laurent et al., 2022). Indonesia's approach to environmental governance has begun to incorporate social economy considerations, recognizing the interconnected nature of environmental protection and social welfare (Singh et al., 2021). This integrated approach represents a significant evolution in the country's environmental governance framework, acknowledging that effective environmental management must address both ecological preservation and socioeconomic development simultaneously.

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2. Understanding Indonesia's Institutional Framework and Policy Implementation Dynamics in Multilevel Environmental Governance

The dynamics of global environmental governance in Indonesia demonstrate complex interplays between international frameworks and domestic institutions, revealing multifaceted governance patterns across various administrative levels. The nation's experience illustrates how international governance regimes significantly influence domestic environmental policy formulation and implementation, particularly evident in climate aid allocation and policy development strategies (Qian et al., 2023).

Indonesia's unique economic, social, and political context has shaped its distinctive approach to environmental governance, particularly in pursuing climate neutrality goals. This approach differs significantly from other Asian nations' strategies, reflecting the importance of contextual adaptation in environmental policy implementation (Liu et al., 2023).

The Indonesian environmental governance landscape exhibits intricate interactions between various institutional mechanisms. This is particularly evident in the development of carbon market initiatives, where the relationship between voluntary and compliance markets demonstrates the evolution of governance structures. The emergence of compliance-based mechanisms has significantly influenced the trajectory of voluntary initiatives in Indonesia's environmental governance framework (Chen & Xie, 2023).

Furthermore, Indonesia's experience with paradiplomacy in environmental governance reveals the significant role of non-state actors in shaping environmental policy outcomes. These actors contribute substantially to international agreement negotiations and policy implementation processes, adding another layer of complexity to the governance landscape (Macedo et al., 2023).

Within Indonesia's multilevel governance framework, the interaction between regional and national environmental initiatives demonstrates the challenges and opportunities in coordinating environmental actions across different administrative scales. This coordination becomes particularly crucial in addressing transboundary environmental issues and implementing international environmental commitments while maintaining alignment with local development priorities. The dynamics of global environmental governance in Indonesia demonstrate complex interplays between international frameworks and domestic institutions, revealing multifaceted governance patterns across various administrative levels. The nation's experience illustrates how international governance regimes significantly influence domestic environmental policy formulation and implementation, particularly evident in climate aid allocation and policy development strategies (Qian et al., 2023).

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Within Indonesia's multilevel governance framework, the interaction between regional and national environmental initiatives demonstrates the challenges and opportunities in coordinating environmental actions across different administrative scales. This coordination becomes particularly crucial in addressing transboundary environmental issues and implementing international environmental commitments while maintaining alignment with local development priorities (Ali & Puppim de Oliveira, 2018).

The evolution of Indonesia's environmental governance systems further highlights the importance of adaptive institutional frameworks that can effectively respond to changing environmental challenges while maintaining policy coherence across different governance levels. This adaptive capacity has become increasingly important as Indonesia navigates complex

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environmental challenges while pursuing its development objectives (Bodin, 2017). The nation's experience provides valuable insights into how developing countries can effectively balance environmental protection with economic development goals through sophisticated governance mechanisms that integrate both local and global perspectives (Sandelowski, 2001). The integration challenges within Indonesia's multilevel governance system significantly impact the nation's capacity to address global environmental challenges. The interaction between international environmental regimes and domestic institutions reveals complex patterns of policy implementation and coordination across different governmental levels in Indonesia's decentralized system (Macedo et al., 2023). This complexity is particularly evident in Indonesia's climate change response, where local governments often operate independently from national initiatives, creating potential inefficiencies in coordinated action.

The effectiveness of Indonesia's environmental governance is further complicated by intergovernmental relations, where political differences and unclear role distributions among various governmental levels impede cohesive policy implementation (Mumtaz, 2023). This challenge is particularly pronounced in climate adaptation policies, where local institutions struggle to define and execute their responsibilities within the broader national framework.

However, Indonesia's experience with polycentric governance approaches demonstrates potential pathways for enhancing domestic organizational responses to global environmental challenges. The participation of Indonesian cities in transmunicipal networks has facilitated capacity building and knowledge transfer at the subnational level (Picavet et al., 2023). This networking approach has proven particularly effective in developing local government capabilities for climate change response through interactions with international sustainability organizations (Macedo et al., 2023).

Civil Society Organizations (CSOs) play a crucial role in bridging governance gaps within Indonesia's environmental management framework (Puppim de Oliveira, 2019). These organizations facilitate collaborative actions between national and regional governments, particularly in implementing climate adaptation policies and fostering integrated approaches to environmental challenges (Mumtaz, 2023). This intermediary role of CSOs becomes especially significant in contexts where formal governmental coordination mechanisms may be insufficient or ineffective. The intermediary function of CSOs in Indonesia's environmental governance structure has fostered innovative approaches to policy implementation and stakeholder engagement. These organizations have demonstrated particular effectiveness in facilitating knowledge transfer between international best practices and local implementation contexts, while respecting Indonesia's unique socio-cultural dynamics (Chen & Xie, 2023). Their role becomes increasingly crucial in addressing complex environmental challenges that require coordinated responses across multiple governance levels.

The Indonesian experience highlights the importance of developing robust institutional frameworks that can effectively bridge the gap between national policy objectives and local implementation capabilities. This institutional development process requires careful consideration of both formal and informal governance mechanisms, particularly in contexts where traditional authority structures continue to influence environmental management practices (Qian et al., 2023).

Furthermore, Indonesia's approach to environmental governance demonstrates the potential for developing nations to create effective solutions that integrate global environmental objectives with local implementation realities. This integration becomes particularly relevant in addressing issues such as forest conservation, marine protection, and climate change adaptation, where success depends heavily on local community engagement and support (Ali & Puppim de Oliveira, 2018).

The evolution of Indonesia's environmental governance system also underscores the importance of adaptive management strategies that can respond to changing environmental conditions while maintaining consistency with international environmental frameworks (Sandelowski, 2001). This adaptive approach enables the country to address both immediate environmental concerns and long-term sustainability goals, while building resilience in its environmental governance systems and promoting more effective coordination among various stakeholders involved in environmental management.

3. Integration of Traditional Knowledge and Modern Environmental Management Approaches in Indonesia's Governance System

The evolving complexity of environmental governance in Indonesia exemplifies the growing need for interdisciplinary research approaches that integrate scientific, behavioral, social, and political dimensions in understanding governance models and regimes (Rodela & Gerger Swartling, 2019). Indonesia's unique position as an archipelagic nation with diverse ecosystems and governance challenges provides a rich context for examining multiple perspectives in environmental governance.

Indonesia's environmental paradiplomacy demonstrates the intricate relationships between local and international environmental initiatives. The country's subnational governments increasingly engage in international environmental cooperation, particularly in areas such as forest conservation and marine protection (Macedo et al., 2023). This engagement is

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further complicated by Indonesia's participation in global carbon markets, where different regime interactions influence policy effectiveness and market outcomes (Chen & Xie, 2023).

The implementation of environmental policies in Indonesia faces significant challenges in intergovernmental relations, particularly in coordinating actions across national, provincial, and local levels. These challenges are especially evident in climate adaptation efforts, where institutional capacity and resource allocation often create implementation barriers (Mumtaz, 2023). The country's commitment to carbon neutrality has led to the development of comprehensive policies that align with regional and global environmental objectives, though implementation challenges persist across different administrative levels (Liu et al., 2023).

Indonesia's experience with international climate finance highlights the complex interplay between political and economic factors in environmental governance. The country's ability to access and effectively utilize climate finance is influenced by both domestic institutional capacity and international political dynamics (Qian et al., 2023). This complexity necessitates the adoption of more sophisticated research methodologies to address interdisciplinary questions in environmental governance (O'Neill et al., 2013).

The Indonesian case study provides valuable insights into environmental governance practices at different scales, from local community initiatives to national policies and international commitments. The country's experiences with city-level climate actions demonstrate the importance of local governance in addressing global environmental challenges (Macedo et al., 2023). Similarly, Indonesia's climate adaptation strategies reveal the critical role of coordinated action across different governmental levels (Mumtaz, 2023).

Indonesia's participation in regional and global environmental initiatives, particularly in carbon markets and emission reduction programs, offers important lessons for comparative analysis of environmental governance mechanisms (Chen & Xie, 2023). The country's experience as both a recipient and implementer of climate finance programs provides insights into the dynamics of international environmental cooperation (Qian et al., 2023).

Looking forward, Indonesia's environmental governance framework demonstrates the need for continued research into the roles of international organizations, institutions, and agreements in shaping environmental outcomes (Dimitrov, 2020). The country's engagement with global environmental institutions and its implementation of international agreements provides valuable lessons for understanding the effectiveness of global environmental governance mechanisms (Hale, 2020). Furthermore, Indonesia's experience highlights the importance of studying how international environmental agreements interact with domestic policy frameworks and implementation capabilities (Mitchell et al., 2020).

This comprehensive analysis of Indonesia's environmental governance experience contributes to the broader understanding of how developing nations can effectively engage with global environmental challenges while addressing local implementation realities. The country's diverse environmental challenges and governance responses provide valuable insights for both theoretical development and practical application in environmental governance studies. The complexity of Indonesia's environmental governance system further demonstrates the need for adaptive and innovative approaches in addressing emerging environmental challenges. The country's experience in balancing economic development with environmental protection offers valuable insights into the practical implementation of sustainable development principles in developing nations (Ali & Puppim de Oliveira, 2018).

Indonesia's approach to environmental governance also highlights the critical role of stakeholder engagement and participation in environmental decision-making processes. The integration of traditional ecological knowledge with modern scientific approaches has proven particularly effective in developing locally appropriate environmental solutions (Bodin, 2017). This integration becomes especially important in the context of Indonesia's diverse cultural and ecological landscapes.

The evolution of Indonesia's environmental governance framework demonstrates the importance of building robust institutional capacity while maintaining flexibility in policy implementation. The country's experience in adapting to changing environmental conditions while adhering to international environmental commitments provides valuable lessons for other developing nations (Ulibarri et al., 2023). This adaptive capacity is particularly crucial in addressing complex environmental challenges such as climate change and biodiversity loss.

Indonesia's engagement with international environmental networks and organizations has facilitated knowledge transfer and capacity building at various governance levels. The country's participation in global environmental initiatives has contributed to the development of more effective domestic environmental policies and implementation mechanisms (Jabbour & Flachsland, 2017). This international engagement has also helped strengthen Indonesia's institutional capacity for environmental governance.

Furthermore, Indonesia's experience in implementing environmental policies across its diverse archipelagic territory demonstrates the importance of context-specific approaches in environmental governance. The country's efforts to balance national policy objectives with local implementation capabilities have led to the development of innovative governance

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mechanisms that could serve as models for other developing nations (Lemos & Agrawal, 2006). These mechanisms often incorporate elements of both traditional and modern governance systems, creating unique hybrid approaches to environmental management.

The ongoing evolution of Indonesia's environmental governance system continues to provide valuable insights into the challenges and opportunities faced by developing nations in addressing global environmental challenges. The country's experience underscores the importance of maintaining flexibility in governance approaches while building strong institutional foundations for environmental protection and sustainable development (Sandelowski, 2001).

Indonesia's environmental landscape presents a complex array of emerging global environmental challenges that demand sophisticated and nuanced governance approaches. While climate change remains a central focus of environmental discourse, Indonesia's unique geographical and ecological characteristics necessitate a broader perspective on environmental governance that addresses multiple interconnected challenges.

The Indonesian archipelago's distinctive environmental context demonstrates that universal solutions are inadequate for addressing diverse environmental challenges. Each environmental issue requires tailored approaches that consider specific regional and local characteristics, particularly in a nation spanning multiple ecological zones. This understanding has become increasingly crucial as Indonesia faces various emerging environmental challenges that extend beyond traditional climate change concerns.

Indonesia's marine environmental governance presents particularly complex challenges, encompassing both biodiversity conservation and pollution control in one of the world's most diverse marine ecosystems (Grip, 2017). The nation's extensive coastline and maritime territory require specialized governance approaches that differ significantly from terrestrial environmental management strategies. Recent global events, including concerns about nuclear waste management in maritime environments, have added new dimensions to Indonesia's marine governance challenges (Xu et al., 2022).

Furthermore, Indonesia's rapid economic development has generated additional environmental challenges that require innovative governance solutions. The management of electronic waste in urban areas and the protection of remote ecological regions represent emerging challenges that demand new approaches to environmental governance (Zagrebelnaya, 2022). The increasing complexity of these environmental issues requires the development of sophisticated policy frameworks that can address both immediate concerns and long-term sustainability goals (Zeng et al., 2017).

The Indonesian experience in addressing these diverse environmental challenges provides valuable insights for developing comprehensive governance frameworks. This includes the integration of traditional ecological knowledge with modern environmental management practices, the development of adaptive governance mechanisms, and the establishment of effective multi-stakeholder engagement processes (Ali & Puppim de Oliveira, 2018). The nation's efforts to balance economic development with environmental protection have generated important lessons for other developing countries facing similar challenges (Qian et al., 2023).

This evolving understanding of environmental governance in Indonesia contributes significantly to the broader academic discourse on global environmental management, offering practical insights into the development of effective governance mechanisms that can address both specific local challenges and broader global environmental concerns (Macedo et al., 2023).

The evolution of Indonesia's environmental governance systems demonstrates the importance of developing flexible and adaptive management approaches that can respond to emerging environmental challenges while maintaining long-term sustainability objectives. This adaptability becomes particularly crucial as the nation faces increasingly complex environmental issues that require coordinated responses across multiple governance levels (Chen & Xie, 2023).

The Indonesian context also highlights the critical role of institutional capacity building in addressing emerging environmental challenges. The nation's efforts to strengthen environmental institutions while balancing economic development priorities demonstrate the complex challenges faced by developing countries in implementing effective environmental policies (Bodin, 2017). This institutional development process becomes particularly crucial when considering Indonesia's role in global environmental initiatives and its commitment to international environmental agreements.

Moreover, Indonesia's experience in developing environmental governance mechanisms offers valuable insights into the importance of integrating scientific knowledge with local wisdom and traditional practices. This integration becomes especially relevant in addressing emerging environmental challenges that require both technical expertise and deep understanding of local ecological systems (Dietz et al., 2003). The success of these integrated approaches in Indonesia provides important lessons for other developing nations facing similar environmental challenges.

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These developments in Indonesia's environmental governance framework contribute significantly to the broader academic understanding of how developing nations can effectively address complex environmental challenges while maintaining economic growth and social development objectives (Sandelowski, 2001). The lessons learned from Indonesia's experience continue to inform the development of more effective environmental governance mechanisms that can address both current and emerging environmental challenges in the context of rapid global change.

IV. CONCLUSIONS

Indonesia's environmental governance framework exemplifies the intricate relationship between global environmental imperatives and local implementation realities. The nation's experience offers valuable insights into how developing countries can navigate complex environmental challenges while pursuing economic development goals. The successful integration of traditional ecological knowledge with modern environmental management approaches, combined with adaptive governance mechanisms, has proven crucial in addressing diverse environmental issues. The country's multilevel governance system, despite facing coordination challenges, provides important lessons for developing comprehensive environmental frameworks that can effectively balance immediate environmental concerns with long-term sustainability objectives.

V. PRACTICAL AND THEORETICAL IMPLICATIONS

From a practical perspective, Indonesia's experience demonstrates the critical importance of developing flexible institutional frameworks capable of adapting to emerging environmental challenges while maintaining policy coherence across different governance levels. The successful integration of traditional ecological knowledge with modern scientific approaches provides a practical model that other developing nations can adapt to their specific contexts. The crucial role played by Civil Society Organizations in bridging governance gaps offers valuable insights for improving policy implementation mechanisms in other developing countries.

The theoretical implications of Indonesia's environmental governance experience contribute significantly to our understanding of environmental management in developing nations. The study enhances theoretical frameworks by illustrating how multilevel governance systems can effectively address complex environmental challenges in diverse geographical and cultural contexts. This research advances our understanding of how polycentric governance approaches can enhance domestic organizational responses to global environmental challenges. Furthermore, the findings contribute to theoretical frameworks regarding the integration of traditional and modern governance systems in environmental management.

VI. RESEARCH LIMITATIONS AND FUTURE AGENDA

Current research limitations include the primary focus on formal institutional structures, which may overlook important informal governance mechanisms influencing environmental policy implementation. The reliance on secondary data potentially limits our understanding of ground-level implementation challenges. Additionally, the rapid evolution of environmental challenges may affect the long-term applicability of current findings in Indonesia's dynamic environmental context.

Future research should explore several critical areas in Indonesia's environmental governance landscape. These include examining the impact of emerging technologies on environmental governance effectiveness and investigating the potential of indigenous knowledge systems in enhancing environmental policy implementation. Research attention should also focus on developing more effective metrics for assessing governance outcomes across different administrative levels. Additionally, studies should investigate the influence of international climate finance on domestic environmental governance structures and examine the integration of social equity considerations in environmental policy design and implementation. These research directions would contribute to a more comprehensive understanding of environmental governance challenges and opportunities in developing nations, particularly in contexts similar to Indonesia's complex socio-ecological landscape.

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Challenges and Perspectives of Georgian Kvevri Wine Production



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ABSTRACT: This research examined the quality of Georgian Amber Kvevri wines produced in the last three years via sensory evaluation and identified common defects in Kvevri amber wines. The Georgian Wine Guild organized 32 tasting sessions, assessing 1,440 amber wines sourced from 149 cellars. Only 30.76% of the wines evaluated were free from faults. High levels of ethyl acetate, acetaldehyde, and volatile acids characterized the majority of faulty wines. Researchers collaborated with 18 local wineries to conduct a field study, revealing that errors in cellar planning, design, and winemaking contributed to defects in Kvevri Amber Wines. The identified mistakes comprised placing kvevries in close proximity, failing to adequately wash and sanitize the cellar, neglecting the use of sulfur dioxide and inert gases, fermenting wines at elevated temperatures, and excessively maturing wines with lees and solid grape components. Based on the obtained results, the study team developed a novel technique that integrates traditional and modern methods for the production of amber wine. The team implemented the traditional liming method for the installation of new wines, produced trial wines utilizing innovative approaches, and created control wines through the conventional method. Trial and control samples were prepared from Georgian endemic grape varieties Rqatsiteli, Kisi, and Khikhvi, which are typically employed in the production of kvevri amber wine. The accredited Wine Laboratory conducted the chemical analyses. The results indicated that the trial wine had three times lower levels of acetaldehyde, ethyl acetate, and volatile acids compared to the control samples. The study emphasizes the significance of reinstating authentic traditional Kvevri winemaking methods alongside contemporary practices. The research indicates that the application of the new technique enables winemakers to improve the sensory attributes of their wines and diminish off-flavors.

KEYWORDS: Kvevri Wine, Georgian Wine History.

JEL Classification Code-L66

1. INTRODUCTION

Georgian viticulture and winemaking tradition dates back 8000 years [1]. The Kvevri is a remarkable wine-making vessel that significantly influences the composition and organoleptic characteristics of the wine. The Kvevri winemaking method is unparalleled worldwide. UNESCO has even added the traditional method of Kvevri winemaking to its lists of intangible cultural heritage. The use of Kvevri in winemaking has been a longstanding tradition in Georgia, contributing to the unique character and quality of their wines. This ancient method involves fermenting and aging wine in large clay vessels buried underground, allowing for a natural and controlled process [2]. For the Georgians, wine is not just a drink. It is a significant part of Georgian culture, national identity, and heritage. Winemaking customs can be found in oral traditions, inscriptions on the walls of caves, churches, and dwellings, rites and songs, the calendar, the language, and people's common understanding. Myths, culture, art, and religious beliefs reflect the Georgian people's deep love and reverence for the vine [3]. The generations have passed down the traditional method of making kvevri vessels from clay, burying them in the ground, and using them to produce kvevri wine. However, during

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the Soviet Union era, the rural population of Georgia faced additional challenges. The Soviet Union had a considerable wine market. Small and medium-sized wine producers prioritized quantity over quality and tradition preservation in order to maximize profits [4]. Consequently, they replaced numerous traditional methods. For more than 50 years, rural residents used the wine-making processes developed during this period [5]. As a result, people mistake this method for a conventional one. Contrary to popular belief, reestablishing true traditional Kvevri wine methods necessitates scientific research as well as the implementation of community-wide educational initiatives. Georgia, a small country, should grow its wine industry by producing high-quality wine. Kvevri wine, a traditional product from the wine's origin, piques the interest of wine lovers worldwide. The wine country's reputation and centuries-long history undoubtedly contribute to Kvevri wine's popularity. However, first and foremost, it must be of high quality and free of faults. The porous construction of the Kvevri wall increases the possibility of bacteria accumulation in this vessel. Using these wine vessels is fraught with complications, physical effort, and hazards. Despite these challenges, the unique flavor profile and cultural significance of Kvevri wine make it a valuable asset for Georgia's wine industry. With proper education and modern technology, Georgia can continue to produce exceptional Kvevri wine that stands out in the global market [6].

This study aimed to develop an effective method for producing Kvevri wine by combining traditional methods with modern winemaking techniques. The study concentrated on investigating the impact of Kvevri installation and operation techniques on wine composition.

2. METHODS AND MATERIALS

2.1. Preliminary study, sensory evaluation of Kvevri wines

This phase of the experiment was to investigate the quality of Georgian Amber Kvevri wines produced in the past three years through sensory evaluation and determine the prevalent flaws among them. For the sensory assessment, medium-scale and family wineries submitted wines from six distinct Georgian regions.

The Georgian Wine Guild organized thirty-two tasting sessions, with 15 wine judges conducting each tasting. All participating wine judges are enologists and wine tasters with at least 5 years of experience, and they hold the appropriate certificates recognized by the state of Georgia. We evaluated 1,440 amber wines sourced from 149 wine cellars. The website www.topgeorgian.wine displays the outcomes of these sessions, featuring wines that have achieved scores over 80. We organized and implemented the tastings in accordance with OIV 332A/2009 resolution [9]. The wine judges evaluated samples using the following sensory descriptors: 1. Visual: The judges evaluated the samples for their limpidity and other aspects; 2. Nose: They assessed the samples for their genuineness, positive intensity, and quality; 3. Taste: They assessed the samples for their genuineness, positive intensity, harmonious persistence, and quality; 4. Harmony: The overall assessment. The tasting sheet also incorporates a section for wines that have undergone elimination due to a major defect. When a wine taster marks a wine as eliminated due to a major defect, he/she must write the detected flaw or fault. At least two tasters may eliminate a wine. The OIV Standard for International Wine Competitions and Spirituous Beverages of Vitivinicultural Origin delineates the globally recognized techniques and procedures that the Georgian Wine Guild consistently use for wine tastings. This organization adheres to stringent ethical guidelines; if a wine receives a score below 80 and any defect is detected, the sensory evaluation results are solely sent to the wine producer and remain inaccessible to others.

2.2. Field research and case study

The team of experimenters has visited 18 wineries that have received results indicating their wines are faulty. The visits were not only to implement the planned research but also to consult producers and help the wineries improve the quality of their wine. The team of experimenters studied the conditions in the wineries, learned about all the stages of winemaking, and, in individual cases, determined the various reasons for the development of faults in amber Kvevri wine. In a separate case, the team developed a strategy to prevent fault development and provided the producer with recommendations for making amber wine, including winery design, harvest date, equipment, cellar washing and sanitation, fermentation, kvevri closure, and opening time.

2.3. Winery design

Based on the field study results, the research team developed the Kvevri amber wine-making experimental technique by integrating traditional methods with contemporary approaches. The initial and essential step in this winemaking technique was the installation of new kvevries and the organization of the experimental area. The team opted for the traditional method of kvevri installation and operation.

Historically, ancestors placed kvevries in the yards of their houses rather than within the buildings. Traditionally, people covered them with a stone or wood lid, then with a layer of moist clay and soil [5; 7]. The contemporary rural population favors installing Kvevri underground within a winery building. Now, a glass lid is used. In certain wineries, elevated humidity levels in cellar

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buildings, coupled with insufficient air circulation, create conditions conducive to bacterial proliferation. Exposing Kvevries to the open air enhances the drying process of empty Kvevri walls after washing and sanitation and prevents mold growth on the surfaces.

The experiment team installed 12 new kvevries, each with a capacity of 700 liters, in the yard of the winery, located in the Gurjaani district. The kvevries were purchased from the potter man, who made the kvevries, already installed in the winery building. The roof was constructed over the kvevries to protect them from precipitation and sunlight. The traditional liming method was applied for the installation of kvevries in the ground [5]. Concrete, cement, or other contemporary building materials were not used. Kvevris were positioned 3.5 meters apart to showcase their exceptional characteristics. The Kvevri necessitate an adequate quantity of soil around them to regulate the temperature of the wine during fermentation and ensure stability throughout maturation. At the special request of the research team, the walls of the kvevries were not covered with wax.

Covering the kvevri walls with wax has both positive and negative sides. Filling the kvevri pores with hot wax kills bacteria, deprives anaerobic microorganisms of oxygen, and prevents the development of microbiological diseases in the wine. This method is effective only for the first year of waxing the Kvevri walls. After decanting the wine, washing and sanitizing the kvevri removes part of the wax from the wall, which allows bacteria to grow between the wall and the wax layer. Removing the old wax and rewashing the kvevri before each season is technically very difficult, and wineries do not use this method. In addition, wax diminishes the wine's micro-oxygenation. That's why the research team decided not to cover the vegetables with wax [5; 8].

The old kvevries located in the cellar building were used to prepare the control wine samples. They were installed four years ago. The potter man who made both the new and old kvevries used the same clay and kvevri-making technique. However, it should be noted that the outer surface of the old kvevries was covered with cement, while the inner walls were coated with wax. Because there was not enough space in the winery, the distance between old kvevries was 0.5 m. Today, such cellar organization is typical. Regrettably, small and medium-sized wineries, belonging to the category of entrepreneurs who produce kvevri wine, typically place the kvevri in the ground close to each other, at a distance of 0.5 m, and do not re-wax them annually.

2.4. Grapes and Materials

In 2023, the Rqatsiteli, Kisi, and Khikhvi grapes were selectively harvested in the early morning and subsequently transported to the winery. The grapes underwent processing within a four-hour timeframe. Each grape variety was partitioned into six equal portions, destemmed, and in kvevries. For each grape sort were used 6 kvevries: three for trial and three for control wines. Following crushing, the must's temperature, brix, and total acidity were assessed (Table 1). The must intended for trial sample preparation had its total acidity adjusted using tartaric acid.

Table 1. Results of Must Analyses

Grape must	Brix °	Temperature, °C	Total acidity Prior adjustment	Total acidity in Trial Samples after adjustment
Rkatsiteli	24.7	18.3	5.8	6.3
Kisi	24.4	18.1	5.6	6.1
Khikhvi	23.8	17.4	6.0	6.5

The research team selected and purchased the following materials: Myzym White Fruits (enzymes), IOC Be Fruits (yeast), and Potassium Metabisulfite. The essential chemicals for winery cleaning and sanitation were purchased from Asir AL GmbH & Co. KG.

2.5. Preparation of control samples

After cleaning and sanitation, the final step involved steaming the Kvevries for 45 minutes to sterilize them. Grapes were processed, destemmed, and loaded into Kvevries. Tartaric acid adjusted the pomace's total acidity after sulfurizing it with potassium metabisulfite (10 g/hl). Myzym White Fruits was added, and during 6 hours, the pre-fermentation maceration was carried out, and then 20 g/hl of rehydrated yeast was inoculated. The pomace cap was punched down 6-9 times a day, and the temperature was measured. In order to avoid oxidation, when the third stage of fermentation began, the liquid level in the kvevries was increased. At the end of the fermentation, potassium metabisulfite was added (6 g/hl), and the Kvevris were

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completely filled and covered with a glass lid, which had a hole in the central part of the circle where an airlock was attached. 4 weeks later, the leads were changed and the kvevries were sealed according to the traditional method. In accordance with the traditional method, we used a stone lid to cover them. Georgia has been manufacturing these kvevri lids for centuries, mining the stone for their production in the Caucasus Mountains. We fixed the lid with a mixture of clay and water. The experimental group decided to pre-mix 1 mg of potassium metabisulfite in 1 L of water to knead the clay. On top, we added clay soil, which we compacted well [5]. The current regulation mandates that wine matures in kvevri before December 25 of the same vintage year. The trial wines were separated from the solid parts of the grapes and decanted from the kvevri on December 26-28. We used the free-run fractions for the experiment and stored them in 250-500 L capacity stainless steel tanks.

2.6 Preparation of control wine samples

Family winery owners created control samples of wine using the same techniques they use every year. Before harvesting, kvevries were cleaned from the white lime layer with water, and in wet kvevri, according to the traditional approach, sulfur sticks were burned. Following this, the pomace was immediately loaded into the kvevri. The composition of the must was not corrected, the pomace was not sulfurized, and fermentation was carried out by wild yeasts. There was no air conditioner inside the cellar. The pomace cap was punched down 3–6 times a day. At the end of fermentation, Kvevries were completely filled and covered with a glass lid, which had a hole in the central part of the circle where an airlock was attached. 4 weeks later, the leads were changed, and kvevries were sealed with a whole glass lid that was attached with Mastic Enoplastico Special.

According to local tradition, Kvevries were opened 3 weeks before Easter, 22-27 March. For the experiment, the free-run fractions were stored in 250-500 L capacity stainless steel tanks.

2.7 Method of Laboratory Analyses

OenoFoss² performed the must and wine analyses during grape processing, fermentation, before final closing, and after the decantation from kvevries. Accredited Wine Laboratory LTD, prior to bottling, conducted final laboratory analyses in May of the year following the harvest. Analyzes were performed according to the Compendium of International Methods of Wine and Must Analysis (Table 2) [10]. From each grape variety, control and research samples were made in triplicate. Laboratory research was conducted separately on the wine poured from each kvevri.

Table 2. Methods of Analyses

Ethanol content, volume (%)	OIV-MA-AS312-01A. Anton Par, Densitometer, Refractometer
Sugars	OIV- MA-AS313-01, SHOTT, Tirolian Alfa, Automatic Titrator
Total acids	OIV-AS311-01A, Loofah method
Volatile acids	OIV- MA-AS313-01, SHOTT, Titrolina Alfa, Automatic Titrator
Gas Chromatography	OIV-MA-E-AS312-03-METHAN. Equipment: GCMS Agilent Technologies, Gas Chromatograph, Mass Spectrometer.
Free SO ₂	OIV.MA.AS313-02
Total SO ₂	OIV.MA.AS323-04B

2.8. Statistical Analysis

The mean \pm standard deviation (SD) of three replicates was applied to convey the results of chemical analyses. The mean values were compared using Fisher LSD, and a one-way analysis of variance (ANOVA) was performed. Both were conducted with a significance level of $p < 0.05$. The mean values were compared using Fisher LSD at a 0.05 significance level, and repeated

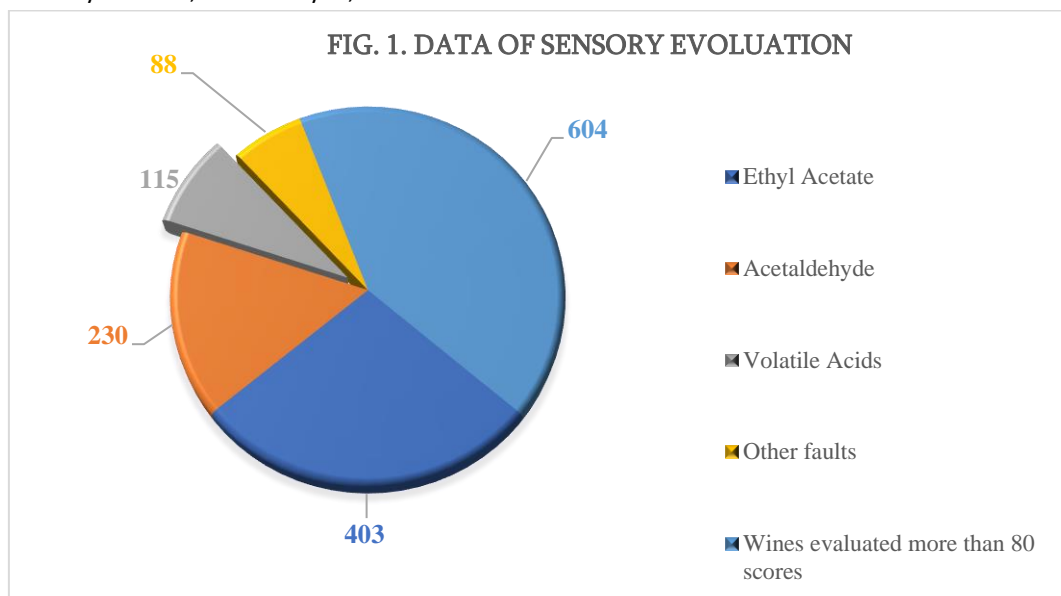
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measures ANOVA was carried out for sensory analysis. XLSTAT version 2022.4.1 (Addinsoft®, Paris, France) was employed to conduct all statistical analyses.

3. RESULTS AND DISCUSSION

3.1. Preliminary study, sensory evaluation

The conducted tasting sessions revealed (Figure 1) that the majority of faulty wines were characterized by descriptors: brownish color, smell of vinegar, over ripened and spoiled apples, roasted nuts, metallic taste, pungent aroma of vinegar, caused by high content of ethyl acetate, acetaldehyde, and volatile acids.



The results of field research and a case study indicate that certain traditional methods have a negative impact on the quality of wine. Currently, these traditional methods of making wine, which are widely used among the rural population and in some cellars, lead to the development of wine defects. Regrettably, the proprietors of the wineries employing these flawed methods assert that they have been in operation for over half a century.

3.2. Filed research data

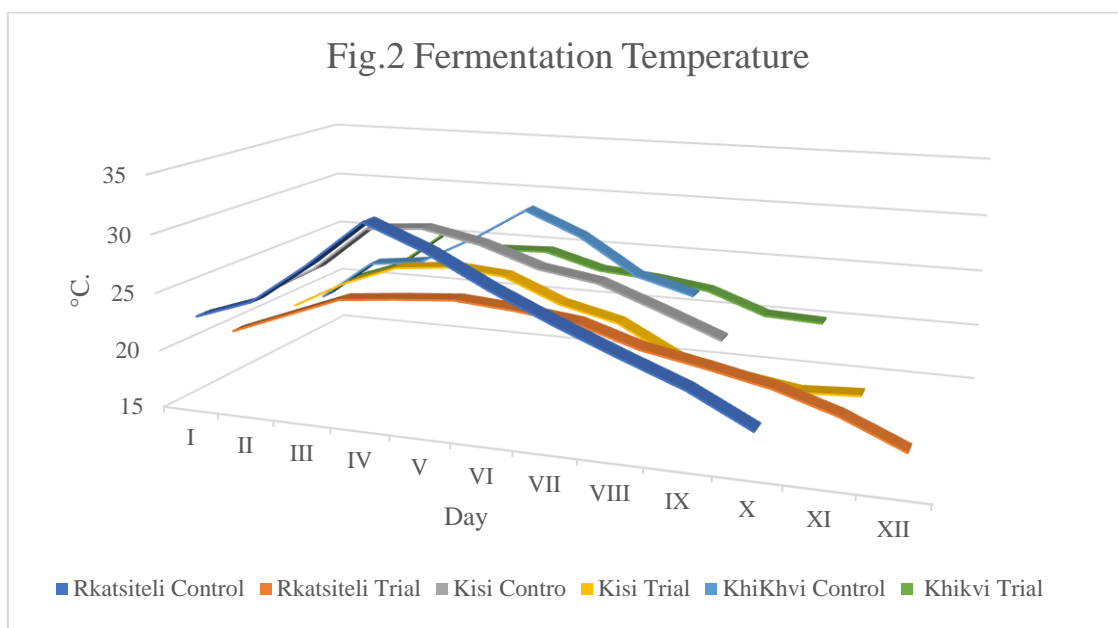
The experiment team identified the below-mentioned factors that lead to the development of wine faults and flaws, or the loss of varietal aroma:

1. The winemakers placed the kvevries in the cellars with minimal distance between them—only 0.5–1 meter apart. The producers did not regulate the fermentation temperature, and the average temperature during the alcoholic fermentation was higher than 27 °C.
2. Six wineries had humidity levels above 75% and lacked adequate air ventilation, which contributed to Kvevri mold growth.
3. In 11 out of 18 wineries, winemakers washed and sanitized their pitchers incorrectly. They adhere to traditional practices and use lime or ash to clean their kvevris. They sanitize the kvevri by burning a sulfur stick in the wet kvevri before loading the pomace, but they don't follow this practice by washing them with water. Burning a sulfur stick in a wet kvevri produces sulfurous acid due to the reaction of sulfur gas with water, which can lead to an unpleasant taste in the wine. They last waxed the kvevri 4–6 years ago. The space between the wax and kvevri walls is the best place for bacteria to hide.
4. Six family wineries prefer to ferment amber wine with grape stems. It is part of traditional Kakhetian technology. They are harvesting grapes with high sugar content and low organic acid content. They do not correct the acidity; the wine's pH is high, which is a favorable environment for bacterial growth [9].
5. The winery's eight representatives have a negative attitude toward sulfurizing must and wine. They prefer to ferment wine with wild yeast and do not consider using potassium metabisulfite or inert gas. Six winemakers failed to manage sulfur dioxide content properly.
6. All wineries where the research team conducted field research opened and decanted wines from Kvevries too late, usually 2–3 weeks before the Ester. During the long post-fermentation maceration, the wine is on the lees, which leads to the development of faults caused by the content of sulfur-containing compounds.

3.3. The effect of the kvevri placement method on the fermentation temperature

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The grapes were not pre-cooled, nor was the pomace chilled, to assess the impact of the distance between the kvevries and their installation technique on fermentation temperature. The fermentation temperature of both the control and research samples was measured four times daily at consistent intervals: 9 a.m., 1 p.m., 5 p.m., and 9 p.m. Figure 2 presents the results of the daily average temperature recorded in three kvevries. The phase at which the residual sugar content of the wine fell below 3 g/l was deemed the conclusion of fermentation. The control samples underwent fermentation more rapidly than the trials.



Compared to the control samples, trial wines underwent fermentation at lower temperatures. The control sample of the Rkatsiteli grape variety exhibited the highest daily average fermentation temperature at 32 °C. The daily average fermentation temperature in trial samples remained below 25 °C. Data obtained indicate that the organization of the winery and the placement method of kvevries, particularly the distance between them, significantly affect the fermentation temperature of wine. Fermentation conditions and temperature significantly affect the presence of specific compounds in wine. Higher fermentation temperatures typically accelerate the fermentation process, which can lead to an increased production of esters, including ethyl acetate [11]. Moreover, temperature has a significant impact on yeast growth and the production of volatile compounds; it has been observed that elevated temperatures can enhance the formation of ethyl acetate while also influencing the overall fermentation dynamics. Therefore, managing fermentation conditions carefully is essential for controlling the levels of these volatile compounds [12].

3.3. Study of wine oxidation markers in trial and control samples

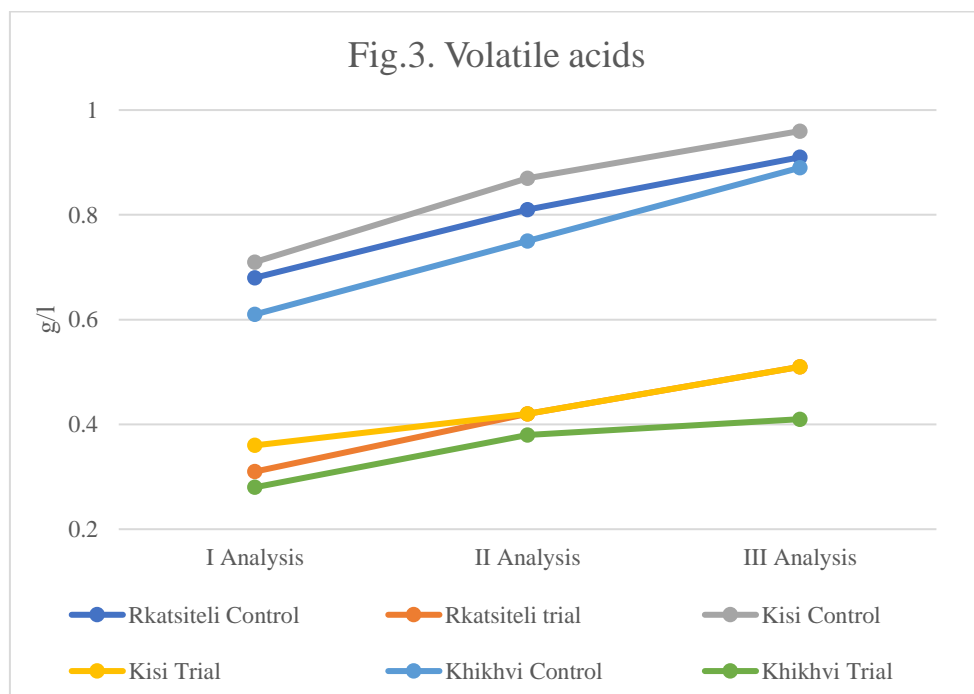
Family producers of Kvevri wine now emphasize the production of wine devoid of additives. The cellar owner consistently prepares control samples utilizing a uniform method and firmly rejects the incorporation of sulfating pomace or wine in his production process. Wild microflora fermented the control wine samples. The type of yeast strains employed in fermentation markedly affects the production of volatile acids, ethyl acetate, and acetaldehyde due to microbial activity [13]. Various yeast strains demonstrate differing capacities to synthesize these compounds, with certain strains producing significantly reduced amounts of acetic acid and acetaldehyde [14, 15]. In the preparation of control samples, the local winemaker confirmed the absence of inert gas usage during wine decantation, resulting in unprotected wines susceptible to oxidation. The researchers thought it was important to check the amounts of volatile acids, ethyl acetate, and acetaldehyde in both the test and control samples (Figures 2 and 3). They also did the usual wine tests, which included checking the amounts of ethanol, sugar, and sulfur dioxide (Table 3). Chemical parameters were assessed at various stages of the winemaking process. Measurements were conducted at three stages: (I) at the conclusion of fermentation, (II) before the initial decantation, and (III) prior to bottling.

Table 3. Chemical parameters of wines

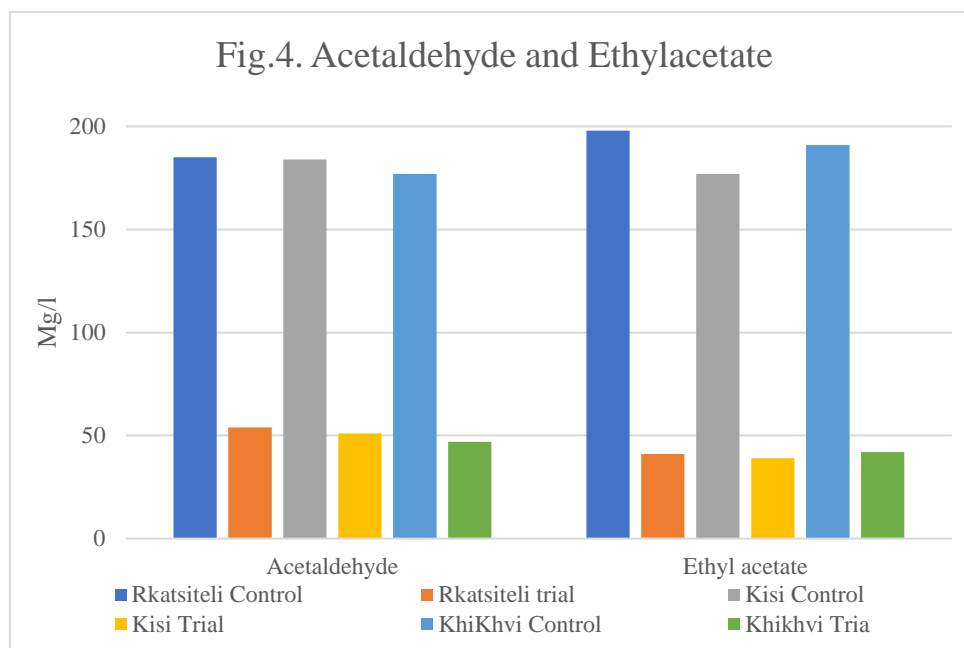
Wine	Analytical	Ethanol by vol. %	Sugars, g/l	Free / Total SO ₂ , mg/l	Total Acids, g/l

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		Control	Trial	Control	Trial	Control	Trial	Control	Trial
Rkatsiteli	I	12.68	12.88	2.6	2.8	11/27	19/75	5.0	6.3
	II	12.51	12.67	2.16	2.66	8/24	25/87	4.8	5.9
	III	12.3	12.52	2.1	2.64	6/21	26/124	4.6	5.5
Kisi	I	13.1	13.46	2.76	2.3	18/34	21/67	5.2	5.7
	II	12.6	13.38	2.61	2.41	14/32	25/87	4.4	5.4
	III	12.2	12.9	2.89	2.41	11/29.7	26/131	4.1	5.2
Khikhvi	I	12.8	13.3	1.8	1.4	19/38	21/83	5.7	5.8
	II	12.56	13.0	1.76	2.39	17/34	23/97	5.1	5.4
	III	12.4	12.7	1.71	2.39	8/31	26/141	4.9	5.4



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The study found that the control wines have three times more ethyl acetate and acetaldehyde and two times more volatile acids than the trial wines. According to the research results, the Kvevri wine production method developed and implemented by the experimental group enables the production of high-quality, traditional Kvevri wine.

CONCLUSION

This study illustrates that combining traditional Kvevri winemaking techniques with contemporary oenological practices can enhance the quality of Georgian Amber wines significantly. It was possible to make wines with much lower levels of ethyl acetate, acetaldehyde, and volatile acids using the experimental method, which involved carefully placing the Kvevri, controlling the temperature, and adding certain yeasts and enzymes. The distance between Kvevries and their installation method significantly affects fermentation temperature, with increased spacing resulting in more favorable fermentation conditions. Effective sanitation, management of sulfur dioxide, and regulation of fermentation parameters are essential for the production of high-quality Kvevri wines. The application of specific yeasts and additional solutions, coupled with meticulous fermentation monitoring, can mitigate the likelihood of wine faults. Avoiding the use of sulfur dioxide in traditional practices may result in a heightened risk of oxidation and microbial spoilage. The timing of decanting wine from Kvevries is crucial, as earlier decanting may decrease the likelihood of fault development.

AUTHORSHIP CONTRIBUTION STATEMENT

Mariam Khomasuridze, Nazi Kutsiava, and Ani Chutlashvili: Investigation, Methodology, and Writing—original draft. Nino Tektumanashvili and Sofio Tamazashvili were responsible for the planning and organization of the study.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

ACKNOWLEDGMENTS

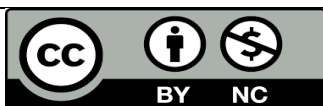
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