

Teachers' 21st-Century Skills and Their Competence on Inclusive Education in Opol Districts



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ABSTRACT: In this 21st century, teachers are faced with a rapidly changing educational landscape that requires them to possess a new set of skills and competencies to effectively implement inclusive education practices. This study was conducted to determine teachers 21st-century skills and competence on inclusive education. Specifically it sought to answer the following questions; by profiling of respondents, assessing teachers 21st-century skills based on learning and innovation, information, media, and technology, and life and career skills as well as their competence on inclusive education on social regard for learning, knowledge about inclusive education, and diversity of learners; and determining the significance difference 21st-century skills and competence on inclusive education, and exploring the correlation between their competence on education and profile. The respondents of this study were the one hundred seventy-one (171) teachers in Opol East and West Districts, Division of Misamis Oriental for the School Year 2023-2024 was obtained using Slovin's Formula. The questionnaires were adopted and employed descriptive research design method and used simple random sampling for collecting data from the sample population of interest. Frequency, percentages, mean, standard deviation and Pearson-r were used to interpret the data of the level respondents' profile and significance difference on 21st-century skills and competence on inclusive education. The findings of the study revealed that respondents possess a very high level of 21st-century skills and competence on inclusive education, with a positive significant relationship between these skills as well as significant correlation between respondents' competence on inclusive education and their profile. The conclusion emphasizes the importance of professional development in 21st-century teaching practices. The study recommends government incentives, school head mentoring, and SPED teachers collaboration. It also suggests creating curriculum programs to bridge gaps in inclusive education and maximizing teachers' competence on inclusive education. In the end, giving these factors a top priority is essential for developing a supportive school environment and maximizing teachers' 21st-century skills and competence on inclusive education.

KEYWORDS: 21st-century skills, competence on inclusive education

I. INTRODUCTION

This study proposed that there exists a progressive and interdependent relationship between teachers' 21st-century skills and their competence on inclusive education within an educational setting. The assumption of this study highlights that teachers with higher twenty-first century skills are more likely have a higher competence on inclusive education that protects all diversity of learners, for have equal chance to study, learn, and developed the skills they need to flourish, and similarly time toughens their confidence in utilizing modern instructional methods. Emphasizing the importance of fostering 21st-century skills and competence on inclusive education culture can maximize its benefits.

In the 21st century, teachers are faced with a rapidly changing educational landscape that requires them to possess a new set of skills and competencies to successfully implement inclusivity practices. Inclusive education aims to provide all students, regardless of their abilities or backgrounds, with equal opportunities for learning and growth (UNICEF, 2023).

For this reason, the world officially focused attention on the need to give equal access and opportunities to education, especially in the Philippines through the Republic Act 11650, according to the declaration of this policy, the state will take the necessary actions to ensure that everyone has access to high-quality education by its policy of protecting and promoting that right at all levels. It willpower recognize, uphold, and promote the different opportunity to an education for all students with disabilities, including those who belong to linguistic, ethnic, or religious minorities. It will also make this education mandatory and accessible

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to them by making sure that no student with a disability is denied the opportunity to receive an inclusive, equitable, and high-quality education, and it will encourage opportunities for lifelong learning.

On the other hand, UNICEF (2023) ensures that everyone fulfills their human right to a high-quality education for the duration of their lives is the goal of the right to education. When education is approached inclusively, the needs of each student are considered, and everyone works together to attain goals. It recognizes that every child can learn and that every child has a unique characteristic, interests, abilities, and learning needs. For this reason, teachers must be equipped with the ability to differentiate instruction, accommodate diverse learning styles, and create inclusive classroom environments that foster collaboration and support for all students (Hamstead, 2024). They must also possess strong communication skills, empathy, and cultural competency to effectively engage with students from diverse backgrounds.

Therefore, teachers must continuously adapt and evolve their teaching practices in response to new technologies and pedagogical approaches (Alhothali, 2020). By developing teachers' twenty-first century skills and competence on inclusive education, they can establish inclusive education environments that enable all learners to reach their full potential.

In the 21st century, the teaching profession in the Philippines has undergone major changes due to developments of technology and evolving educational practices, as a result, educators are required to possess a set of skills known as 21st-century skills. Additionally, having competence on inclusive education is crucial for success in this field to effectively implement inclusive education practices.

This study is anchored to the Social Learning theory by Bandura (1977), it proposed that learning occurs through observation, imitation, and modeling and is influenced by factors such as attention, motivation, attitudes, and emotions. Bandura's theory emphasizes the importance of observing and imitating others as a means of acquiring new skills and knowledge. In today's interconnected world, social learning has become more prevalent than ever before. Through platforms such as social media and online communities, individuals have access to an abundance of information and can learn from experts across various fields. In the context of teaching, educators with high-level 21st century skills and competence on inclusive education are more likely to embrace 21st-century skills and exhibit a positive mindset on inclusive education that promotes and protects learners with or without learning disabilities.

By understanding the relationship between teachers' 21st-century skills and their competence on inclusive education, this research study can provide valuable insights for teacher training programs and educational institutions. It may help identify strategies for enhancing teachers' confidence in utilizing modern instructional methods while fostering a positive mindset on inclusion that promotes and protects learners with or without learning disabilities.

In the domain of research, scientific inquiry is the foundation of all scientific knowledge. It is a systematic approach that researchers use to investigate and understand the natural world. Through observation, experimentation, and analysis, researchers seek to answer questions and solve problems. These observations often lead to questions or hypotheses about how or why something occurs. This study anticipates that there were substantial correlations between the teachers' 21st-century skills and their level of competence on inclusive education

Further, this study also anticipates that there were positive relationship between teachers' twenty-first century skills and their competence on inclusive education when respondents categorize based on key stage area, highest educational attainment, years in teaching, related seminars attended, and position within the educational setting.

II. METHODOLOGY

This study employed descriptive research design in collecting the necessary data and information on the teachers' 21st-century skills and their competencies on inclusive education of Opol East and West Districts, Division of Misamis Oriental.

Descriptive research is a method used in both quantitative and qualitative studies to gather information about a particular phenomenon or topic (Siedlecki, 2020). It aims to provide a specified picture of the subject under study, allowing researchers to acquire a extreme understanding of its traits, actions, and connections.

In quantitative research, descriptive studies involve collecting numerical data through surveys, questionnaires, or experiments. This data was then examined using statistical techniques and correlations. On the other hand, qualitative descriptive research focuses on gathering non-numerical data through methods such as interviews, observations, or focus groups. This approach aims to gain the value and involvedness of social experiences and perspectives. Researchers analyze this data by identifying themes or patterns that emerge from participants' narratives or observations.

This approach was anticipated to produce a truthful and precise description of a scenario. Data must be gathered, tabulated, and computed for this study. To derive the implication of the findings, it was also involving the analysis and interpretation of the data. The characteristics of the teacher respondents, as well as their level of 21st-century skills and their competencies on inclusive education, was tested as variables.

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Descriptive statistics were used to characterize the core properties of the data in a study. There was a brief explanation of the measurements and the sample. They provided the basis for simple graphical analysis as well as nearly all quantitative data research. Utilizing frequency and percentage, the respondents were divided among different criteria. The standard deviation was used to estimate the distribution of the data, and the mean was utilized to show the central tendency of responses—especially those pertaining to challenges. The investigation was performed to determine the significance of the difference in the problem when the respondents were grouped based on their profiles, and the Pearson-r moment of the coefficient was used to determine the significance of the relationship between the teachers' 21st-century skill and their competence on inclusive education.

III. RESULTS AND DISCUSSION

Problem 1: What is the respondent's profile in terms of key stage area, highest educational attainment, number of years in teaching, related trainings/ seminars attended, and position?

Table 1: Distribution of the Respondents' Profile in terms of Key Stage Area

Key Stage Area	Frequency	Percentage
Key Stage 4 (Grade 11-12)	3	1.80
Key Stage 3 (Grade 7-10)	18	10.50
Key Stage 2 (Grade 4-6)	78	45.60
Key Stage 1 (Kinder- Grade 3)	72	42.10
Total	171	100%

Table 1 shows the respondents' profile in terms of key stage area. Results show that participants with **Key Stage Area 2 (Grade 4-6)** are the highest number of responses in terms of Key Stage Area having a **highest frequency of 78 (45.6%)**. This indicates that majority of the respondents are handling Key Stage Area 2 (Grade 4-6) or the Upper Primary Level Teachers. One possible reason for the high frequency of respondents in Key Stage Area 2 (Grade 4-6) could be attributed to the presence of more classroom sections in Grade 4 to 6 compared to other grade levels, particularly in schools located in coastal areas. This suggests that there may have been a higher demand for teachers in this specific grade range, leading to the employment of more educators. Furthermore, Key Stage Area 2 serves as the preliminary stage for all students, despite of their capabilities to access quality education and develop essential skills that will benefit them throughout their lives.

In the recent study of Gomez (2022) assesses the academic performance of Key Stage Area 2 Araling Panlipunan pupils using the MELC framework proven to have a positive impact on the high frequency of Key Stage Area 2. By prioritizing essential learning competencies, educators can guarantee that learners are receiving an excellence education that prepares them for future success. Moreover, The MELC framework provides a clear and structured guide for educators to ensure that students are meeting the necessary learning objectives for their grade level, by implementing these competencies into the curriculum, teachers are better able to track student progress and identify areas where additional support may be needed. This allows for targeted interventions to help students succeed academically and reach their full potential.

On the other hand, data revealed that out of 171 respondents, the participants with **Key Stage Area 4 (Grade 11-12)** are the lowest number of responses in terms of Key Stage Area having a **lowest frequency of 3 (1.8%)**. This means the least number of respondents are Key Stage Area 4 (Grade 11-12). One possible explanation for the low frequency of respondents from Key Stage Area 4 could be attributed to the fact that there are only two (2) Grade level in Key Stage Area 4. For more inclusive educational programs may need to consider including this group to ensure a comprehensive understanding of the educational dynamics across all grade levels.

In the recent study by Quinones' (2022), the importance of implementing inclusive practices in senior high schools, students can develop essential skills and knowledge that will prepare them for successful transitions into tertiary education and future career paths.

Table 2: Distribution Table Showing the Respondents' Profile in terms of Highest Educational Attainment

Highest Educational Qualification	Frequency	Percentage
Doctorate Degree	1	0.60
Master's Degree with Doctoral units	1	0.60
Master's degree	43	25.10

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Bachelors with MA units	73	42.70
Baccalaureate Degree	53	31.00
Total	171	100%

Table 2 demonstrates the respondents' profile in terms of **highest educational attainment**. Results show that the participants with **Bachelor's degree with MA units** are the highest number of responses in terms of educational attainment having a **highest frequency of 73 (42.7%)**. This finding highlights the importance of higher educational qualification in shaping the demographic of the participants in this study. The high frequency emphasizes the commitment of the participants to pursue in earning MA units. Hence, the very reason why largely of the teachers are MA unit earners because 20 to 42 MA units are desirable for advancement from Teacher II to Teacher III.

Recent research by Chang et.al. (2020) confirms the idea that teachers with advanced degrees, like a Master's Degree, showcase more competence and specialized understanding in their fields. The high frequency in this category has been observed, which shows that teachers who want to pursue higher education are dedicated to lifelong learning and professional development.

On the other hand, data show that participants with **Master Degree with Doctoral units** and **Doctorate degree** are the lowest number of responses in terms of **highest educational attainment** having a **lowest frequency of 1 (0.6%)**. This statistic highlights a concerning trend in the field of education, as it suggests that there is a lack of individuals pursuing advanced degrees in teaching. Admission to Doctoral programs especially for teachers who cannot afford to pursue higher education due to financial constraints. In order to address this issue, it is crucial for educational institutions and policymakers to explore ways to make doctoral programs more accessible and affordable for teachers. Scholarships, grants, and other forms of financial aid can help alleviate the burden of pursuing advanced degrees. By investing in the professional development of educators through doctoral education, we can ultimately improve the quality of instruction and student outcomes in schools across the country.

Research by Turner and Johnson (2023) highlights various factors that hinder students' progress toward completing their doctoral programs, such as financial constraints, lack of mentorship, and limited access to resources. Recognizing the causes of the declining number of doctorate degrees can reform to address these barriers and support students in their academic pursuits. By implementing strategies to increase funding opportunities, improve mentorship programs, and enhance access to resources, institutions can better support doctoral students and increase their chances of success.

Table 3: Distribution of the Respondents' Profile in terms of Number of Years Teaching

Number of Years Teaching	Frequency	Percentage
30 years and above	15	8.80
26-29 years	6	3.50
21-25 years	12	7.00
16-20 years	32	18.70
15 years and below	106	62.00
Total	171	100%

Table 3 demonstrates the respondents' profile in terms of **number of years teaching**. Data show that participants with **15 years and below** are the highest number of responses in terms of number of years teaching having a **highest frequency of 106 (62.0%)**. This indicates that most of the participants had less experience in teaching which is 15 years and below. The reason of high frequency in the indicator because majority of the teachers employed in Opol West and East Districts have teaching experience of **15 years and below**. Less experienced teachers can bring a fresh perspective to the classroom, but they may also face challenges in effectively managing their classrooms and delivering high-quality instruction. While experience can certainly be valuable in teaching, it is also important to recognize the potential benefits that less experienced teachers can bring. Their enthusiasm, creativity, and willingness to try new approaches can create a dynamic learning environment for students.

Graham et al. (2020), emphasizes that teachers with more years of experience tend to exhibit higher levels of instructional effectiveness and classroom management skills compared to teachers with less teaching experience. Teachers' years of experience can make a difference in the quality of teaching, it is essential to consider various factors that contribute to effective teaching practices.

However, data show that participants with **26-29 years** are the lowest number of responses in terms of number years of teaching having a **lowest frequency of 6 (3.50%)**. This finding sheds light on an interesting trend in the teaching profession, suggesting that individuals who have been teaching for over two decades may be less inclined to participate in surveys or research

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studies. It is possible that teachers who have been in the profession for a longer period of time may feel burnt out or overwhelmed by the demands of their job, leading them to prioritize their own well-being over engaging with research surveys. Exploring the reasons behind the lower participation of experienced teachers can provide valuable context and guide for future studies.

The study by Scherer et.al. (2023) posit that experience teachers are better equipped to navigate potential challenges that may arise in a modern learning environment, such as technical issues or student engagement. Their ability to troubleshoot and problem-solve is a valuable asset in ensuring a smooth and effective online teaching experience.

Table 4: Distribution of the Respondents' Profile in terms of Related Seminars or Trainings Attended

Level	Frequency	Percentage
International	20	11.70
National	7	4.10
Regional	2	1.00
Division	36	21.10
District	106	62.00
Total	171	100%

Table 4 demonstrates the respondents' profile in terms of **related seminars or training attended**. Results show that participants with **District Level** are the highest number of responses in terms of related seminars or trainings attended having a **highest frequency of 106 (62%)**. This means a significant portion of the surveyed population had engaged in education at the District Level. Districts are required to conduct In-Service Trainings for Teachers' annually as part of the upskilling program in promoting professional development. These training sessions provide educators with the opportunity to enhance their teaching skills, stay updated on the latest educational trends and research, and collaborate with colleagues from different schools within the district.

As cited by Marcojos-Canon (2018), the purpose of training and development is to help teachers advance professionally and raise students' academic achievement. Teachers will be able to employ their pedagogical talents in the classroom through training and seminars

However, the data show that participants with **Regional Level** are the lowest number of responses in terms of related seminars or trainings attended having a **lowest frequency of 2 (1%)**. The data highlight a notable aspect of the surveyed populations educational experiences. Regional educational institutions often have limited budgets, which can make it difficult to provide ongoing training opportunities for educators. Without adequate funding, it can be challenging to offer professional development programs that are essential for ensuring teachers stay current with best practices and teaching methodologies. furthermore, only superintendent, supervisors, school heads, and select teachers are sent to trainings/seminars at the regional level.

Fenici (2021) emphasizes the value of professional development for teachers. Developing teaching abilities should be an educator's top priority because they are essential to the intellectual development of their students. Since teachers' performance has a significant impact on students' perceptions of the classroom, poor teaching practices can have a lasting negative impact on students' lives.

Table 5: Distribution of the Respondents' Profile in terms of Position

Position	Frequency	Percentage
Master Teacher 2	3	1.80
Master Teacher 1	6	3.50
Teacher 3	28	16.40
Teacher 2	21	12.30
Teacher 1	113	66.10
Total	171	100%

Table 5 illustrates the respondents' profile in terms of **position**. Results show that participants position as **Teacher I** are the highest number of responses in terms of teaching position having a **highest frequency of 113 (66.1%)**. This data sheds light on the dominance of entry-level teaching positions within the surveyed population, underscoring their significance in the composition of the teaching career. The high frequency of Teacher I positions suggests that a significant portion of educators are

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at the initial stage of their professional journey, potentially indicating a trend towards a younger workforce or a high turnover rate in this particular position.

Research by Smith and Johnson (2023) delve into the critical role that entry-level Teacher I positions play in the development of educators. One key finding from their study is that entry-level teaching positions provide new educators with invaluable hands-on experience. This practical knowledge allows teachers to refine their skills, develop effective classroom management strategies, and gain a deeper understanding of student needs.

However, data show that **Master Teacher 2** are the lowest number of responses in terms of teaching position having a **lowest frequency of 3 (1.8%)**. The low frequency of Master Teacher 2 positions suggests that there were few Masters Teachers employed in Opol West and East Districts. This indicates that Master Teacher 2 possess more responsibility and a greater task in their leadership positions, which leaves them with less time for extracurricular activities like taking part in curriculum development. This pattern might point to a preference for mentoring, curriculum creation, and other leadership responsibilities over survey participation, indicating the need for a more thorough comprehension of their time restrictions and obligations.

Research by Zhang, Ma, and Lu (2024) emphasizes that mentorship programs significantly contribute to teachers' professional development by providing guidance, support, and feedback. Mentors play a crucial role in helping teachers navigate challenges, develop new skills, and enhance their teaching practices.

Problem 2: What is the respondents' level of 21st-century skills considering learning and innovation, information, media and technology, and life and career?

Table 6 reveals the summary of the **distribution of the respondents' level of competence on inclusive education** with an overall mean of 3.79 (SD=0.410), interpreted as **Highly Competent**. This finding is significant as it demonstrates the effectiveness of teachers knowledge, competencies and skills in inclusive education. It also highlights the dedication and commitment of educators to meet the diverse needs of all students in their classrooms. The high level of competence observed among respondents is crucial for promoting an inclusive learning environment where every student feels valued and supported. It also reflects positively on the school's commitment to diversity and equity in education. It is clear that many educators are dedicated to creating an inclusive learning environment where all students can succeed. Teachers must strive to cultivate their own competencies in these crucial areas to better serve our future students.

Table 6: Summary Distribution of the Respondents' Level of Competence on Inclusive Education

Variables	Mean	SD	Interpretation
Social Regard for Learning	3.84	0.37	Highly Competent
Knowledge about Inclusive Education	3.73	0.46	Highly Competent
Diversity of Learners	3.80	0.40	Highly Competent
Overall	3.79	0.41	Highly Competent

Legend: 3.26-4.00 At All Times/Highly Competent
 2.51-3.25 Most of the Time/Competent
 1.76-2.50 Rarely/Moderately Competent
 1.00-1.75 Never/Incompetent

In their study Montederamos and Cañon (2022) emphasize the importance of a teacher's professional background and competence in inclusive education. The authors argue that teachers must possess the necessary competencies in inclusive education such social regard for learning, knowledge about inclusive education, and diversity of learners to effectively support diverse learners in an inclusive classroom setting. One key aspect of a teacher's professional background is their level of education and training in inclusive education. Montederamos and Cañon (2022) suggest that teachers who have received specialized training in inclusive pedagogy are better equipped to meet the needs of all students, regardless of their abilities or disabilities.

Among the variables, **Social Regard for Learning** obtained the highest mean of 3.84 (SD=0.372), interpreted as **Highly Competent**. This focuses on the importance of fostering a positive attitude towards learning and promoting a supportive environment for all students to thrive academically. This means that respondents possess very high professional growth and development. Having a social regard for learning encompasses valuing education as a fundamental right and recognizing the diverse needs and abilities of each student. It involves creating an inclusive classroom culture where all individuals are respected, valued, and supported in their academic endeavors.

Maaño (2024), attests that teachers social regard for learning plays a crucial role in their behavior and connection to their teaching performance. Maaña (2024) emphasizes the importance of educators valuing the process of learning and demonstrating

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this through their actions in the classroom. Teacher social regard for learning can impact their relationships with students. Moreover, teachers' behavior and professionalism is essential in fostering a culture of academic excellence. It is imperative that educators continue to prioritize professionalism and positive interactions with their students to create an environment conducive to learning and growth.

Conversely, the variable **Knowledge about Inclusive Education** obtained the lowest mean of 3.73 (SD=0.46), interpreted as **Highly Competent**. This means that there is room for improvement in this particular area of competence. It is essential for educators to possess a strong understanding of inclusive education in order to effectively support students with diverse needs and abilities. A lack of knowledge in this area may result in inadequate support and inclusion practices within educational settings. By addressing the identified weaknesses in knowledge about inclusive education, educators can enhance their ability to create inclusive learning environments that meet the needs of all students. This may involve ongoing professional development opportunities and collaboration with colleagues who have expertise in this area.

In her article, Walsh (2018) one major finding from his study is that many teachers lack sufficient knowledge and training on how to effectively include students with special needs in their classrooms. This lack of knowledge can lead to challenges in meeting the individualized needs of these students and may result in feelings of isolation or inadequacy. It is imperative for educators to continuously strive to improve their understanding and implementation of inclusive practices in order to create a more equitable learning environment for all students. According to Walsh (2018) Inclusive education aims to dismantle barriers to learning by adapting teaching methods, curricula, and classroom environments to accommodate the needs of all students.

Problem 4. Is there a significant relationship between respondents 21st-century skills and their competence on inclusive education?

Table 7 presents the results test of the significant relationship between teachers 21st-century skills and their competence on inclusive education in terms of social regard for learning, knowledge about inclusive education and diversity of learners. Overall, results revealed that the respondents 21st-century skills showed strong positive significant relationship on their competence on inclusive education as indicated by the correlation r-value and probability value less than 0.05 alpha level which led to the **rejection of the null hypothesis**. This implies that the teachers 21st-century skills in terms of learning and Innovations skills, information, media and technology skills, and life and career skills was strongly related to their competence on inclusive education in terms of social regard for learning, knowledge about inclusive education, and diversity of learners. It is suggesting that the education system continues to evolve in the 21st century, it is imperative for teachers to possess a diverse set of skills in order to effectively support inclusive education. By fostering learning and Innovations skills, information, media and technology skills, and life and career skills, these educators can create a dynamic learning environment that promotes inclusivity

Table 7: Relationship between Respondents 21st-Century Skills and Competence on Inclusive Education

21 st Century Skills Indicators	Competence on Inclusive Education			OVERALL r-value p-value
	Social Regard for Learning r-value p-value	Knowledge about Inclusive Education r-value p-value	Diversity of Learners r-value p-value	
Learning and Innovation Skills	0.764 (SPR)	0.714 (SPR)	0.674 (MPR)	0.774 (SPR)
	0.001* S	0.001* S	0.001* S	0.001* S
Information, Media and Technology Skills	0.792 (SPR)	0.752 (SPR)	0.746 (SPR)	0.825 (SPR)
	0.001* S	0.001* S	0.001* S	0.001* S

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Life and Career Skills	0.812 (SPR)	0.710 (SPR)	0.730 (SPR)	0.808 (SPR)
	0.001* S	0.001* S	0.001* S	0.001* S

Legend: *significant at $p < 0.05$ alpha level S – significant NS – not significant

Moreover, Teachers who are well-versed in learning and innovation skills are better equipped to adapt to the diverse needs of their students. Educators must possess a wide range of skills in order to create a supportive and inclusive learning environment. One key skill that educators must develop is critical thinking. Critical thinking allows educators to analyze and evaluate information, identify biases, and make informed decisions about how to best support all students in the classroom. Creativity is another important skill for educators working in inclusive education settings. Creativity allows educators to think outside the box, adapt their teaching methods to meet the diverse needs of their students, and create engaging learning experiences that cater to different learning styles. Collaboration is also a vital skill for educators in inclusive education. Collaboration involves working with other professionals, parents, and community members to ensure that all students receive the support they need. By collaborating with others, educators can share ideas, resources, and best practices, ultimately leading to better outcomes for all students.

Additionally, proficiency in information, media, and technology skills allows teachers to utilize digital tools and resources to enhance their teaching practices. Staying informed about current trends in education through reliable sources is essential for maintaining competence in inclusive practices. Accessing up-to-date information allows teachers to adapt their teaching methods and curriculum to meet the needs of all students effectively. In addition, possessing strong information literacy skills enables teachers to critically evaluate and utilize various media sources in their lesson planning. By selecting appropriate materials that represent diverse perspectives and cultures, educators can foster an inclusive classroom environment that promotes understanding and empathy among students. All of these, does not only provides students with access to a wealth of information but also helps them develop essential digital literacy skills for success in the 21st century.

Furthermore, to effectively navigate the diverse learning environments found in inclusive classrooms, educators must possess a range of essential life and career skills. One key skill that is vital for success in inclusive education is communication. Educators must be able to effectively communicate with students, parents, and other professionals to ensure that the needs of all learners are being met. Strong communication skills can help build positive relationships and create a supportive learning environment for all students. Another important life skill for educators working in inclusive settings is adaptability. Inclusive classrooms often present unique challenges and require teachers to be flexible and open-minded in their approach to instruction. Being able to adapt quickly to changing circumstances and individual student needs is essential for creating an inclusive learning environment where all students can thrive. Life and career skills are essential for teachers to effectively prepare students for success beyond the classroom. By instilling qualities such as leadership, adaptability, initiative, productivity, and social responsibility in their students, educators can empower them to thrive in an ever-changing global society.

On the other hand, Nimante and Kokare (2022) posit that a high-quality inclusive education meet the needs of all learners in a complex and challenging task. This study revealed numerous challenges, problems, and limitations that arise in this endeavor. Despite teachers perceiving themselves as having certain competencies for inclusive education, many still do not feel comfortable and confident in practice within the inclusive classroom.

In the study of Montederamos and Cañon (2022) shed lights the importance of teachers' teaching competence in inclusive education, findings revealed that teachers may have good intentions and a desire to create inclusive learning environments, there are significant obstacles that must be overcome in order to effectively meet the needs of all learners.

Problem 8: Is there a significant relationship between respondents' competence on inclusive education and their profile in terms of key stage area, highest educational attainment number of years in teaching, related trainings, seminar, and position?

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Table 8: Relationship between Respondents' Competence on Inclusive Education and their Profile

Respondents' Profile	Competence on Inclusive Education			OVERALL <i>r-value</i> <i>p-value</i>
	Social Regard for Learning <i>r-value</i> <i>p-value</i>	Knowledge about Inclusive Education <i>r-value</i> <i>p-value</i>	Diversity of Learners <i>r-value</i> <i>p-value</i>	
Key Stage Area	0.068 (NLR)	0.137 (WPR)	0.152 (WPR)	0.132 (WPR)
	0.375 NS	0.035* S	0.047* S	0.025* S
Highest Educational Qualification	0.192 (WPR)	0.205 (WPR)	0.134 (WPR)	0.191 (WPR)
	0.012* S	0.007* S	0.081 NS	0.012* S
Number of Years Teaching	0.254 (WPR)	0.311 (WPR)	0.223 (WPR)	0.286 (WPR)
	0.001* S	0.001* S	0.003* S	0.001* S
Related Seminars and Trainings	0.253 (WPR)	0.305 (WPR)	0.157 (WPR)	0.259 (WPR)
	0.001* S	0.001* S	0.041* S	0.001* S
Position	0.231 (WPR)	0.314 (WPR)	0.211 (WPR)	0.276 (WPR)
	0.002* S	0.002* S	0.006* S	0.001* S

Legend: *significant at $p < 0.05$ alpha level S – significant NS – not significant

Table 8 shows the test relationship between respondents' competence on inclusive education and their profile in terms of key stage area, highest educational qualification, number years of teaching, related seminars and training, and position. Overall, results show that the respondent's competence on inclusive education showed weak positive significant relationship on their profile as indicated by the correlation *r-value* and probability value less than 0.05 alpha level which led to the **rejection of the null hypothesis**. Therefore, significant means that the respondent's competence on inclusive education was related to their profiles.

Key Stage Area play a key role in determining the competence of educators in delivering inclusive education. Competence in Key Stage Areas also enables teachers to adapt their teaching methods to meet the individual needs of students with disabilities or learning difficulties. By understanding how different learners process information and engage with content, educators can tailor their instruction to promote academic success for all students.

Moreover, a teacher's highest educational qualifications play an important role in their ability to effectively implement inclusive practices. Individuals with advanced degrees, such as a Master's or Doctoral degree, are often better equipped with the knowledge and skills necessary to effectively implement inclusive practices in educational settings. Higher education provides individuals with a deeper understanding of special education laws, policies, and best practices for meeting the diverse needs of students. This knowledge allows educators to create inclusive environments that promote academic success for all learners, regardless of their abilities or disabilities.

Additionally, as educators, the number of years spent teaching plays a significant role in determining one's competence in inclusive education. With each passing year, teachers gain valuable experience and develop a deeper understanding of how to effectively support students with diverse learning needs. This experience allows them to refine their instructional strategies, adapt their teaching methods, and create a more inclusive classroom environment. Moreover, this exposure helps them develop a greater sense of empathy and compassion towards all learners, leading to more effective communication and collaboration with students, parents, and other professionals involved in the educational process.

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Furthermore, participation in training/seminar programs related to inclusive education is important for educators to enhance their competence in catering to the diverse needs of students. These events provide opportunities for professional development, networking, and gaining new insights into best practices in inclusive education. Through these seminars and trainings, educators can learn about the latest research and strategies for creating inclusive learning environments that promote academic success for all students. They can also acquire practical skills in adapting curriculum, providing accommodations, and implementing effective instructional techniques that meet the individual needs of diverse learners.

Lastly, teaching position in relation to competence is vital for promoting inclusivity in education. Educators must continuously strive to improve their knowledge and skills in order to effectively meet the diverse needs of their students. By prioritizing professional development and collaboration, teachers can create an inclusive learning environment that empowers all students to reach their full potential.

According to Winter (2019), inclusive and exclusive education for diverse learning needs is a vital issue in today's educational landscape. By embracing inclusive practices, educators can create a more equitable and supportive learning environment where every student has the opportunity to thrive.

.In the study of Montederamos and Cañon (2022) "research findings revealed that only teachers' training significantly relates to their teaching competence in the correlation test between teachers' professional background (education, training, years of teaching) and their level of competence to teach inclusive education. It would be easier to address or prevent possible new challenges for teachers in mainstream classes if they improve their level of competence. Increasing the competence among teachers in teaching Learners with Special Educational Needs (LSEN) relies significantly on building instructional capacity through training."

Nimante and Kokare (2022) research has shown a significant connection between teachers' age, teaching experience, and their perception of specific competencies for inclusive education. The findings suggest that the ability of teachers to put those policies into reality is one of the biggest obstacles to the adoption of inclusive education. The effective development of inclusive practices may suffer significantly from teachers' lack of competency in implementing inclusive education.

IV. CONCLUSIONS

Based on the results and discussions presented, the following conclusions are drawn:

Most of the teachers in Opol East and West Districts holding Teacher I positions, teaching for 15 years and below, and handling Grade 4-6 level (Key Stage 2). They hold a bachelor's degree with MA units and have participated in District-level training and seminars.

Regarding 21st-century skills, teachers' in Opol Districts manifest a very high life and career skills, they know when it is appropriate to listen and when to speak. Moreover, in regards to competence on inclusive education, teachers possess a highly competent in social regards for learning, they can communicate policies and procedures to students, parents, and other concerned persons.

The 21st-century skills based on learning and innovation skills, information, media, and technology skills, and life and career skills were significantly related to their competence on inclusive education in terms of social regard for learning, knowledge about inclusive education, and diversity of learners, it is understandable for teachers possesses varied set of skills to successfully support inclusive education.

Generally, the teachers' profile in terms of key stage area, highest educational qualification, number years of teaching, related training/seminars attended, and position were significantly related to their competence on inclusive education, teachers' profile play a key role to adapt teaching practices to meet learners needs and difficulties in inclusive education.

V. RECOMMENDATIONS

On the basis of the findings of the study, the following recommendations are hereby forwarded:

1. The Governor and Mayors of Misamis Oriental may establish annual incentives for teachers in professional development, to increase the teachers pursuing Master's degree and attended trainings/seminars in International level. This is an opportunity for teaching personnel to better prepare educators for meeting the needs of all students, including those with disabilities or special needs.

2. The school heads may create mentoring and strategies in 21st-century skills with regards to Information, Media, and Technology skills. These strategies should specifically address the challenges that teachers face in applying a fundamental understanding of ethical/legal issues surrounding the access and use of media, in order to enhance educators' abilities to meet the diverse needs of all students in today's classrooms.

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3. The teachers may actively seek out opportunities for collaboration with special education teachers to boost prior knowledge in inclusive education, in order to strengthen the ability to solve problems, to be able to informally assess the skills a student needs rather than relying on standardized curriculum. This can involve attending joint planning meetings, participating in professional development workshops focused on inclusive practices, or simply reaching out to colleagues for input and support.

4. The Master Teachers may create curriculum programs that bridge the gap between 21st-century skills in relation to competence on inclusive education practices. These programs have the potential to not only transform teaching practices but also inspire a new generation of educators who are dedicated to promoting equity and inclusion in schools.

5. The Educators may engage in seminars and trainings that is related to inclusive education. By participating in seminars and trainings sessions focused on inclusive education, educators can gain valuable insights into best practices and strategies for accommodating the individual needs of all students. As educators, it is crucial to constantly seek opportunities for professional development and growth in order to effectively meet the diverse needs of our students.

REFERENCES

- 1) Adebisi, R.O. (2024). Equality and Diversity in Learning through Differentiated Instructions. *KnE Social Sciences*. 75-76. <https://doi.org/10.18502/kss.v9i6.15256>
- 2) Akintayo, O.T., Eden, C.E., Ayeni, O.O., and Onyebuchi, N.C. (2024). Inclusive curriculum design: Meeting the diverse needs of students for social improvement. *International Journal of Frontiers in Science and Technology Research* 6(2):050-059. <http://dx.doi.org/10.53294/ijfstr.2024.6.2.0037>
- 3) Al Zou'bi, R. M. (2022). The Impact of Media and Information Literacy on Students' Acquisition of the Skills Needed to Detect Fake News. *Journal of Media Literacy Education Pre-Prints*. Retrieved from <https://digitalcommons.uri.edu/jmle-preprints/28>
- 4) Alhothali, H. M. (2020). Inclusion Of 21st Century Skills in Teacher Preparation Programs In The Light Of Global Expertise. *International Journal*. 9(1), 105-127. <http://dx.doi.org/10.18488/journal.61.2021.91.105.127>
- 5) Balyer, A. and Ozcan, K. (2020). Teachers' Perceptions on their Awareness of Social Roles and Efforts to Perform these Roles. *South African Journal Education*. 40(2). <https://doi.org/10.15700/saje.v40n2a1723>
- 6) Balyer, A. and Ozcan, K. (2020). Teachers' Perceptions on their Awareness of Social Roles and Efforts to Perform these Roles. *South African Journal Education*. 40(2). <https://doi.org/10.15700/saje.v40n2a1723>
- 7) Baria, K., and Gomez, D. (2022). Influence of social support to student learning and development. *International Journal of Research Studies in Education* 11(2). <http://dx.doi.org/10.5861/ijrse.2022.112>
- 8) Bartolome, A. (2024). Inclusive Education: A Salient Feature of Teaching-Learning Process. *ResearchGate*. <http://dx.doi.org/10.6084/m9.figshare.24994451>
- 9) Bhuiyan, M. N. F., and Huda, M. S. (2020). Exploring the Status of Teaching Listening and Speaking Skills after the Introduction of their Tests in Secondary Level Education. *Crossings: A Journal of English Studies*, 11(2), 210–224. <https://doi.org/10.59817/cjes.v11i.59>
- 10) Cabahug, I., Osias, N.C., Ongcachuy, B.L., and Corpuz, G.G. (2024), 21st Century Skills and Teachers' Performance: Basis for Instructional Development Plan. *American Journal of Arts and Human Science*. 3(2). <https://doi.org/10.54536/ajahs.v3i2.2860>
- 11) <https://doi.org/10.54536/ajahs.v3i2.2860>
- 12) Chaiyama and Kaewpila, (2021). The Development of Life and Career Skills in 21st Century Test for Undergraduate Students. *European Journal of Educational Research*. 11(1), 51-68. <https://doi.org/10.12973/eu-jer.11.1.51>
- 13) Chang, M., Abellan, I.M., Wright, J., Kim, J., Gaines, R.E. (2020) Do Advanced Degrees Matter? A Multiphase Mixed-Methods Study to Examine Teachers' Obtainment of Advanced Degrees and the Impact on Student and School Growth. *Georgia Educational Research*. (17)1. <https://files.eric.ed.gov/fulltext/EJ1242391.pdf>
- 14) Chun, T.C. & Abdullah, M.N., (2022). Contemporary Practices in Teaching 21st Century Skills at Malaysian Primary Schools: Do Environmental Factors and Teacher's Attitudes Matter? <http://dx.doi.org/10.21315/apjee2022.37.1.4>
- 15) Collie, R.J., Martin, A.J., and Granzera, H. (2018) Being able to adapt in the classroom improves teachers' well-being. *The Conversation*. <https://theconversation.com/being-able-to-adapt-in-the-classroom-improves-teachers-well-being-95788>
- 16) Department of Education, Philippines. (2019). Policy Guidelines on the K-12 Basic Education Program. A Policy Framework, Pasig.
- 17) Dogru, M., Koca, C., Celik, M., and Tongal, A. (2022). Development of Life and Career Skills Scale for University Students. *Asian Journal of Contemporary Education* 6(1):30-43. <http://dx.doi.org/10.55493/5052.v6i1.4425>
- 18) Fenici, M. (2021) Areas of Growth for Teachers. *Teacher Academy*. <https://www.teacheracademy.eu/blog/teachers-growth/>

Teachers' 21st-Century Skills and Their Competence on Inclusive Education in Opol Districts

- 19) Formoso, D.B. (2019). Development of Filipino Inclusive Education Attitude Scale (FIEAS). *International Journal of Psychological Rehabilitation*. 23(4). ISSN: 1475-7192
- 20) Gomez, C. (2022) Assessing the Academic Performance of Key Stage 2 Araling Panlipunan Pupils in The Use of The Most Essential Learning Competencies (MELC). ResearchGate. <http://dx.doi.org/10.13140/RG.2.2.35125.14564>
- 21) Graham, L.J., White, S.L., Cologon, K., and Pianta, R.C. (2020) Do teachers' years of experience make a difference in the quality of teaching?. *Science Direct*. (96)103190. <https://doi.org/10.1016/j.tate.2020.103190>
- 22) Gultaliano-Ansayam, M.P. (2020). National Competency-Based Teacher and Teaching Effectiveness. *International Journal*. 5(7). 2456-2165 <http://dx.doi.org/10.38124/IJISRT20JUL824>
- 23) Gultaliano-Ansayam, M.P. (2020). National Competency-Based Teacher and Teaching Effectiveness. *International Journal*. 5(7). 2456-2165 <http://dx.doi.org/10.38124/IJISRT20JUL824>
- 24) Hamstead, B.H. (2024). Fostering Inclusive Classrooms for Diverse Learners. LinkedIn. <https://www.linkedin.com/pulse/fostering-inclusive-classrooms-diverse-learners-hebert-hamstead-tdwdc>
- 25) Hazar, E., Akkutay, U., and Kese, H. (2021). Information, Media and Technology Skills in Terms of Curricula, Process and Product in Middle and High Schools. *International Journal*. 5(3), 288-310. <https://doi.org/10.46328/ijtes.252>
- 26) Hazar, E., Akkutay, U., & Keser, H. (2021). Information, media and technology skills interms of curricula, process and product in middle and high schools. *International Journal of Technology in Education and Science (IJTES)*, 5(3), 288310. <https://doi.org/10.46328/ijtes.252>
- 27) Hursen, C., Pasa, D. Keser, H. (2023). High School Students' Use of Information, Media, and Technology Skills and Multidimensional 21st-Century Skills: An Investigation within the Context of Students, Teachers, and Curricula. *International Journal*. 15(16), 12214. <https://doi.org/10.3390/su151612214>
- 28) Indrawati, C.D.S. (2021). The Effectiveness of Archiving Videos and Online Learning on Student's Learning and Innovation Skills. *International Journal of Instruction*. 14(4). 135-154. ISSN-1694-609X
- 29) Jones, C. and Nillas, L. (2022). Fostering a Respectful and Engaging Classroom Environment. John Wesley Powell Student Research Conference. https://digitalcommons.iwu.edu/jwprc/2022/edstudies/3?utm_source=digitalcommons.iwu.edu%2Fjwprc%2F2022%2Fedstudies%2F3&utm_medium=PDF&utm_campaign=PDFCoverPages
- 30) Maaño, S.J. (2024) The Teacher's Competency in Teaching to Public Elementary School Learners at Mulanay District II, Quezon Province In Relation to their Individual Performance Commitment Rating (IPCR): Basis for a Development Program. *Multidisciplinary Journal Psychology and Education*. (18)1,1-13. <https://scimatic.org/storage/journals/11/pdfs/2661.pdf>
- 31) Marcojos -Canon, I. (2018). Linking The DOTS of STEM Instruction In Private Higher Education Institution. *International Journal of Scientific & Technology Research*, 7(7)
- 32) Mena, G.S. (2019). Inclusive Schools as a Political and Social Rights Space. *World of Education*. <https://www.ei-ie.org/en/item/23176:inclusive-schools-as-a-political-and-social-rights-space-by-gabriela-sancho-mena>
- 33) Montederamos, G.A. and Cañon, I.M. (2022), Teacher's Professional Background and Competence in Inclusive Education. *Asia Pacific Journal*. 9(2). 21-26. ISSN: 2782-9332
- 34) NCBTS -TSNA Guide Tools. National Competency-Based Teacher Standards Teachers' Strength and Needs Assessment. DepED.
- 35) Nimante, D. and Kokare, M. (2022) Perspective of Teachers on Their Competencies for Inclusive Education. *Acta Paedagogica Vilnensia*. (49). 8-22. <https://doi.org/10.15388/ActPaed.2022.49.1>
- 36) Nwokedi, B.F.C. (2023). Influence of Classroom Environment on the Academic Performance of Students in English Language. *International Journal*. 1(4). 191-198. <http://dx.doi.org/10.59890/ijasse.v1i4.732>
- 37) Pa-alisbo, M.A. PhD. (2017). The 21st Century Skills and Job Performance of Teachers. *Journal of Education and Practice*. 8(32).
- 38) Partnership for 21st Century Skills (2019). Partnership for 21st century Learning. https://www.battelleforkids.org/wp-content/uploads/2023/11/P21_Framework_Brief.pdf
- 39) Philippine Republic Act 11650. Instituting a Policy of Inclusion and Services for Learners with Disabilities in Support of Inclusive Education Act.
- 40) Quino, J.B. and Corpuz, G.G. (2021), Self-efficacy and practices in teaching 21st-century skills. *International Journal of Scientific & Engineering Research*. 12(6). <http://dx.doi.org/10.20935/AL1255>

Teachers' 21st-Century Skills and Their Competence on Inclusive Education in Opol Districts

- 41) Quinones, T.F. (2022), Exploring Inclusive Education in the Senior High School as Bridging Program to Tertiary Career Pathing. *International Journal Of Advanced Multidisciplinary Studies*. (2)7, <https://www.ijams-bbp.net/wp-content/uploads/2022/08/IJAMS-JULY-ISSUE-260-274.pdf>
- 42) Ramdani, Z., Amri, A., Hadiana, D., Warsihna, J. Anas, J., and Susanti, S. (2021) Students Diversity and the Implementation of Adaptive Learning and Assessment. *Advances in Social Science, Education and Humanities Research*. 639. <https://www.atlantis-press.com/article/125970237.pdf>
- 43) Rashid and Zaman's (2018) Effects of Teacher's Behavior on Academic Performance of Students. *International Journal*. https://www.researchgate.net/publication/325248514_Effects_of_Teacher's_Behavior_on_Academic_Performance_of_Students
- 44) Saadah, N., Jalil, S.A., Ziden, A. A., (2020). Life and Career Skills amongst Technical and Vocational Education and Training (TVET) students. *International Journal*. 11(12). <https://doi.org/10.30880/ojtp.2020.05.02.003>
- 45) Scherer, R., Siddig, F., Howard, S.K., and Tondeur, J. (2023) The more experienced, the better prepared? New evidence on the relation between teachers' experience and their readiness for online teaching and learning. *Science Direct*. (139) 1074530. <https://doi.org/10.1016/j.chb.2022.107530>
- 46) Serrano, J. and Dela Cruz, L. (2022) National Competency Based-Teacher Standard as perceived by the Senior High School Students of State Universities Colleges. *European Online Journal of Natural and Social Sciences*. (11)1. https://www.researchgate.net/publication/359518476_National_Competency_Based-Teacher_Standard_as_perceived_by_the_Senior_High_School_Students_of_State_Universities_Colleges
- 47) Serrano, K. and Dela Cruz, D. (2022) Influence of social support to student learning and development. *International Journal of Research in Education*. (11)12. <http://dx.doi.org/10.5861/ijrse.2022.112>
- 48) Sevillano, S. (2023). VP Sara Stresses Importance of Inclusive Education vs. 'Othering. *GOVPH*. <https://www.pna.gov.ph/articles/1201845>
- 49) Smith, A., & Johnson, B. (2023). The role of entrylevel teaching positions in teacher development: A comprehensive analysis. *Journal of Teacher Education*, 74(2), 189-205.
- 50) Soderlund, A. (2020). Implementing 21st Century Learning and Innovations Skills in Classroom. *NW Commons*. https://nwcommons.nwciowa.edu/education_masters/262/
- 51) Stehle, S.M. and Peters-Burton, E.e (2019) Developing student 21st Century skills in selected exemplary inclusive STEM high schools. *IJ STEM Ed* (6) 39. <https://doi.org/10.1186/s40594-019-0192-1>
- 52) Sulaiman, J. and Ismail, S.T. (2020). Teacher Competence and 21st Century Skills in Transformation Schools 2025 (TS25). *Universal Journal of Educational Research*. 8(8). 3536 – 3544. DOI: 10.13189/ujer.2020.080829
- 53) Sumayang, K., Celendron K., Declaro, N.P., and Flandez, D.L. (2022) Mainstreaming Learners with Special Needs in a Regular Classroom: A Scoping Review. *Universal Journal of Educational Research*. (1)3,106-114. <http://dx.doi.org/10.5281/zenodo.7111154>
- 54) Timotheou, S. and Ioannou, A. (2021). Learning and Innovation Skills in Making Contexts: A Comprehensive Analytical Framework and Coding Scheme. *Educational Technology Research and Development*. 69, 3179–3207. <https://doi.org/10.1007/s11423-021-10067-8>
- 55) Tipan, S.J., Pabia, K.A., Mojares, J.G., and Tuiza, J.T. (2020). Faculty Awareness on Cultural Diversity of Learners: The Case of San Pedro National High School, Philippines. *Asian Journal of Language*. 3(2). 20-30. https://www.researchgate.net/publication/341079482_Faculty_Awareness_on_Cultural_Diversity_of_Learners_The_Case_of_San_Pedro_National_High_School_Philippines
- 56) Turner, L., & Johnson, M. (2023). Exploring barriers to doctoral degree attainment: Implications for educational policy. *Journal of Higher Education Policy and Management*, 45(1), 78-95.
- 57) UNICEF (2023). Inclusive Education. UNICIF for Every Child. <https://www.unicef.org/education/inclusive-education>
- 58) Walsh, M. (2018) The Inclusion of Students with Special Needs in the General Education Classroom. *Senior Theses*. 69. <https://doi.org/10.33015/dominican.edu/2018.EDU.ST.01>
- 59) Winter, S. (2019), Inclusive and Exclusive Education for Diverse Learning Needs. *International Journal*. 1-13. http://dx.doi.org/10.1007/978-3-319-69902-8_24-1



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