

ISSN[ONLINE] : 2643-9875 ISSN[PRINT] : 2643-9840

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**INTERNATIONAL  
JOURNAL OF  
MULTIDISCIPLINARY  
RESEARCH AND  
ANALYSIS**

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**VOLUME 05 ISSUE 03  
MARCH 2022**

**SJIF IMPACT  
FACTOR : 6.072**

**IJMRA ASI  
SCORE : 04**

**CROSSREF DOI  
10.47191/IJMRA**

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**International Journal of Multidisciplinary Research and Analysis**  
**ISSN[Online] : 2643-9875 || ISSN[Print] : 2643-9840**

**Table of Contents IJMRA Volume 05 Issue 03 March 2022**

S.no.	Article	Authors	Page no.
1.	On the Identity Construction and Industrial Development of "Digital Self-Maker" In Online Sales in the Digital Age	Liu Yongliang	586-590
2.	Integration of Islamic Studies and Sciences: Study of the Implementation and Practice of Scientific Integration at UIN Alauddin Makassar	Penulis Ibrahim, Muhammad Ridha, Yusran, Imamul Hak	591-597
3.	The Influence of Work Culture, Work Motivation, and Educational Supervision on PJOK Teacher Performance during the Covid-19 Pandemic	Dwi Murti Yadi, Yudanto, Amri Hartanto, Betrix Teofa Perkasa Wibafiet Billy Yachsie, Andrian Rahman Ayudi, Afeb Chesa Arianto, Ujang Nurdin, Gupo Matvayodha	598-605
4.	Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball	Nisa 'Urizka Fayogi, Endang Rini Sukamti, Amri Hartanto, Betrix Teofa Perkasa Wibafiet Billy Yachsie, Andrian Rahman Ayudi, Afeb Chesa Arianto, Ujang Nurdin	606-615
5.	Implementation of HOTS-Based PJOK Learning (Higher Order Thinking Skill) at Junior High School, Sleman Central Sleman 2020	Chandra Richo Pratama, Yudanto, Amri Hartanto, Betrix Teofa Perkasa Wibafiet Billy Yachsie, Andrian Rahman Ayudi, Afeb Chesa Arianto, Ujang Nurdin, Galih Dewanti	616-623
6.	Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption	Bambang Daud, Hendra Karianga, Muhammad Tabrani Mutalib	624-635
7.	Integrated Report-Making Benefit	Nguyen Hoan	636-642
8.	Why is it Important to have Good Corporate Governance in The Management of Foundation?	Putu Krisna Adwitya Sanjaya, M. Rudi Irwansyah, I Gede Agus Pertama Yudantara, A. A. Bgs. Bayu Joni Saputra	643-647
9.	Spillover of COVID-19: Impact on National Defense	Aris Sarjito, Joni Widjayanto	648-654
10.	The Adoption of Learning Management System in Teaching and Learning in the New Normal	Michael Angelo A. Legarde	655-661
11.	Analysis of Sediment in Goronyo Dam, Sokoto, Nigeria	I.T.Peni ,B.K.Adeogun	662-668
12.	How to Cariogenic Food Habits in Children aged 9-10 Years? -Caries Severity Index (CSI)	Eliati Sri Suharja	669-672
13.	Administrators' Financial Accountability and Perceived Internal Efficiency of Public Secondary Schools in Cross River State, Nigeria.	Abana, Clement Unimke	673-681

14.	The Influence of Motivation, Work Disipline and Work Environment on the Performance of PT Employees. Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat	Choiriyah, Muhammad Idris, Sovie Hidayatul Hamzah, Fithri Atika Ulfa, Desi Ulpa Anggeraini	682-692
15.	Management of Fitnes Center Health and Sport Center (HSC) Yogyakarta State University	Ali Sodiqin, Sumaryanto, Putri Prastiwi Wulandari, Amri Hartanto, Betrix Teofa Perkasa Wibafiet Billy Yachsie, Afeb Chesa Arianto, Gupo Matvayodha	693-698
16.	Increased Activities and Learning Outcomes of Volleyball through Sponge Ball Modification for Junior High School Students	Rumini, Jaka Sunardi, Ahmad Nasrulloh	699-708
17.	Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes	Endang Prasetyo, Djoko Pekik Irianto, Ahmad Nasrulloh	709-719
18	Awareness and Use of Internet and Online Services among Homemakers in Kollam District, Kerala, India	Selsa.S, Usha .S	720-728
19	Possible Solutions to Challenges of Including Learners with Special Educational Needs in Mainstream Classrooms	MC Morena	729-738
20	Newly Discovered Works of Ali Safi Kashifi Hirawi: "Sharh-i Masnavi", "Ghazal-i Ali Safi", "Tuhfatu-I-Hani"	Bahriddin S. Umurzoqov	739-743
21	Prospects and Challenges for Women Entrepreneurs in India	Shobana D. M.Com., MBA., NET., PGDCA., Ph.D (Pursuing), Dr. J.Suresh Kumar. M.A., M.Phil., Ph.D	744-751
22	Knowledge and Practices on Healthcare Waste Management among Healthcare Staff in a Specialized Infectious Disease Hospital in Sri Lanka	G.P.C.J Fonseka, P. Karthikeyan, A. D. N. Jayathilake, I.M.S.M Rajakaruna, N.G.S Panditharathna, S.M Arnold, M.S.K. Wickramatilake	752-757

## On the Identity Construction and Industrial Development of "Digital Self-Maker" In Online Sales in the Digital Age



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**Abstract:** With the development of network and digital technology, modern business began to turn to online sales. Relying on digital technology, database technology and Internet of Things (IoT) technology, virtual online store has changed people's patterns of behavior, thinking and aesthetic. In the virtual network community, "Makers" are dominated by desktop transactions. According to the demands and evaluations of customers, "Digital Maker" began to transform technology, management experience, artistic design, their own mindsets and literacy, so as to advance the development of the whole network market and industrial economy.

**KEY WORDS:** Digital age; Digital Maker; Network sales; Industrial economy; design

The development of network digital technology has brought a new production model of batch and standardization of modern industry, which not only saves costs, but also optimizes industrial resources. However, time and people's pursuit of personalization and diversification results to mass production model gradually shows its disadvantages. With the advent of digital economy, digital technology has incubated a new business model which rely on the development of network technology, big data technology and IoT technology. For producers, they communicate and interact with consumers in the online community in order to transform into the identity of "Digital Maker" by understanding the needs of consumers, creating personalized goods and changing the operation mechanism. Besides, the application of "Digital Maker" has also sprung up in European and American countries because of the progress of modern industry and computer technology. "In the self-made movement, it is very important to do it yourself, but the past 'self-made' behavior is often limited by some technology factors such as the backwardness of manufacturing tools, the lack of design aesthetics, the limitation of information sharing and so on."<sup>[1]</sup>Last, profiting from information technology, many producers began to improve their self-study ability and professional quality to meet the commercial needs of the society. The commercial space in the digital age has turned to virtual online stores. For both consumers and producers, it is in the transaction and interaction of goods that an experience economy model is formed. Therefore, at this time, the subjectivity of the self-made identity is gradually replaced by a creative and experiential sharing economy.

### 1. CURRENT SITUATION OF NETWORK SALES IN THE DIGITAL AGE

Since the 1980s, digital technology and network technology has brought unprecedented challenges to China's traditional industry. At the same time, digital technology provides the innovation of "Digital Maker" thinking for modern industry, and forms a new operation model within the context of digital technology. The mass production in the era of large industry makes the symbolic value substitutes for the functional value, which inevitably causes personal handicrafts be compressed to the lowest. After digital technology entering modern industry, a group of "Makers" familiar with table production appeared in the process of production and sales of goods. These "Makers" are equipped with creativity and craftsmanship. They also have the spirit of cooperation and are good at paying attention to communicating with customers in the online community. At this time, the production model of goods has been transformed into a sharing economy, and the value of goods has also turned to the production model with experience value. The rising numerical control technology and rapid prototyping technology have also brought an unprecedented leap to the development of modern industry. The production of modern industrial products can not only complete the display of



## **On the Identity Construction and Industrial Development of "Digital Self-Maker" In Online Sales in the Digital Age**

renderings or animation scenes through the setting of product models and scenes and parameters by computer software, but also investigate the sales volume and sales channels of products according to the big data statistics of computer network. The "Maker" can utilize digital tools to finish the product design on the screen, and improve the technology and products according to the requirements of consumers at any time. It provides an electronic database for preview through virtual imaging technology, and digitizes some traditional industrial production skills through computer network media.

Network technology has brought a new way of communication and display for the evolution of modern industrial products. By using digital technology, special industrial products can be classified and displayed on the Internet through fixed portal websites. Through the numbering and sorting of the database, people can easily retrieve the electronic data of the picture database or image database. Regarding the digital presentation of industrial products as the original database, we can process and modify the original data online, recreate it, and then create more creative industrial products to meet the modern people's lifestyle. The information of traditional industries can be quickly spread on the digital community platform, and can be produced and sold on the table. For consumers, they first buy virtual digital images, and then be serviced by offline delivery through IoT technology.

In recent years, online stores have been gradually improved. Firstly, the construction of digital network can level the channel of network information dissemination for modern online stores and form data analysis through network data. For some businesses, they can choose different network platforms to carry out network e-commerce. You can register stores, decorate stores, display products online, complete commodity transaction payment and message evaluation, etc. Secondly, the express industry thrives. The early express steel industry mainly receives orders offline. With the development of Internet technology, many express companies moved to the Internet and combined with relevant platforms for bundle sales. Then, receiving points are established in the residential community, with the emergence of post stations, hives and other forms, so that online and offline are connected together to form a closed IoT system; Thirdly, the maturity of online banking, rapid payment and QR code technology enable online stores to form a scale basically. Early online stores mainly paid on delivery, but in the wake of the improvement of online store payment system and reputation, there are now various forms of direct payment, trial period, evaluation and reward, which makes the online store system more complete and wins stronger credibility among consumers, sales platforms and producers; Fourth, new media communication has improved the speed of online commodity circulation. In the early stage of marketing, the main way is to build sales websites and enter specific sales websites for consumption and shopping. Thankfully, now there are professional apps. People can create industry characteristics and establish brand effect through professional apps. For example, Tik Tok, Taobao, WeChat, QQ, Jitter, and Kwai provide platforms for live-streaming scales. All of these can accelerate the progress of commercial selling.

### **2. THE CONSTRUCTION OF THE IDENTITY OF "MAKER" IN THE DIGITAL AGE**

On the outset, the creation task and value of the "Maker" will be explained. At the end of the 20th century, the "Digital Maker" movement caused the exploration of Open Source. Intellectual property rights were formed with "Maker's" own value in the process of opening source code of some computer software. In particular, the generation of big data and huge amount of information makes the computer micro control system penetrate into our daily life. For "self-made people", we should first master digital technology for desktop production, and then form a kind of digital manufacturing in the virtual network community. "Digital manufacturing is constituted by the integration of digital technology and manufacturing technology. With the support of virtual reality, computer network, rapid prototyping, database and other technologies, it analyzes, plans and reorganizes product information, process information and resource information according to the needs of users, so as to realize the simulation of product design, function and prototype manufacturing, to quickly produce products that can meet the requirements of users."<sup>[2]</sup>The "Makers'" main tasks are DIY, sharing, communication, desktop manufacturing and creative transformation. The "Maker" mainly tells everyone through the online community what the "Maker" should do, including the tools used by them. They have responsibilities to take into account the culture of consumers, so as to integrate people's needs and finally form the possibility of business model. Digital technology creates economic possibilities through contemporary network platforms with different knowledge, technologies and survival instincts, which expresses contemporary humanistic values.

As the embodiment of economic value, "Maker" should use the network platform to understand the current situation of the market and marketing of their own works and pay attention to the comparative relationship between different producers through

## On the Identity Construction and Industrial Development of "Digital Self-Maker" In Online Sales in the Digital Age

the statistics of big data and cloud computing. In the sales of products, the IoT uses network technology to connect all things, collect and analyze consumer behavior through digital devices, cloud links, big data analysis and intelligent decision-making, and promote sales by innovating services and reversing the traditional management mode. "Digital Maker" is the practitioner who master new technology and maintain the development of network business economy. Digital technology provides "Digital Maker" with online sales information at the same time. The development of IoT technology has realized the development of information industrialization because IoT technology combines online information and online operation through information technology, remote management control and intelligent management, and realizes the connection between people and objects, objects and objects. With the development of digital technology, IoT, vehicle app and sales model, the network market economy has gradually built a new economic law in the network era.

The second one is the formation of "Digital Maker" identity in virtual network community. The development of science and digital technology has brought the Tool Revolution to the whole socio-economic form. The modern capitalist industrial economy brings new opportunities to modern craftsmen, and creates friendly atmosphere for the "Maker" in the era of network economy. The advent of the digital age provides a broader platform and living space for "Maker". Makers mainly complete tasks through desktop manufacturing, which is intelligent and creative relying on mental labor. In modern venture capital design, the perfect products are not only determined by function and appearance, but also the creative communication and experience process in the network. Modern product design is an assembly centered on humanistic design. Through the trend of design, we can find out what the most important needs of ordinary users and consumers are. After the handicrafts that people need are created on the digital platform, the "Maker" will help consumers solve problems, rather than imposing the products on consumers based on the "Maker's" own experience. As the "Digital Maker" of modern industry, we should understand the production line of modern industry and complete the new design according to the requirements of customers. As a manufacturer of modern industry, how to control the imagination of consumers, to create an "identity", and then to manufacture the products needed by the society through connection and communication? This requires modern industrial producers to improve their artistic literacy, their technological skills and proficiency, to change the identity and creative concept of "Digital Maker". "Digital literacy includes the ability to discover, organize and process information, the application ability of computer software. It mainly focuses on the digital field. Steam literacy and maker literacy acquire knowledge and cultivate ability by hand, but steam literacy is more focused on technology and engineering. The scope of maker literacy is broader, and it has no provision to master some discipline knowledge but pay close attention to the development of personal innovation. "[3]

It can be seen that with the advent of the era of digital economy, social design based on big data and "Digital Maker" spirit seems to have begun to penetrate into the whole social culture. As "Makers" in the new era, we should digitize our creative ideas through the Internet, and enriches our creativity through sharing in the online community. Digital technology not only provides economic value for the contemporary industrial products, but also expands the space of market and the approaches of marketing. In the agricultural era, handmade has become the main way of production. In the industrial and post-industrial age, alienation arises among people, and the subjectivity of self-made people gradually disappears.

### 3. EXPLORATION OF THE DEVELOPMENT OF INDUSTRIAL ECONOMY IN THE ERA OF "MAKER"

First of all, the "Maker" is the creator based on the virtual digital economy. First, as a "Maker", we should not only understand and master advanced science and technology, but also have the ability to find and solve problems. Chris Anderson put forward the concept of "Maker". In his opinion, "Digital Maker" is a customer-centered personal design and personal manufacturing, which is to pursue the realization of their own creative value. As a "Maker", we should not only have basic practical ability, but also are able to use new technology to finish creation. Only in this way can the products become innovative and creative. Second, as a "Maker", we should also have the ability of communication, cooperation and sharing. "Maker" should be capable of teamwork and handling the relationship with the team, peer competitors, customers and consumers in the virtual online consumption environment. "Makers" share their own creative ideas and exchange creative products on the maker's community platform both online and offline. On the one hand, we can cater to the personalized needs of consumers through interactive communication with high quality and low price; On the other hand, producers can improve their capacity to ensure their products meet the needs of society. Third, as "Makers", we should accept new things actively, firmly establish a sense of service, critical spirit and persistent craftsman

## On the Identity Construction and Industrial Development of "Digital Self-Maker" In Online Sales in the Digital Age

spirit. "Makers" maintain the awareness of innovation in commodity production. They learn spontaneously, master new technologies, new materials and new processes, and cater to clients initiatively. Moreover, establish a critical consciousness in the production of goods and listen to advice are also necessary. Evaluation in online sales is a method to improve the quality of products through consumer information feedback, which helps construct a competitive mechanism. In the live-streaming sales, it fully reflects the values of consumers that sellers improve their service awareness according to the concept of consumers preference. Consumers' imagination of products is experienced in the online community. Consumers' consumption process and products themselves become a part of their life so that wealth and goods become the representation of their identity and culture. Therefore, consumers get psychological and spiritual recognition, and the economic value in online sales can be reflected.

Secondly, the "Digital Maker" has gathered the collective wisdom in the online community, thus forming the experience economy model of "Digital Maker" production. In the process of commodity production, the "Digital Maker" needs to listen to the opinions of consumers, learn the knowledge of others, and pay attention to all kinds of messages and interactions. At this time, the "Digital Maker" and consumers, combined with the public message database, form an interactive, pluralistic and symbiotic network system. The process of commodity production is equivalent to a process of collective experience. In the online store, there are not only product introduction, but also store decoration, various information dialog boxes and electronic posters. Customers can experience virtual products in online stores. "The economic model in the era of digital reproduction pays more attention to satisfying the sensory experience of the body, and then into the experience of human emotion and spirit. In the display of modern digital art, the audience can shuttle back and forth and gallop freely in the space-time dimensions of different logic, such as history and future, material and spirit, emotion and reason."<sup>[4]</sup> For the "Maker", the task is to give commodity new meaning and higher symbolic value, so as to change the relationship between consumers and goods and enhance the experience value of "things". In the community platform of modern IoT, "Makers" strengthen the construction of "things" in people's consciousness through the interaction with consumers. This construction process is a kind of production of experience value. This experience process not only gratify consumers, but also improves the public's awareness of product value, and further produces economic benefits. The communication and interaction in the process of online sales consolidate the affective commitment between consumers and producers, so that they can gradually meet the spiritual needs of consumers. Therefore, modern network products have become spiritual products, which use value and sentimental value of consumers can coexist and then to form an experience economy reflecting the emotional and spiritual resonance.

Thirdly, "Digital Maker" is a democratic production based on the sharing economy. In the marketing, producers and consumers co-build a collective wisdom to promote the development of commercial economy. For one thing, consumers' opinions on the improvement of commodities forms an intellectual support. For the other, producers should have the creative spirit to carry out direct production as well as a consciousness about listening to the opinions of consumers. Makers are "innovative, practical, complex, resource accessible, time elastic, interactive, cooperative, and pay attention to sharing"<sup>[5]</sup> They "go beyond the structure of the production line provided by capitalism, share their ideas through online communities, educate themselves through the Internet, and share global resources through open source"<sup>[6]</sup>. At this time, the economic model of online sales has become a co-creation economy. Commodity production in the online community highlights its sharing. Modern "Digital Maker" should not only master the manufacturing process of products, but also understand the psychological and spiritual needs of consumers by displaying materials, data, finished products and manufacturing process. The model of social development transforms from the traditional competitive mode to cooperative sharing mode--- the combination of human competition and information sharing. All production processes can be viewed through the network platform, and the information of goods can be understood through messages, comments, data ranking and other information. "Digital reproduction art forms the scene of virtual reality through digital reproduction, and then forms the visual landscape and experience effect. With the development of network platform technology, high-definition imaging technology and cloud processing technology, digital information can be transferred in different media, and digital reproduction has formed the form of harmonious symbiosis among technology, art and social ecology."<sup>[7]</sup> This urges commodity producers to win in the market only by mastering new technologies, new tools, new materials and new processes. "Makers" apply their own unique creativity to go beyond the structure of the production line provided by capitalism. They share their ideas through online communities, educate themselves through the Internet, and share global resources through open source.

## On the Identity Construction and Industrial Development of "Digital Self-Maker" In Online Sales in the Digital Age

"The concept of sharing has important transformative significance: it has realized the transformation from free competition to cooperative sharing, the transformation from consumerism to shared consumption, and the social improvement from unfair consumption to fair sharing."<sup>[8]</sup> The network platform itself has the characteristics of democratization. The communication of "Digital Maker" on the network platform help the production tools democratized. At the same time, the protection of the original code also calls for the traditional industrial production technology to form new intellectual property rights and economic value.

### 4. EPILOGUE

The development of network in the digital age creates a virtual network business world for our whole society. In terms of modern design, the first thing is to complete a social design. The works designed by the designer should not only satisfy the purpose of sales, but also to bring meaningful service to consumers. "In the virtual digital world, the "thing" of a commodity has become the link between the intellectual world and the material world. In the private studio of the creator, the product is no longer an abstract idea or a concept only existing in their minds, but a physical product that can be made by hands. "<sup>[9]</sup>Producers and consumers promote commodity production through online communication and interaction, and build a bridge of the sentimental and spiritual commitment between producers and consumers through online transactions. It can be seen that the "Digital Maker" in the digital age has accomplished a "social design" according to the needs of consumers. This social design reflects a new economic model which is characterized by interaction, experience and sharing in the network economy. In the process of liberating the source code, virtual online sales objectively stimulate the development of industrial economic democracy and the liberation of productive forces.

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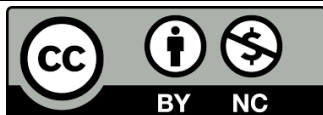
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## Integration of Islamic Studies and Sciences: Study of the Implementation and Practice of Scientific Integration at UIN Alauddin Makassar



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**ABSTRACT:** This study examines the implementation and practice of integrating Islamic and general science into the lecture process at the State Islamic University (UIN) Alauddin Makassar. The process and efforts to realize the concept of scientific integration in the realm of policy and the process of its formation will be approached with a historical approach. Meanwhile, the practice of implementing scientific integration guidelines in lectures is approached sociologically, especially the limitations and problems of how this concept is practiced at UIN Alauddin Makassar. The results of this study conclude that at least the last two decades since IAIN changed to UIN Alauddin Makassar, have taken steps, namely: first, the process of seeding the idea of scientific integration, incorporating the idea of scientific integration into the vision and mission and implementing it into university policies that support the integration process. Second, integration efforts at UIN Alauddin are also carried out in the process of teaching courses and writing student scientific papers. Some of the efforts that have been made to realize integrative teaching of courses and scientific works are by attaching verses to courses, teaching integrative courses, implementing team teaching, memorizing chapter 30 for each UIN student and implementing Character Building Training for each student.

**KEYWORDS:** Scientific Integration, Islamic studies, General Science, UIN Alauddin Makassar.

### I. INTRODUCTION

Leading public universities in Indonesia have struggled with efforts to transform IAIN into UIN for almost two decades. This effort aims to provide a wider space to develop science by creating study programs or faculties with studies of sciences in accordance with Islamic studies. This creation realized in early 2002 when IAIN Syarif Hidayatullah, Jakarta received a Presidential Decree regarding the conversion from IAIN to the State Islamic University, From "Institute" to "University".

This transformation is not merely a term but more than just changing the name of the institution. The authority to open a new faculty aside from Islamic studies is the most prominent and significant change on institution's characteristic which was once known as an institution for Islamic studies to be an institution that provides general subjects such as: medicine, engineering, economics, arts and humanities.

This also happened at UIN Alauddin Makassar. The nuance of science in the last two decades has become different from the previous decade where all lecturers and subjects are based on traditional Islamic scholarship. Many have questioned if IAIN has been able to open a general faculty, then what is its distinction from other higher education institutions that has existed for a long time with general science provided. While this Islamic education institution previously has managed only the faculties of Syari'ah, Tarbiyah, Adab, Da'wah and Ushuluddin, now the general faculty with all general study programs under it also has been opened. If so, what is the distinctive scientific distinction of the lecture process and knowledge development at UIN? This was answered rhetorically by the Chairman of the Committee for the Conversion of IAIN to UIN, the former Chancellor of UIN Alauddin and (currently) the chairman of the Senate of UIN Alauddin, Prof. Dr. H. Qadir Gassing, HT, MS in a speech at the Senate forum that "Scientific integration" "Other public education institutions only learn general scientific knowledge, then at UIN Alauddin the general faculty will study general sciences along with Islamic studies, while the religious faculties give greater weight to general science than before so that an integration feature between traditional Islamic sciences which mostly comes from the Qur'an and Hadith with general sciences emerges" (**minute of senate meeting**).

## **Integration of Islamic Studies and Sciences: Study of the Implementation and Practice of Scientific Integration at UIN Alauddin Makassar**

However, what is expected, as simply stated as "scientific integration" at the senate meeting mentioned above, is not as simple as mentioning the term. Because in practice, at UIN Alauddin itself, the so-called scientific integration is only represented in the form of grafting verses and hadith into general courses and incorporating general knowledge and science into the Islamic studies faculty. Despite its simplicity, these efforts have been developed in the last few decades and practiced in the learning process to the writing of scientific papers. Therefore, it is important to know further and draw the process of scientific integration at UIN Alauddin Makassar.

### **II. METHODOLOGY**

In this study, researchers employ qualitative methods. This research aims to understand the phenomena of what is experienced by research subjects such as behavior, perception, motivation, action, etc., holistically by means of description in the form of words and language, in a certain natural context and by utilizing various scientific methods.<sup>ii</sup> In terms of data collection, this research collects archives, deeds of meeting statements, minutes of senate meetings and leadership meetings related to the process of establishing scientific integration regulations at UIN Alauddin Makassar. Informants in this study are lecturers in the sample study programs drawn based on categories representing religious faculties and non-religious faculties. This research was conducted at UIN Alauddin Makassar. The UIN Alauddin Makassar campus changed from IAIN to UIN Alauddin in 2005 under the leadership of the rector Prof. Dr. Azhar Arsyad, MA. The campus is located in Makassar City and in Gowa Regency, South Sulawesi.

### **III. RESULTS AND DISCUSSION**

#### **From the 'Cypress Cell' to the Civilized House**

The debate about the paradigm and the form of scientific integration at UIN Alauddin Makassar is actually not something that is 'finished' in the sense of issuing a rector's decision or holding workshops and publishing books related to the theme of scientific integration. Behind it all, there are struggles and competing ideas that have been poured out by at least some of the leading thinkers at UIN to realize or concrete what is meant by scientific integration. In a book entitled *Synergy of Religion and Science, Efforts to Build a Center for Islamic Civilization*, a number of thinkers, both from within UIN Alauddin and outside UIN Alauddin, contributed ideas about what integration is and how integration is envisioned to be implemented at UIN Alauddin.

One of the quite relevant to provide a conceptual basis for the scientific integration paradigm at UIN Alauddin Makassar is an article written by Prof. Dr. H Azhar Arsyad, MM (2005) entitled *Cemara Cell: Integration and Interconnection of Science and Religion*. In the article he expresses the need to provide conceptualization as a metaphor for what he called scientific integration. Therefore, he wrote: "It is crucial to formulate a picture of the cypress cell in which integrity and the metaphorical interconnection of roots, grooves, branches and fruits and the transcendental goals of universal science can be realized within a university as we will see later. The image of a fir tree indicates something that is alive, not dead. Cool to look at because it is a tree, it grows and develops and then becomes conical. More and more shady. This tree will bear fruit, and that fruit is the name of a science that will certainly bear fruit again and so on. The parts are integrated and interconnected. The picture of the cell depicts aspects of scientific and technological interconnection, while the fir depicts the ultimate transcendental through Muhammad's apostolate to Allah."<sup>iii</sup>

The argument about the scientific scheme in the IAIN institution needs to be refreshed by changing IAIN to become a UIN in a more universal mission of integrating Islam and science or not dichotomizing Islam and science but putting Islam as an approach to science itself. The aforementioned argument is also supported by an interesting review of the Islamic world and Islamic scholarship in the classical century of Islam as an era in which scientists who were not dichotomous expertise between religion and science.

Another article that also contributes to a discussion of scientific integration at UIN Alauddin belongs to Natsir Mahmud, an academic and professor of Islamic education. He wrote an article entitled *The Paradigmatic Foundation of the Islamization of Science*. This article describes the importance of the islamisation of sciences in which in European history sciences were secularized and later became the legacy of modern science. One of the important debates that Natsir Mahmud responded to in relation to his idea of Islamizing science was the polemics from scientists regarding, on the one hand, secular sciences and on the other hand Islamized science. As stated in the article: "The problem lies in the will to produce objective science, becoming rigorous science on the one hand, and on the other hand the tendency of Muslim scientists to want science to be born from the heart of Islam, referring to the Qur'an and Sunnah, starting from the process of seeking knowledge, systematizing and analyzing to drawing conclusions."<sup>iv</sup>

#### **Internalizing Scientific Integration at UIN Alauddin Makassar: Workshop and Training**

This section describes how scientific integration is implemented from its epistemological aspect to its axiological aspect as an illustration of an internalization or transformation. In this case, it will be described how the philosophy of scientific integration

## Integration of Islamic Studies and Sciences: Study of the Implementation and Practice of Scientific Integration at UIN Alauddin Makassar

that developed at UIN Alauddin as something that seemed to be in the sky then tried to be brought down to earth to become more contextual. In one of Umar Kayam's explanations it is described that the process of application/internalization and transformation is a process of total transfer from an imaginary form to a new, more real figure.

In the implementation of the scientific integration of UIN Alauddin as an internalization and transformation effort, there are three aspects involved. 1) university: physical transformation (physical development), 2) government: political transformation (management), and 3) University: idealistic transformation; academic field. Although this research focuses on the implementation of scientific integration in teaching and scientific work, in its elaboration, these three aspects describe simultaneously or not separately from one another. In general, the implementation of scientific integration at UIN Alauddin is described in the following chart.<sup>v</sup>

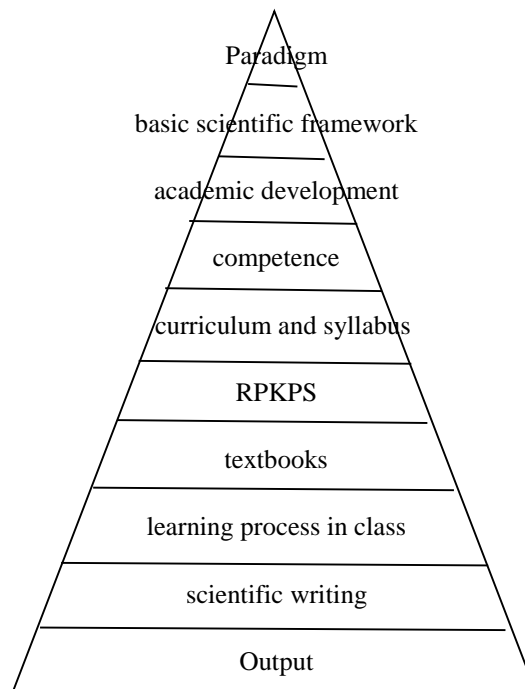


Figure 1. Implementation of Scientific Integration at UIN Alauddin Makassar

### Efforts to Apply Scientific Integration: Teaching Practices and Internalization of Values to students

There are a number of practices that have been carried out in the practice of teaching and writing scientific papers at UIN Alauddin Makassar as a form of implementing the vision of scientific integration. Broadly speaking, the scientific integration found in the field as acknowledged by a number of informants from lecturers, study program managers and students who became informants in this study was an effort to incorporate verses of the Qur'an and Hadith into every general course, attaching verses of the Qur'an and Hadith to every general course. al-Qur'an and Hadith in the process of writing scientific papers, especially for students' final assignments. The lecturers give religious messages at each start of the lecture, memorize 30 juices for each student that must be completed before graduating and provide knowledge such as Arabic for every student in all faculties. The general pattern of scientific integration in a number of fields of science has actually been formulated by the university's academic senate team in 2017 and 2019 which has been published as a scientific integration guidebook. The book provides an overview in a table regarding the general pattern of scientific integration, as shown in the table below<sup>vi</sup>:

**Table 1. General Patterns of Integration.**

	<b>NBRANCH OF SCIENCE</b>	<b>CHARACTERISTIC</b>	<b>INTEGRATION</b>
I	Natural Sciences	Studying the natural structure of matter.	<p>There is a creator of nature, namely God, so that its internal systems and mechanisms run steadily and can be expressed by humans.</p> <p>Understanding the nature of matter prevents us from understanding materialism, because there is an immaterial force in matter.</p>
		Matter essentially contains something immaterial, namely energy. Condensed energy = matter, and sparse matter = energy (Albert Einstein)	
		The element of material works systematically and can be analyzed mathematically	
II	Social Sciences	Social Sciences include Sociology, psychology, economics, education, communication, politics, etc. It examines the relationship between human beings who need each other in a community, governed by an institutionalized order that develops dynamically following the changing times.	<p>Humans organize their lives by creates the order produced from their mind. However, humans still need guidance from the Almighty. Humans need the absolute from the Most Absolute as a firm grip beyond what is produced by human thought.</p> <p>Spiritual-religious dimension as a therapy to ward off social shocks, so that humans live on the earth with peace. Religious spiritual values can ward off social shocks that hit all aspects of life.</p>
		Social dynamics and changes always involve social frictions. Humans always organize their lives to achieve peace. However, social friction always appears, destructive actions always get a chance.	
III	Humanities	Humanities studies cultural values, customs, symbolism, language expressions, etc. The study concerns value but is described according to scientific procedures, so that it remains neutral.	The humanities examine scientific values objectively, but because the study already involves values so that it is easy to implement, especially values that do not conflict with Islamic thought.

In an effort to integrate this pattern, the following authors describe the study findings:

**A. Attachment of verses of the Qur'an and Hadith in General Lectures**

In our interviews with several major convenors, as we did with Dra. Hj. Andi Nirwana (Head of Study Program of Religion, Faculty of Ushuluddin, Philosophy and Politics) and Sitti Syakira, M.Ag (Secretary of International Relations Program, Faculty of Ushuluddin, Philosophy and Politics at UIN Alauddin Makassar) acknowledge that what has been done so far is related to the practice of integration. Science is to provide the basis for the verses of the Qur'an and hadith for studies or general courses in their respective study programs as well as in the courses they teach respectively. As acknowledged by Mrs. Hj. Nirwana "The integration of knowledge that I understand, which has been practiced for a long time in our study program is to attach verses and hadiths to general courses given to our students. As in the subject of research methods, philosophy of science, and so on."<sup>vii</sup>

Sitti Syakira, M.Ag admits that "Integration as far as we understand is to provide an overview of the scriptures for each general course that is taught. For me, it is not clear what our integration at UIN will be like. But the practice is like that (attributing verses or hadiths). There are still many shortcomings. But efforts are continuing."



## **Integration of Islamic Studies and Sciences: Study of the Implementation and Practice of Scientific Integration at UIN Alauddin Makassar**

The inclusion of the verse is where the verse or hadith is presented in the discussion of the subject or course material (especially in the discussion of general science course material). Yet is still at the surface level of the "meaning" of the verse or hadith that is linked. Of course, it is still generally far from ontological and epistemological discussion, as expected in the concept of scientific integration when opposing the concept of the Islamization of science that developed in the 1980s. Even in some cases of the process of presenting verses (which was later referred to in this study as the inclusion of verses of hadith), the learning process in the classroom seems to return to pattern of the Islamization paradigm, or even more "shallow" because sometimes there are coercions that are not based on systematic argumentation in the teaching process.

As found in this study, the real conditions of teaching religious and general sciences are still in a state of:

- Until now, many course leaders/lecturers have not fully understood the meaning of the intended integration, especially in terms of its application when it will be taught in lecture classes. Except for the understanding that the integration referred to in the learning process at UIN is how in every learning process of any subject that "what is important is the presence of the verses of the Quran and the hadith then that is regarded as integration.
- Both general science and islamic studies lecturers have no specific guidelines regarding the use of verses of the Quran and hadith in the process of integrating the knowledge and subjects..
- General science lecturers who are historically coming from the academic background of general science who were previously unfamiliar with the UIN scientific integration project. On the other hand, religious lecturers are historically coming from religious education pathways that do not recognize well-established scientific integration.
- briefing and training program of Scientific integration that is not run well.

The main obstacle why such application still exists is due to the understanding of the general science lecturers on the meanings of verses and hadiths that are associated with the science being taught. This is due to, among other things:

- a. Explanations regarding the meanings of verses or hadiths have their own traditions and scientific methods that require a different and more deeper process.
- b. Some lecturers still have a lack experience on using verses and hadiths as a scientific tradition (text civilization) due to their academic background that is not developed in religious educational institutions/institutions, since elementary, junior high, high school, undergraduate to become lecturers.
- c. Handbooks and teaching guides in the framework of scientific integration are still underdeveloped, especially for guidance on substantial matters in the process of using verses and hadith in general courses.
- d. Incorporating the relevant verse in every scientific paper writing.

The team teaching method has been applied in the teaching process at UIN Alauddin as an effort to integrate science and religion in the subjects. However, this method only worked for about a year and then was discontinued. According to one of our informants, this program was discontinued mainly because islamic studies lecturers were unable to provide detailed references to verses and hadiths for specific scholarships or subjects. Therefore the information is still too general about the importance of seeking knowledge in Islam, high dignity for people seeking knowledge and so on which are still general ethos.<sup>viii</sup>

### **B. Integrative Course Teaching Practice**

In general, the process of teaching courses at UIN Alauddin Makassar takes place in three types of course teaching:

#### ***General Course Teaching***

The teaching of general courses referred to here is the teaching of subjects that are branching from independent vocational/departmental sciences without unification/integration of ontological aspects. For example teaching general sociology courses, PPKN, Indonesian, Physics, Biology, and English. Of course, the teaching process will take place specifically separately, namely: 1) the teacher according to his capacity as a general course teacher, and 2) the lecture material/syllabus is independent. In the process of teaching this kind of subject, there is a process of applying scientific integration

- the application of morals in accordance with Islamic teachings (verses and hadiths) by creating a lecture contract
- delivery of religious moral messages at the beginning or end of lectures
- prayer readings at the beginning of each lesson
- linking lecture material with several religious arguments, both related to a verse or a hadith of the prophet.

#### ***Teaching Religion Courses***

The learning process of Islamic studies subjects also implies the process of teaching courses that are specifically independent ontological and epistemological as a branch of religious science in particular. Of course, the teaching process will take place

**Integration of Islamic Studies and Sciences: Study of the Implementation and Practice of Scientific Integration at UIN Alauddin Makassar**

specifically and separately, namely: 1) the teacher according to his capacity as a lecturer in certain religious subjects, and 2) the lecture material/syllabus is independent from general science. For example, the study of classical texts, tasawwuf, fiqh, kalam, and others. In the process of teaching this kind of subject, there is a process of applying scientific integration:

- the use of religious arguments (verses or hadiths) with evidence from general scientific material.
- the use of technological tools to support the learning process of religious subjects, as a response to the existence of a moral-scientific integrative scientific effort
- presenting contemporary material in the syllabus, especially on material that often clashes between general science and religion
- develop studies of westerners - non-Muslims who happen to also have a concentration on Islamic religious sciences, such as the knowledge of the Koran, hadith or Islamic religious traditions
- the use of contemporary scientific methodologies as enrichment, such as semiotics, hermeneutics.

**Integrative Course Teaching**

The teaching of integrative courses is teaching that teaches courses that are the result of scientific integration at the most basic level in each type of science developed by the study programs at UIN alauddin. That each study program, due to the demands of scientific integration at UIN Alauddin, must present one or two types of courses in the learning curriculum which ontologically undergo a process of scientific integration as in the general study program which in addition to presenting general religious subjects, must also specifically present integrative (religious-general) courses such as interpretation of verses or hadiths on politics, social, law, education, science, technology, agriculture, animal husbandry, business, economics and others. On the other hand, in the religious studies program, the religious sciences present integrative courses such as hadith, law and government, quranic psychology, scientific interpretation, and others.

In the context of teaching this integrative course, there is a cross-section of teachers, namely; Religious lecturers teach in general study programs, and vice versa. However, based on the data that has been collected, this teacher exchange is still dominated by the use of religious lecturers in general studies programs to teach integrative sciences, while the use of general lecturers in religious studies programs is still very minimal. This is because “that the scientific integration project of UIN is still in the understanding that the most important of the sciences on campus are religious studies, and general sciences that must welcome this scientific integration project more. In one of the integration FGDs, several participants described that religious knowledge at UIN was the earlier one, the host, knowledge that has survived and will save, science that contains absolute truth, therefore general science that is present at UIN must ask for guidance from scientists. religious knowledge in order to be safe”. Here we present a table of scientific integration guidelines published by the university's academic senate:

**Table 2. Pattern of Integration Applications in Lectures**

PROLOG	DESCRIPTION	EPILOG
<p>In the introduction of the lecture, the lecturer conveys religious messages, such as:</p> <p>= Building up students' interest and motivation to learn in the name of Allah.</p> <p>= Presenting the Qur'an and hadith, opinions of scholars and scientists relevant to the subject = The lecturers add that studying Allah's creation is just the same as reading Allah's verses, because it is the part of worship.</p> <p>Lecturers can put forward other arguments with more or less meaning as above.</p>	<p>The description of the lecture is a core discussion that is studied scientifically. The duration cannot be less than the duration target.</p>	<p>Before closing the lecture, the lecturer gave religious messages, among others, such as:</p> <p>= Concluding the material of the lecture.</p> <p>Its output and outcome are directed according to God's purpose for creating everything, namely the benefit of human life.</p> <p>= Always be humble in seeking knowledge because only Allah knows everything.</p> <p>Lecturers can put forward other arguments with more or less meaning as above.</p>

**C. Religious Messages in the Practice of Lectures and Memorizing Short Surahs (Al-Qur'an juz 30)**

In instilling religious knowledge, especially etiquette for students, each course always begins by providing motivation and universal messages of religion to students. As in the ushuluddin faculty, it is proposed in several discussions at educational meetings every semester to implement this. "It is hoped that every lecturer will give some kind of *tausiah* before entering the core discussion of the subjects being taught".<sup>ix</sup>

Until now, all faculties at UIN Alauddin require students to memorize short surahs of juz 30 in the Qur'an. This memorization is delivered directly in front of the academic advisor. If students pass the memorization of juz 30, then students can take the thesis result exam and advance to the next stage. This is based on the rector's policy in the era of prof. Dr. H. Qadir Gassing, HT MS, namely the Decree of the Chancellor of UIN Alauddin Makassar number 129 D of 2013 concerning the Implementation of Scientific Integration for students of UIN Alauddin Makassar. This decree requires students to understand basic religious messages and at least memorize al-Qur'an juz 30. This regulation also encourages the function of CBT to encourage students' personalities with integrative character and ethos.

**IV. CONCLUSION**

Based on the description and discussion of the research results, this study concludes that the scientific integration promoted at UIN Alauddin Makassar has been going on for at least the last two decades since IAIN changed to UIN Alauddin Makassar. The steps taken start from, first, the process of seeding the idea of scientific integration, incorporating the idea of scientific integration into the vision and mission and implementing it into university policies that support the integration process. Second, science integration at UIN Alauddin is also carried out in the learning process and student scientific papers. Several efforts have been made to apply integrative teaching of courses and scientific works, including incorporating verses to courses, teaching integrative courses, implementing team teaching, memorizing chapter 30 for each UIN student and implementing character building training for each student.

**V. RECOMMENDATION**

From the results of the search and data collection to the discussion of the findings, this study recommends two things. First, carry out a movement to re-implement scientific integration as a whole for all lecturers and study program managers so that the forms of integration that have been formulated in the scientific integration guidelines that have been published by the university's academic Senate can be conveyed. Second, there is a mass production of scientific integration books that have been compiled so that there are standard guidelines for lecturers, students and study program managers to implement scientific integration according to the procedures set by the institution.

**Acknowledgments**

The Author would like to thank UIN Alauddin Makassar for funding support through the 2019 Litapdimas program.

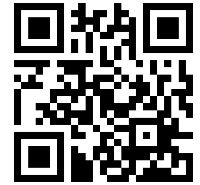
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## The Influence of Work Culture, Work Motivation, and Educational Supervision on PJOK Teacher Performance during the Covid-19 Pandemic



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**ABSTRACT:** The research objectives are to determine: (1) the influence of work culture on teacher performance; (2) the effect of work motivation on teacher performance; (3) the effect of educational supervision on teacher performance; and (4) the influence of work culture, work motivation, and educational supervision on the performance of PJOK teachers. This type of research is ex post facto. The population is PJOK teachers in SMA Negeri in Bantul Regency totaling 48 teachers, with a total sampling technique. The instrument uses a questionnaire via google forms. The data analysis technique is multiple regression analysis. The results showed that: (1) there was a significant influence between work cultures on the performance of PJOK teachers. (2) There is a significant influence between work motivations on the performance of PJOK teachers. (3) There is a significant effect between supervision on the performance of PJOK teachers. (4) There is a significant influence between work culture, work motivation, and educational supervision on teacher performance. The conclusion is that work culture, work motivation, and educational supervision have an effect on teacher performance.

**KEYWORDS:** work culture, work motivation, educational supervision, teacher performance

### INTRODUCTION

The Covid-19 pandemic has hit all countries, including Indonesia. Currently, several campuses and schools are starting to implement policies for remote or online learning activities. Online learning is carried out because face-to-face learning is abolished to prevent the transmission of Covid-19. Currently, teachers are experiencing a changing role that requires new attitudes and efforts in carrying out learning methods in schools.

Physical activity is the main and dominant thing in learning Physical Education, Sports and Health (PJOK). The essence of PJOK learning, which requires physical movement, is that the learning is carried out in open spaces or in the field. The method for sports education is the deductive method or the command method, with various assignments, demonstrations and a little explanation (Supriyadi, 2018: 7). Therefore, the performance of teachers in the educational process should provide more practices to students directly through videos. However, when learning online, this cannot be done directly, it makes teacher performance not optimal. This can be seen from Bappenas data (Rismawan, 2015) states that the results of a survey conducted by UNESCO for the quality of teacher performance in Indonesia are at level 14 out of 14 developing countries. This shows that the teaching performance of teachers in Indonesia is still not in line with the ideals.

The low performance of teachers is also influenced by several things, including the current pandemic condition, learning is done online. Online learning is carried out by utilizing technology, especially the internet (Dai & Lin, 2020), the use of internet networks that require costs (Jones & Sharma, 2019; Purwanto et al., 2020). Many factors affect the teaching performance of teachers, namely motivation (Zuhriyah, 2015; Kasmir, 2016; Nellitawati, 2017; Ondima, 2014), organizational culture (Suharningsih, 2017), instructional supervision by school principals (Lyonga, 2018; Khan, 2014; Andriani, et al, 2018).

Teachers are the main implementation in the educational learning process to answer the need for quality human resources who can play a professional role in society. Therefore, the renewal of the educational process requires very high teacher performance. Teacher performance in schools is realized through the ability to educate, teach and train students in the learning process.

The performance of PJOK teachers really needs to be applied in the current new normal, especially in lesson planning, learning implementation and evaluation in learning. PJOK teachers as creators and motivators in the learning process, therefore teachers

# The Influence of Work Culture, Work Motivation, and Educational Supervision on PJOK Teacher Performance during the Covid-19 Pandemic

need to develop a learning atmosphere that is more attractive to students, so that students can express their interests and passions in learning, especially PJOK. The learning process that is managed with quality teacher performance will be able to produce quality human resources.

## METHODS

This type of research is descriptive quantitative with an ex post facto approach. Ex post facto research is research that aims to find causes that allow changes in behavior, symptoms or phenomena caused by an event, behavior or things that cause changes in the independent variables which as a whole have occurred (Sukardi, 2015). This research was carried out in State Senior High Schools throughout Bantul Regency, which consisted of 19 schools. The research was carried out in January-February 2021.

The population is a generalization area consisting of: objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions (Sugiyono, 2015). Similarly, Arikunto (2013) states that "the population is the entire research subject". The population in this study were PJOK teachers at state high schools throughout Bantul Regency, which consisted of 19 schools with 48 PJOK teachers. The sample in this study was taken by total sampling.

Data collection tools used in the field, both data on work culture, teacher work motivation, supervision, and teacher performance in the form of a questionnaire/questionnaire. Questionnaires as a data collection tool are used because they can reveal facts according to the respondent's experience and the questionnaire is cooperative, respondents set aside time to answer questions in writing in accordance with the instructions given by the researcher (Arikunto, 2013). The instrument grid is presented in Table 1:

Table 1:

**Table 1. Instrument Grille**

Variable	Indicator	No Item	
		Positive	Negative
Work Culture	Attitude towards work	1, 3, 5, 6, 9, 10, 11, 12, 13, 14,	2, 4, 7, 8, 15
	Behavior at work	16, 18, 20, 21, 22, 24, 25, 26, 27, 28, 29	17, 19, 23, 30
Work motivation	Achievement Needs	1, 2, 4, 6	3, 5
	Growth Opportunity	7, 8, 9, 10, 12	11
	The Job itself	15, 16, 17, 18	13, 14
	Need for recognition	20, 21, 22, 24	19, 23
	Wages	26, 27, 28, 29, 30,	25
Supervision	Lesson planning	1, 2, 3, 4, 7, 10	5, 6, 8, 9
	Implementation of learning	13, 14, 15, 16, 17, 18, 19, 20	11, 12
	Learning evaluation	22, 24, 25, 26, 27, 28, 29, 30	21, 23
Teacher Performance	Making plans lesson	2, 4, 5, 6, 7, 8	1, 3
	Executing the plan lesson	10, 11, 12, 14, 15, 16	9, 13
	Carry out evaluation	17, 18, 19, 20, 21, 22	20, 23, 24
	Interpersonal relationship	25, 26, 28, 29, 31, 32	27, 30

Data analysis technique is a process of simplifying data into a form that is easier to read and interpret. The data analysis used in this study were descriptive statistics, analytical prerequisite tests consisting of normality test and homogeneity test, and hypothesis testing such as multiple regression analysis, partial test (t test), simultaneous test (F test), and determination test (R<sup>2</sup>).

## RESEARCH RESULTS

The results of the descriptive analysis are intended to determine the respondents' responses to the variables of work culture, work motivation, educational supervision, PJOK teacher performance in SMA Negeri in Bantul Regency based on the results of filling out questionnaires sent via google forms. The results are presented in Table 2:

**Table 2. Descriptive Variable Statistics**

Variable	N	mean	SD	Min	Max
Work Culture	48	102.06	9.71	82.00	120.00
Work motivation	48	103.85	9.17	84.00	117.00
Supervision	48	102.25	10.60	75.00	119.00
Teacher Performance	48	109.42	9.38	90.00	127.00

# The Influence of Work Culture, Work Motivation, and Educational Supervision on PJOK Teacher Performance during the Covid-19 Pandemic

## Normality test

The normality test of the data in this study used the Shapiro-Wilk method. The summary of the analysis is presented in Table 3:

**Table 3. Normality test**

Variable	P	Description
Work Culture	0.134	Normal
Work Motivation	0.122	Normal
Supervision	0.105	Normal
Teacher Performance	0.111	Normal

Based on Table 3 above, it shows that the variables of work culture, work motivation, educational supervision, and teacher performance obtained normality test results with a significance value of  $p > 0.05$ , which means the data is normally distributed.

## Linearity test

The linearity test of the relationship was carried out through the F test. Summary of the analysis The linearity test is presented in Table 4:

**Table 4. Linearity Test**

Variable	p	Description
Teacher Performance * Work Culture	0.091	linear
Teacher Performance * Work Motivation	0.310	linear
Teacher Performance * Supervision	0.269	linear

Based on Table 4 above, it can be seen that the significance value ( $p$ )  $> 0.05$ . So, the relationship between the independent variable and the dependent variable is stated to be linear.

## Multiple Linear Regression Analysis

Regression analysis double is used to test the independent variable together with the dependent variable. Based on the results of the analysis, it can be determined the multiple linear regression equation resulting from this study, as follows:

$$Y = 9.779 + 0.494X_1 + 0.325X_2 + 0.152X_3$$

The constant is 9.779, which means that if the variables of work culture, work motivation, and educational supervision are equal to zero, then the variable of teacher performance is only 9.779.

## F Test (Simultaneous)

F test is a means of testing to determine whether the independent variables simultaneously (simultaneously) affect the dependent variable. The summary of the F-Test analysis is presented in Table 5:

**Table 5. F Test Analysis Results (Simultaneous)**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3965.023	3	1321,674	348.97	0.000a
Residual	166,644	44	3,787		
Total	4131,667	47			

Based on Table 5 above, the calculated F coefficient is  $348.970 > F$  table 2.82, and the value of sig.  $0.000 < 0.05$ , then  $H_0$  is rejected, meaning. An alternative hypothesis which reads "There is a significant influence between work culture, work motivation, and educational supervision on the performance of PJOK teachers in SMA Negeri in Bantul Regency", accepted.

## T-Test Analysis Results (Partial)

The t-test (partial) was conducted to determine the effect of work culture, work motivation, and educational supervision on the performance of PJOK teachers in SMA Negeri in Bantul Regency. The results of the t-test (partial) analysis are presented.

**Table 6. T-Test Analysis Results (Partial)**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	9.779	3.308		2,956	.005
Work Culture	.494	.118	.511	4,200	.000
Work motivation	.325	.146	.318	2.229	.031
Supervision	.152	.066	.171	2,313	.025

## The Influence of Work Culture, Work Motivation, and Educational Supervision on PJOK Teacher Performance during the Covid-19 Pandemic

The work culture variable has a t-count value of 4.200 and a significance value (sig) of 0.000. Because the t arithmetic value is  $4.200 > t$  table 2.013 and the significance value is  $0.000 < 0.05$ , then  $H_0$  is rejected, meaning that  $H_a$  which reads "There is a significant influence between work culture on the performance of PJOK teachers in SMA Negeri in Bantul Regency" is accepted. The value is positive, meaning that if the work culture is getting better, then the performance of PJOK teachers in State Senior High Schools throughout Bantul Regency will also get better.

The work motivation variable has a t value of 2.229 and a significance value (sig) of 0.031. Because the t arithmetic value is  $2.229 > t$  table 2.013 and the significance value is  $0.031 < 0.05$ , then  $H_0$  is rejected, meaning that  $H_a$  which reads "There is a significant influence between work motivation on the performance of PJOK teachers in SMA Negeri in Bantul Regency" is accepted. Positive value, meaning that if the work motivation is getting better, then the performance of PJOK teachers in State Senior High Schools throughout Bantul Regency will also get better.

The supervision variable obtained a t-count value of 2.313 and a significance value (sig) of 0.025. Because the t arithmetic value is  $2.313 > t$  table 2.013 and the significance value is  $0.025 < 0.05$ , then  $H_0$  is rejected, meaning that  $H_a$  which reads "There is a significant influence between work supervision on the performance of PJOK teachers in SMA Negeri in Bantul Regency" is accepted. Positive value, meaning that if the work motivation is getting better, then the performance of PJOK teachers in State Senior High Schools throughout Bantul Regency will also get better.

### Coefficient of Determination (R<sup>2</sup>)

The coefficient of determination (R<sup>2</sup>) is essentially used to measure how far the regression model's ability to explain the variation of the dependent variable is. The results of the analysis are in Table 7:

**Table 7. Results of the Analysis of the Coefficient of Determination (R<sup>2</sup>)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.980a	0.960	0.957	1.94611

The value of the coefficient of determination R Square or work culture, work motivation, and educational supervision in explaining or predicting the performance variables of PJOK teachers in SMA Negeri in Bantul Regency is 0.960 or 96.0%. This means that the variables of work culture, work motivation, and educational supervision have an influence on the performance variable of PJOK teachers in SMA Negeri in Bantul Regency by 96.0%, while the rest is influenced by other factors of 4.0% outside this study. Other variables that influence such as compensation, principal leadership, and others.

## DISCUSSION

### The influence of work culture on the performance of PJOK teachers

A high work culture will provide a strong impetus for teachers to work well which will result in maximum performance. Especially when the Covid-19 pandemic hit, teachers must have a higher work culture than before. According to Triatna (2015) "culture performs a number of functions within an organization." Culture is the social glue that helps unite the organization by providing appropriate standards for what employees should say and do.

In line with this research, organizational culture and motivation have a significant influence on teacher performance (Hutabarat, 2015). Another opinion states that to achieve performance, individuals must have the ability, motivation and have a good environment (Griffin & Moorhead, 2014). Another study states that organizational culture affects teacher performance (Karantiano, 2018); Regards, et al. (2017); Susilawati (2018); Febrianta, et al. (2018); Hatemu, et al (2018); Lutfah, et al (2019); Ghanney et al (2017); Gunawan (2018): and Komarudin (2018), and there is a positive effect (Ismiyarto, et al., 2015), (Arifin, 2015) and a significant effect on teacher performance (Udin, et al., 2017). The higher the level of work culture that the teacher has, the higher the teacher's performance will be.

### The effect of work motivation on the performance of PJOK teachers

The Covid-19 pandemic has resulted in learning being carried out online, so that in carrying out their professional duties, teachers are always obliged to develop professionalism in developing science and technology (Mandala & Astika, 2019; Kawiana et al., 2018). This means that teachers are required to have high motivation. Motivation is an impulse that helps individuals to do or not do something in achieving goals. Motivation is a desire to achieve the desired task (Seebaluck & Seegum, 2016; Dislen, 2016). Motivation plays an important role in school organization because it helps improve teacher skills (Ali, et al., 2016). High work motivation will provide a strong impetus for teachers to work well which can produce maximum performance, otherwise the low

## **The Influence of Work Culture, Work Motivation, and Educational Supervision on PJOK Teacher Performance during the Covid-19 Pandemic**

work motivation of teachers will reduce enthusiasm for work, so that teacher performance is not optimal. Teachers who have high work motivation will always work hard to overcome all kinds of problems faced in the hope of achieving better performance results. Komarudin's study (2018) that when work motivation increases, teacher performance will also increase. Kiruja & Makuru (2013); Sokro (2016); Hamdani, et al (2018); Suryati, et al (2020); Abast, et al; (2018); Mine (2018); Djibu & Duludu (2020); and Nzulwa (2014) which shows that motivation affects teacher performance.

### **Supervision influence on the performance of PJOK teachers**

Due to the Covid-19 pandemic, teacher performance has decreased, so the role of the principal as a leader is needed to always carry out evaluations. Supervision is an activity carried out by principals to assist teachers in developing their abilities and facilitating teachers in efforts to improve the learning process (Mulyasa, 2015). Supardi's research (2017); Ginting (2020) that supervision has an influence on teacher performance, the supervision carried out by school principals helps teachers in improving the quality of teacher performance so that the learning process activities are more optimal and of high quality. Ramadona & Wibowo (2016); Imah (2018); Sudarsono (2017); Hasanah & Kristiawan (2019) showed that the principal's supervision had an effect on teacher performance.

### **The influence of work culture, work motivation, and supervision on the performance of PJOK teachers**

The work culture, work motivation, and supervision are getting better, the better the performance of PJOK teachers will also be. In line with the research of Joharis (2016); Marwan (2016); Nasrun & Amabarita; Utami & Wedasuwari (2019); and Nur (2015) that simultaneously the variables of organizational culture, work motivation, and supervision have a significant effect on teacher performance. Organizational culture is a factor that also influences teacher performance. A good culture will also have a good performance effect on teacher performance. Organizational climate or organizational culture is a set of characteristics of the work environment that is felt by workers either directly or indirectly (Yani, et al., 2017). On the other hand, work motivation has a positive impact on teacher performance. Thus it can be said that the better the work motivation of the teacher, the more motivated the teacher is in carrying out his duties well. With motivation, teachers will try to provide better services in carrying out their duties (Yani, et al., 2017). Supervision is one of the principal's duties in addition to being an administrator. Supervision management includes a series of activities starting from planning to evaluation, accompanied by follow-up on supervision activities. Principals have an important role in influencing teachers in schools. The principal can set various policies which if the policy is right, it will be able to improve the performance of teachers. One of these policies is supervision or control by the principal on teacher performance (Andriani, et al, 2018).

## **CONCLUSIONS**

The conclusion of this study is that there is a significant influence between work cultures on the performance of PJOK teachers. There is a significant influence between work motivations on the performance of PJOK teachers. There is a significant influence between supervision on the performance of PJOK teachers. There is a significant influence between work culture, work motivation, and educational supervision on the performance of PJOK teachers. Simultaneously, the three variables, namely work culture, work motivation, and educational supervision, contributed significantly to teacher performance. Schools in which there is a good school culture, able to increase a sense of belonging, and responsibility, accompanied by teachers who have high work motivation and supervision are able to improve teacher performance.

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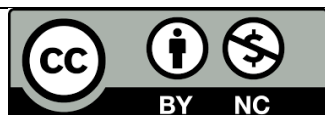
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## Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball



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**ABSTRACT:** This study aims to determine: (1) the relationship between the power of the arm muscles and the result of the gate-in stroke, (2) the relationship between the length of the arm and the result of the gate-in stroke. (3) The relationship between hand eye coordination with the result of the gate-in stroke. (4) The relationship between concentration and the gate-in punch. (5) The relationship between arm muscle power, arm length, hand eye coordination, and concentration on the results of the gate-in stroke in woodball. This type of research is correlational. The population in this study were 54 athletes of Woodball in Bantul Regency, who were selected based on purposive sampling technique. The instruments used to measure the power of the arm muscles were the medicine ball test, the length of the arm with an anthropometer / meter, the concentration using the Grid Concentration Test, and the gate-in stroke with a modified gate-in punch density test. The data analysis technique used is multiple regression. The results showed that: (1) There was a significant relationship between arm muscle power and the gate-in punch, with  $r$  count 0.845, and  $p < 0.05$ , and a contribution of 32.09%. (2) There is a significant relationship between the length of the arm and the result of the gate-in blow, with  $r$  count 0.585, and  $p < 0.05$ , and a contribution of 12.00%. (3) There is a significant relationship between hand eye coordination and the results of the gate-in stroke, with  $r$  count 0.855, and  $p < 0.05$ , and the contribution is 21.92%. (4) There is a significant relationship between concentration and the results of the gate-in blow, with  $r$  count 0.808, and  $p < 0.05$ , and a contribution of 21.39%. (5) There is a significant relationship between arm muscle power, arm length, hand eye coordination, and concentration on the results of the gate-in stroke in woodball, with a calculated  $F$  value of  $84.798 > F$  table 2.56, and  $p < 0.05$ , and a contribution of 87.40%.

**KEYWORDS:** arm muscle power, arm length, hand eye coordination, concentration, gate-in

### INTRODUCTION

Woodball is a new sport that is still foreign and rarely heard. Woodball is also a growing sport in the world. Woodball is an outdoor game that is played individually or in a team by hitting the ball gradually until it passes the ball into the net on each fairway (trajectory) with as few strokes as possible. Woodball was first developed in Taipei China, invented in 1990 by Mr. Ming-Hui Weng and Mr. Kung Cu Young. Woodball is a modified sport of golf that considers elements of cost efficiency and environmental protection (Soetrisno, 2015: 10; Kriswantoro, 2015: 5). Woodball is a fun recreational sport.

Woodball is the target sport. The goal in the woodball game is to try to get the ball into a predetermined target with the least number of strokes possible, so that the winner in this woodball game is the athlete with the fewest number of strokes compared to other athletes. Woodball is a fairly simple sport, because in practice it only hits a ball that is always stationary (not moving). If the woodball athlete has mastered the basic movements, then the athlete can master the basic technique, the athlete can hit the ball effectively. The demands of hitting the ball in a woodball game are trying to hit the ball to make a small number of strokes to reach the target, so this game is difficult for beginners.

Dewi & Broto (2019: 25) stated that basic technique is one of the foundations for someone to be able to play woodball by learning good and correct basic techniques that will make it easier for athletes to play woodball. Woodball basic techniques include techniques without tools and with tools. Techniques without tools include: swing motion, setup (preparation), preswing routines without tools. While the techniques with tools are preswing routines with mallets, long strokes, medium distance

## **Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball**

strokes, close range punches, and gating. Long stroke in woodball is one of the basic techniques that are important to master. Long strokes are taken when playing on a long-distance field.

It is important for a woodball athlete to master the basic techniques of woodball stroke, one of which is parking and gate-in. Parking or gate-in strikes can greatly determine success in completing a fairway in the game, because these strokes are usually done to direct the ball directly into the gate or direct the ball so that it can easily enter the gate. The skill of playing woodball is adjusted to the needs. Classifying the skills that must be possessed by woodball athletes can be determined through the rules of the woodball game, the characteristics of the woodball game, and the biomotor abilities needed in the woodball game. The skill in question is how an athlete can find out why the ball shows a different character when moving, know how mallet tilt affects ball movement and control, and how to translate swing in distance and accuracy. Thus, to be a good woodball athlete, one must be able to control the ball from the mallet swing at different distances and angles.

Mastering good hitting techniques, of course, supported by good physical components. The physical component is the most important factor to achieve high abilities (Anderson, et al., 2015: 14; Kendzierski & DeCarlo., 2016: 211). Elements in physical condition include muscle strength, speed, cardiovascular endurance, muscle endurance, balance, flexibility, explosive power, coordination (Donnelly et al., 2016: 1198). Doing a good shot in woodball is determined by several factors, one of which is arm muscle power. As revealed by Muhammad, et al. (2019) that "Specifically, grip and arm power contributes to long hit accuracy up to 45.18%. Swing will determine the power and direction of mallet".

Myssidayu (2015: 136) that power can be interpreted as "strength and speed that are carried out together in carrying out a motion. Bafirman & Eahyuni (2019: 135) that in general according to the direction and form of movement, explosive power consists of acyclic explosive power and cyclic explosive power. Sports that require acyclic explosive power predominantly are throwing and jumping in athletics, elements of gymnastic movements, fencing and movements that require jumping (basketball, volleyball, pencak silat and so on). The need for power components can be determined from the aspect of the tools used and the basic techniques of woodball games. Based on the aspect of the tool used in the woodball game, the strength component is closely related to the body's ability to cope with the burden of the tool. The mallet is a bat used in woodball games made of wood in the shape of the letter "T" with a gross weight of about 800 grams. The length of the mallet is  $90 \pm 10$  cm which consists of a handle and a bottle-shaped head. Based on the specifications of the mallet used as a bat, it is known that the weight of the load that must be held by the body, especially in the upper extremity or upper limb, is about 800 grams. To be able to remain stable swinging a mallet with a load of about 800 grams during the game, it takes good upper extremity muscle strength and good back muscles. Based on the specifications of the mallet used as a bat, it is known that the weight of the load that must be held by the body, especially in the upper extremity or upper limb, is about 800 grams. To be able to remain stable swinging a mallet with a load of about 800 grams during the game, it takes good upper extremity muscle strength and good back muscles. Based on the specifications of the mallet used as a bat, it is known that the weight of the load that must be held by the body, especially in the upper extremity or upper limb, is about 800 grams. To be able to remain stable swinging a mallet with a load of about 800 grams during the game, it takes good upper extremity muscle strength and good back muscles.

Good or bad arm muscle power is also determined by the length of the arm. When viewed from an anatomical point of view, the length of the arm which consists of several bones does not produce power. As in Newton's second law, states that the longer the lever, the greater the force produced, and the less force is required. So the longer the arm, the more energy expended in making a shot (Maj'di, 2018: 1). The movement of the stroke is a swing movement of the arm that originates at the base of the arm to provide power when the arm hits the ball. Long arms will produce a longer range, so that it has an effect on hitting in woodball sports.

Good coordination is needed to be able to perform basic woodball hitting techniques, so as to be able to master the motion properly and correctly. In performing the basic technique of hitting woodball, an athlete must be able to string together movements from the prefix, swing, to follow-through stages. The movement must look harmonious, harmonious, and simultaneous, so that the movement will look flexible and not stiff. To be able to do this, woodball athletes must have good coordination skills. Imadudin (2020) the results of his research show that there is a relationship between arm muscle strength and hand eye coordination on long stroke skills in woodball sports.

Even though they already have a good hitting technique, sometimes a Woodball athlete cannot always enter the ball smoothly into the gate, because there are other determining factors that must be mastered by Woodball athletes, namely the mental factor. One of them is the level of concentration (Agustiar & Sul-toni, 2016). Woodball sports require a high level of concentration and composure, sometimes when an athlete is about to put the ball into the goal, he can be overwhelmed by feelings of doubt and fear, this is what often causes the failure of a Woodball athlete when making a shot.

## Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball

On the other hand, woodball athletes must also have the ability to make decisions, whether to hit the ball directly at the gate assuming the ball goes straight in or make another shot to adjust the distance and angle between the ball and the gate. Making a shot to adjust the distance and angle between the ball and the gate before gating is often called parking. Parking is usually done when the angle formed between the ball and the gate does not allow for direct gating even though the ball is close to the gate or the ball is too far from the gate area. This requires athletes to have skills in managing control and accuracy of strokes when parking and gating.

Based on the results of the researcher's observations when observing the Woodball Club in Bantul Regency in August 2020, most of the athletes made a gate-in stroke when the game was still not good. This is indicated by the wrong or inaccurate hitting direction, lack of concentration and fear when hitting, hitting the ball incorrectly in the middle of the rubber cross section, and the instability or unsteadiness of the mallet swing when making a shot. Athletes lack concentration when hitting, so the ball is not on target. The gate-in shot does not have enough power, so the ball moves slowly.

In woodball sports, swing is one of the most dominant techniques, therefore athletes who will swing or swing at the time of striking need good concentration and coordination. If an athlete cannot control the tension when he is about to hit, the muscles around his body become stiff, his concentration and coordination are disturbed, so that the results of the blow will not be optimal, so that it can damage the pattern of the next game.

Several related studies were carried out by Yazid, et al. (2016) showed that there was a significant relationship between concentration and long stroke results in the woodball sport. Furthermore, research by Yulianingsih, et al. (2020) shows that there is a relationship between emotional intelligence and the result of gattting woodball. Agustiar & Sul-toni (2016) research results show that there is a significant relationship between anxiety levels and gate-in hitting in woodball. Imadudin (2020) in his research results showed that there was a relationship between arm muscle strength and hand eye coordination on long stroke skills in woodball sports.

Based on the explanation of these observations, this study intends to further prove the "Correlation Study between Arm Muscle Power, Arm Length, Eye-Hand Coordination, and Concentration on Gate-In Hit Results in Woodball".

### METHODS

This type of research is correlational. Correlational research is research conducted to determine whether there is a relationship and the amount of contribution between two or several variables (Arikunto, 2015: 247). The population in this study were Woodball athletes in Bantul Regency, totaling 74 athletes. Sampling in this study was done by purposive sampling. The criteria in determining this sample include: (1) not in a state of illness, (2) willing to be a research sample, (3) age 12-15 years, (4) still actively registered as an athlete in a club, and (5) minimum exercise duration 3 months. Variables are concepts that have varying values, have more than one value, state, category, or condition. A variable is something that is the main focus of researchers' attention, whose values vary and change (Budiwanto, 2017: 58). The independent variables in this study were arm muscle power, arm length, hand eye coordination, and concentration, while the result of the gate-in stroke was the dependent variable. The instrument used to measure arm muscle power is the medicine ball test, arm length with *anthropometer*/meter, concentration with Grid Concentration Test, and gate-in stroke with modified gate-in punch accuracy test/ Data analysis or data processing is an important step in research. In this study, data analysis used computer software tools in the form of SPSS (Statistical Product and Service Solutions) Version 23. SPSS is a computer program used to analyze data statistically. The data analysis techniques used in this research are requirements test, multiple linear regression analysis, hypothesis testing, and coefficient of determination analysis.

### RESEARCH RESULTS AND DISCUSSION

The sample in this study was the Woodball Club in Bantul Regency which consisted of 3 clubs, namely Mustang Woodball Club, West Shinobi Woodball Club, and Imogiri Woodball Club, totaling 54 athletes. Statistical descriptions of arm muscle power, arm length, hand eye coordination, concentration, and gate-in strokes in woodball are as follows.

- a. Data on arm muscle power of Woodball athletes in Bantul Regency obtained an average of 1.55 cm, with a minimum value of 1.23 cm and a maximum value of 1.95.
- b. Data on the arm length of Woodball athletes in Bantul Regency obtained an average of 66.48 cm, with a minimum value of 61.00 cm and a maximum value of 75.00 cm.
- c. Data on eye-hand coordination of Woodball athletes in Bantul Regency obtained an average of 11.26 times, with a minimum score of 5 times and a maximum value of 19 times.

## Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball

- d. Data on the concentration of Woodball athletes in Bantul Regency obtained an average of 13.65, with a minimum value of 6.00 and a maximum value of 22.00.
- e. The gate-in data for Woodball athletes in Bantul Regency is obtained an average of 15.65, with a minimum score of 9.00 and a maximum value of 26.00.

### Multiple Linear Regression Equation

Multiple regression analysis was used to test the independent variables together with the dependent variable. The results of multiple linear analysis of arm muscle power, arm length, hand eye coordination, and concentration on the results of the gate-in stroke in woodball:

$$Y = 18.965 + 7.510X_1 + 0.230X_2 + 0.314X_3 + 0.302X_4$$

### Test Analysis Results (Simultaneous)

F test is a means of testing to determine whether the independent variables simultaneously (simultaneously) affect the dependent variable. The results of the analysis are in Table 1.

**Table 1. F Test Analysis Results (Simultaneous)**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	720,264	4	180,066	84,798	.000a
	Residual	104,050	49	2,123		
	Total	824,315	53			
a. Predictors: (Constant), Concentration, Arm Length, Arm Muscle Power, Hand Eye Coordination						
b. Dependent Variable: Gate In						

Based on Table 8 above, the calculated F coefficient is 84,798 > F table 2.56, the value of sig. 0.000 < 0.05 then H<sub>0</sub> is rejected, meaning. The alternative hypothesis which reads "There is a significant relationship between arm muscle power, arm length, hand eye coordination, and concentration on the results of the gate-in stroke in woodball sports", was accepted.

### T-Test Analysis Results (Partial)

- 1) The relationship between arm muscle power and the result of the gate-in  
The proposed hypothesis reads "There is a significant relationship between arm muscle power and the results of the gate-in stroke in woodball sports". The results of the analysis are presented in Table 2 as follows.

**Table 2. Correlation between Arm Muscle Power and Gate-In Stroke Results**

Connection	r count	t count	Significance	Description
X1.Y	0.845	4,157	0.000	Significant

Based on the results of the analysis, showing the arm muscle power variable, the r-count value was 0.845, the t-count was 4.157 and the significance value (sig) was 0.000. Because the significance value is 0.000 < 0.05, then H<sub>0</sub> is rejected, meaning that H<sub>a</sub> which reads "There is a significant relationship between arm muscle power and the result of hitting the gate-in in woodball sports" is accepted. The correlation coefficient is positive, meaning that if the arm muscle power gets better, then the gate-in results in woodball sports will also get better.

- 2) The relationship between arm length and the result of the gate-in  
The proposed hypothesis reads "There is a significant relationship between arm length and the result of the gate-in stroke in woodball sports". The results of the analysis are presented in Table 3 as follows.

**Table 3. Correlation between Arm Length and Gate-In Stroke Results**

Connection	r count	t count	Significance	Description
X2.Y	0.585	3,509	0.001	Significant

Based on the results of the analysis, it shows that the arm length variable has an r-count value of 0.585, a t-count of 3.509 and a significance value (sig) of 0.001. Because the significance value is 0.001 < 0.05, then H<sub>0</sub> is rejected, meaning that H<sub>a</sub> which reads

## Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball

"There is a significant relationship between arm length and the result of hitting the gate-in in woodball sports" is accepted. The correlation coefficient is positive, meaning that if the arm length is getting better, then the gate-in shot in woodball will also be better.

3) The relationship between eye-hand coordination and the result of the gate-in

The proposed hypothesis reads "There is a significant relationship between hand eye coordination and the results of the gate-in stroke in woodball sports". The results of the analysis are presented in Table 4 as follows.

**Table 4. Correlation between Eye-Hand Coordination with Gate-In . Strike Results**

Connection	r count	t count	Significance	Description
X3.Y	0.855	2,479	0.017	Significant

Based on the results of the analysis, showing the eye-hand coordination variable, the r-count value was 0.855, the t-count was 2.479 and the significance value (sig) was 0.017. Because the significance value is  $0.017 < 0.05$ , then  $H_0$  is rejected, meaning that  $H_a$  which reads "There is a significant relationship between eye-hand coordination and the result of hitting the gate-in in woodball sports" is accepted. The correlation coefficient is positive, meaning that if the eye-hand coordination is getting better, then the gate-in results in woodball sports will also be better.

4) The relationship between concentration and the result of the gate-in pukulan

The proposed hypothesis reads "There is a significant relationship between concentration and the result of hitting the gate-in in woodball sports". The results of the analysis are presented in Table 5 as follows.

**Table 5. Correlation between Concentration and Gate-In Hit Results**

Connection	r count	t count	Significance	Description
X4.Y	0.808	3,292	0.002	Significant

Based on the results of the analysis, showing the concentration variable, the r-count value is 0.808, the t-count is 3.292 and the significance value (sig) is 0.002. Because the significance value is  $0.002 < 0.05$ , then  $H_0$  is rejected, meaning that  $H_a$  which reads "There is a significant relationship between concentration and the result of hitting the gate-in in woodball sports" is accepted. The correlation coefficient is positive, meaning that the better the concentration, the better the gate-in results in woodball.

### Coefficient of Determination (R<sup>2</sup>)

The coefficient of determination (R<sup>2</sup>) is essentially used to measure how far the regression model's ability to explain the variation of the dependent variable is. The results of the analysis in Table 6 are as follows:

**Table 6. Results of the Analysis of the Coefficient of Determination (R<sup>2</sup>)**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935a	.874	.863	1.45722
a. Predictors: (Constant), Concentration, Arm Length, Arm Muscle Power, Hand Eye Coordination				

The table above shows that the value of R Square is 0.874 or 87.4%. This means that the independent variables of arm muscle power, arm length, hand eye coordination, and concentration together affect the dependent variable on the outcome of the gate-in stroke in woodball by 87.4% while the remaining 12.60% is influenced by other variables. not included in this study, for example talent, practice, and technique.

## DISCUSSION

### 1. The Relationship between Arm Muscle Power and Gate-In Hit Results

Based on the results of the study showed that there was a significant relationship between arm muscle power and the results of the gate-in stroke in woodball sports. The magnitude of the contribution of arm muscle power with the result of the gate-in hit is 32.09%. The results of this study confirm that the relationship between the two variables is positive, meaning that the stronger the arm muscle power, the better the gate-in results. Arm muscle explosive power is a physical condition that cannot be



## **Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball**

separated and is the main support for movement, namely muscle strength and muscle speed to direct maximum power. Arm muscle explosive power is a very important factor and must be considered in woodball sports, especially when hitting, so having good arm muscle explosive power will produce a better gate-in shot.

Explosive power (muscular power) is a person's ability to use his strength to the fullest in the shortest possible time. With this, it can be stated if the explosive power (power) is equal to the speed (velocity) x strength (force) (Kraemer & Looney, 2016: 14). Power is a combination of speed and strength or direction of maximum muscle force with maximum speed. Fast and strong abilities are also needed by athletes to make fast movements and need strong power (Rahmansyah, et al., 2018: 40; Sunardi, et al., 2019: 1).

Verma (2014) in his research revealed that power helps players maintain corners. The special relationship between muscle power and exercise technique is seen in daily movements performed with the dominant and non-dominant extremities. Analysis performed during the movement with the weaker arm, compared to the same movement using the dominant arm, showed not only a decrease in exercise efficiency, but also a change in the regression law (Peric, et al. 2015).

The accuracy of the gate-in stroke, it takes a good explosive power of the arm muscles, it is hoped that the development of achievement from an early age through well-programmed exercises. Explosive power training in doing gate-in punches requires a lot of muscle cooperation in coordinating and providing acceleration so that the transfer of energy impulses occurs very quickly between muscles. By doing regular exercise, muscles will become strength, develop and make the body's organs function properly (Gatta, et al., 2015: 23). Doing regular exercise, muscles will become strong, develop and make the function of body organs better (Aditama, 2020). Sung et al (2016) stated that a combination of core and non-dominant arm strength training can provide a more effective specific training program than core training alone for golfers to increase distance.

### **2. Relationship between Arm Length and Gate-In Strike Results**

Based on the results of the study, it showed that there was a significant relationship between arm length and the results of the gate-in stroke in woodball. The amount of the contribution of the length of the arm with the result of the gate-in hit is 12.00%. The results of this study confirm that the relationship between the two variables is positive, meaning that the longer the arm, the better the gate-in result. These results are in line with research conducted by Faizin & Hariadi (2019) that there is a significant relationship between arm length and throw-in, which is obtained by  $r$  count of 0.67, thus the interpretation of the relationship is in the medium category and the relationship shows a positive direction of relationship.

The arm is one of the upper limbs or upper extremities in the human body that functions to carry out movements such as lifting, pushing, pulling, hitting, rejecting, and throwing. Arm length is the distance from the upper arm bone (humerus) to the ulna (Syarifudin, 2016: 2). Sleeve length is the length of the hand from the olecranon to the wrist. The arm is included in the extremity joints in the human body. The arm has three parts of the muscles that support the arm including the shoulder muscles, the base of the upper arm muscles, and the forearm muscles. The muscles in the arms are located in the upper extremities of the human body, divided into the upper and lower arms (Syaifudin, 2016: 143).

Hermayani, et al (2018: 62) states that arm length is the distance from the upper arm bone (humerus) to the ulna. An object moving at the long end of the radius will be linearly larger than an object moving at the short end if the angular velocity is kept constant. The arm-length swing motion is an angular motion that occurs when an object moves in a circular path around a fixed point. This means that the distance traveled can be in the form of a small arc/a full circle that rotates at the joint, in this case the shoulder joint. Furthermore, it is explained that the skeleton of the body is composed of a system of levers. The lever of a rigid rod moves in a circular arc around its axis, so the motion is called angular motion.

Margono (2017: 6) argues that the greater the strength possessed by the arm length, the more functions, advantages and uses it has in sports. People who have long arms if they have good physical, technical, mental elements, it is believed that their performance will be better, and long arms are part of the body that gives advantages for sports that require far throws or punches.

### **3. Relationship between Eye-Hand Coordination with Gate-In Strike Results**

Based on the results of the study, it shows that there is a significant relationship between hand eye coordination and the results of the gate-in stroke in woodball sports. The contribution of eye-hand coordination with the result of the gate-in hit is 21.92%. The results of this study confirm that the relationship between the two variables is positive, meaning that the better the eye-hand coordination, the better the gate-in results. This is in line with research which shows that the contribution of eye-hand coordination to service accuracy only contributes 25.3% (Andria & Igorosky, 2020). The accuracy of hitting and the success of athletes in the future can be seen from the high level of eye-hand coordination of athletes today (Laby, et al., 2018). Akbari, et al. (2017) stated "Eye-hand coordination directly effects badminton smash skills by 8.64%". Yulianti (2017) added that hand-eye

## **Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball**

coordination contributed 20.79% to smash accuracy. Setianingrum et al. (2018) that the contribution of hand-eye coordination of 14.3% to accuracy. Purnomo & Yendrizal (2019) in their research showed that eye-hand coordination contributed 74.13% to the accuracy of the stroke.

A study explained that the speed of eye-hand coordination could not be done perfectly if the athlete had an injury to the neck, without eye movements assisted by agile neck rotation, good eye-hand coordination could not be obtained, so athletes would also have difficulty serving (Mutasim, 2007). et al., 2020; Przednowek, et al., 2019). Rahmadiky (2020) shows that hand eye coordination is closely related to service accuracy.

Irianto (2018: 77) states that coordination is the ability to perform movements at various levels of difficulty quickly and precisely efficiently. The level of good or bad coordination of a person's movements is reflected in his ability to perform a movement skillfully. An athlete with good coordination is not only able to perform a skill perfectly, but also easily and quickly in performing a skill that is still new to him. Coordination is the ability to perform movements with varying degrees of difficulty quickly and efficiently and with full accuracy. Good coordination will be able to carry out various movements with various levels of difficulty quickly, fully targeted and of course efficient in their movements (Syafutra, 2020: 203).

Coordination is needed in almost all sports competitions and games, coordination is also important when in unfamiliar situations and environments, for example changes in the playing field, equipment, weather, lighting, and the opponents they face. The level of good and bad coordination of a person's movements is reflected in the ability to perform a movement smoothly, precisely, quickly, and efficiently. Coordination ability allows athletes to perform a group of movements with better quality of movement. Coordinative ability is needed for maximum utilization of conditional abilities, technical skills (Gogoi & Pant, 2017: 53). Throwing, hitting, pushing, or pulling skills require hand eye coordination. Eye-hand coordination combines the ability to see and the ability of the hand, for example in the game of table tennis before the movement hits the eye must lead to the target or the intended object. Eye-hand coordination will result in timing and accuracy. Timming is oriented to timeliness, accuracy is to target accuracy. Through good timing, the contact between the hand and the object will be in accordance with the wishes so that it will produce an effective movement. Accuracy will determine whether the object is right for the intended target. The contact between the hand and the object will be in accordance with the wishes so that it will produce an effective movement. Accuracy will determine whether the object is right for the intended target. The contact between the hand and the object will be in accordance with the wishes so that it will produce an effective movement. Accuracy will determine whether the object is right for the intended target.

#### **4. Relationship between Concentration and Gate-In Hit Results**

Based on the results of the study, it was shown that there was a significant relationship between concentration and the result of hitting the gate-in in woodball. The contribution of concentration with the result of the gate-in hit is 21.39%. The results of this study confirm that the relationship between the two variables is positive, meaning that the better the concentration, the better the gate-in results. These results are in line with the research of Irawan, et al. (2019) that there is a relationship between concentration and coordination in shooting accuracy on the learning achievement of petanque athletes. Haryanto & Amra (2020) added that "Concentration and hand eye coordination together have a strong enough relationship with backhand backspin service accuracy". Purnomo & Yendrizal (2019) in their research showed that concentration contributed 5,

Concentration is the athlete's ability to maintain the focus of his attention on the relevant game environment. Concentration is the athlete's ability to focus his attention on a selected stimulus (one object) in a certain period of time. Furthermore, concentration is the ability to focus on various factors relevant to the match and be able to maintain it for the duration of the match (Tangkudung, 2018: 391). Concentration is a component of cognitive function, which is important for athletes in any sport. Each sport has its own characteristics, body contact or non-body contact, based on aspects of game activities that have direct or indirect physical contact, sports rules, athlete behavior, and psychological demands.

A person's ability to focus or concentrate on certain incoming cues in accordance with his task will provide optimal results for his task. From psychological factors, one of them is that high concentration is needed because every movement made will determine the accuracy of the stroke. There are three barriers that hinder the athlete's concentration during the competition so that it interferes, namely staying silent on the initial mistakes, too focused on the results of the competition and too focused on the body and mechanical movements (Setiawan, et. al. 2018). Concentration disturbed by noise made by spectators should not be used as an excuse by professional players. Because these concentrations are so high which is important,

Without good concentration, athletes can make various mistakes in their performance such as failing to display the techniques that have been learned, lack of accurate sports movements that should be done, or in archery can also mean the athlete's failure to shoot targets with high points (Indahwati & Ristanto, 2016: 132; Jannah, 2017: 49). In important situations, a momentary loss

## **Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball**

of concentration can affect performances and affect the outcome of the match. This is because the focus of attention significantly affects appearance (Zahedi, et al., 2011: 2).

### **5. The Relationship between Arm Muscle Power, Arm Length, Hand Eye Coordination, and Concentration on Gate-In Hit Results**

Based on the results of the study, it was shown that there was a significant relationship between arm muscle power, arm length, hand eye coordination, and concentration on the results of the gate-in stroke in woodball. The magnitude of the contribution of arm muscle power, arm length, hand eye coordination, and concentration with a gate-in hit was 87.40%. Of the several independent variables in this study, the arm length variable is the variable that gives the smallest contribution compared to the arm muscle power, hand eye coordination, and concentration variables to the gate-in stroke result.

Therefore, how the role of concentration when the athlete hits must be known, as well as the contribution of eye-hand coordination which plays a very important role in hitting the athlete and must also be known by the athlete and the coach himself, this is useful for considering the development of a training program, so that the accuracy service becomes more accurate and consistent (Mutasim, et al., 2020; Przednowek, et al., 2019). The results of this study are in line with the research of Imanudin (2020) that there is a relationship between arm muscle strength and hand eye coordination on long stroke skills in woodball sports.

If a player already has good eye-hand coordination, good hitting practice is one way. The target of hitting varies, in contrast to athletes who have not been trained in hand-eye coordination, then the direction of the blow must be corrected first. With the trainer's attention regarding the suitability of the form of training. According to the player's level of coordination, the player's accuracy ability will develop rapidly (Andria & Igorosky, 2020; Basiri, et al., 2020).

## **CONCLUSIONS**

Based on the results of the research and the results of the data analysis that has been carried out, the following conclusions are obtained.

1. There is a significant relationship between arm muscle power and the results of the gate-in in woodball, with a contribution of 32.09%.
2. There is a significant relationship between arm length and the result of the gate-in stroke in woodball, with a contribution of 12.00%.
3. There is a significant relationship between hand eye coordination and the result of hitting the gate-in in woodball, with a contribution of 21.92%.
4. There is a significant relationship between concentration and the result of hitting the gate-in in woodball, with a contribution of 21.39%.
5. There is a significant relationship between arm muscle power, arm length, hand eye coordination, and concentration on the results of the gate-in stroke in woodball, with a contribution of 87.40%.

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## Study of the Correlation between Arm Muscle Power, Arm Length, Hand-Eye Coordination, and Concentration on Gate-In Results in Woodball

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## Implementation of HOTS-Based PJOK Learning (Higher Order Thinking Skill) at Junior High School, Sleman Central Sleman 2020



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**ABSTRACT:** This study aims to find out how well the implementation of HOTS (Higher Order Thinking Skill) based PJOK learning at SMP Negeri Zonasi Tengah Sleman 2020. This type of research is a quantitative descriptive study with a survey method. The population in this study were all PJOK teachers at the Zoning Middle School in Central Sleman, totaling 29 teachers, which were taken using a total sampling technique. Data collection techniques using a questionnaire. The data analysis technique used descriptive percentage analysis. The results showed that the implementation of HOTS (Higher Order Thinking Skill) based PJOK learning at the Zonasi Tengah Sleman Middle School in 2020 was in the "very poor" category of 0.00% (0 teachers), "less" of 51.72% (15 teachers), "enough" by 48.28% (14 teachers), "good" by 0.00% (0 teachers),

**KEYWORDS-** implementation, sport learning, HOTS-based

### INTRODUCTION

The implementation of the 2013 Curriculum which is the reference for the learning process in educational units, according to policy, needs to integrate Strengthening Character Education (PPK). The integration is not as an additional program or an insertion, but as a unit of educating and learning for all education actors in the education unit. Presidential Regulation Number 87 of 2017 concerning Strengthening Character Education (PPK) makes character education an "educational movement under the responsibility of the education unit to strengthen the character of students through harmonization of heart, taste, thought, and sports with involvement and cooperation between education units, families, and communities as part of the National Movement for Mental Revolution (GNRM)" (Article 1, paragraph 1). This Presidential Regulation is the initial basis for putting character education back as the main soul in the implementation of education in Indonesia, reinforced by the issuance of Minister of Education and Culture Number 20 of 2018 concerning Strengthening Character Education in Formal Education Units. Strengthening Character Education is a national policy that must be implemented in every training in order to increase teacher competence.

In the 2013 curriculum learning there are several paradigm changes that have been used by teachers, these changes are intended to adapt to the demands of the times and prepare Indonesian human resources to be ready to compete in the future. Learning with the 2013 curriculum trains students to find out, not just be told about science, emphasizing language skills as a communication tool, carrier of knowledge, and logical, systematic, and creative thinking. Assessment is done by measuring students' thinking levels from low to high, not just memorizing concepts, measuring student work processes and results and using student learning portfolios.

The implementation of the 2013 curriculum (K-13) has consequences for teachers who have to be more qualified in carrying out learning activities. Why is that? Because K-13 mandates the application of a scientific approach (5M) which includes observing, asking, gathering information, reasoning/associating, and communicating. The government expects students to achieve various competencies by implementing Higher Order Thinking Skills (HOTS). These competencies are critical thinking (critical thinking), creative and innovative (creative and innovative), communication skills (communication skills), the ability to work together (collaboration) and confidence (confidence).

Students who have low-level thinking skills without higher-order thinking exercises cause the student's learning process to be incomplete. Therefore, an instrument is needed to support students to get used to higher-order thinking. The instrument is in

## **Implementation of HOTS-Based PJOK Learning (Higher Order Thinking Skill) at Junior High School, Sleman Central Sleman 2020**

the form of a test which in its completion requires higher-order thinking skills or what we are more familiar with HOTS-based tests.

Higher Order Thinking Skill (HOTS) is a higher order thinking skill that demands critical, creative, analytical thinking on information and data in solving problems (Barratt, 2014: 131). Higher order thinking is a type of thinking that tries to explore questions about existing knowledge related to issues that are not clearly defined and do not have definite answers (Haig, 2014: 143). Developing critical thinking requires practice finding patterns, compiling explanations, making hypotheses, generalizing, and documenting findings with evidence (Eggen, 2012: 261). This shows that learning that triggers students to think at higher levels requires the use of active student-oriented learning strategies, so that students have the opportunity to observe, ask questions, reason, experiment, and communicate. This kind of approach is in line with the expectations of the 2013 curriculum.

The 2013 curriculum is a competency-based curriculum where the 2013 curriculum uses a scientific approach or commonly called the scientific approach, namely observing, asking, trying, reasoning and communicating. The purpose of using a scientific approach model based on the 2013 Curriculum Diktat module is intended to provide understanding to students in recognizing, understanding various materials using a scientific approach, that information can come from anywhere, anytime, not depending on direct information from the teacher. Therefore, the learning conditions that are expected to be created are directed at encouraging students to find out from various sources of observation, not being told (Majid & Rochman, 2014: 70).

A teacher must have academic qualifications and know the basics of science, one of which is carrying out RPP preparation activities, so that in the implementation of teaching and learning activities the teacher can direct learning activities from beginning to end. This proves that a PJOK teacher must be able to prepare RPP properly and in accordance with K13 standards and it would be better if it was HOTS (High Order Thinking Skill) oriented, which stimulated students to understand more critically and be brave because HOTS-oriented teachers would tend to build class with representations, describing the material every time they teach and building relationships with students with activities that involve mentally trained, so that teaching and learning activities can run well.

This research was conducted in Sleman Regency. Sleman Regency is divided into 4 zones based on the Regulation of the Head of the Sleman Regency Education Office number: 01 of 2018, namely the west, east, middle, and north zones. In this study, the object of research is the Central Sleman Zoning. The Central Sleman zoning consists of 4 sub-districts, namely Tempel, Sleman, Mlati, and Ngaglik. The number of junior high schools in this zoning is 29 schools.

Based on the results of interviews conducted with one of the PJOK teachers, the teacher has attended several workshops on the preparation of the Learning Implementation Plan (RPP), the teacher also always makes and prepares the RPP at the beginning of the semester. The teacher used the lesson plans from the MGMP, but there was also one teacher who prepared some of the lesson plans he made himself. Another problem, related to the implementation of the 2013 curriculum in the field, still finds several obstacles in its implementation. Researchers see that PJOK teachers still do not understand the 2013 curriculum. This is because the teacher feels that he is almost retired, so that in teaching he still uses the 2006 curriculum teaching method and in understanding the 2013 curriculum it is only limited to knowing without practicing in the field. Observation while learning, the method used by the teacher has not led to learning methods related to HOTS. Interviews with several teachers stated that teachers did not know how to implement HOTS during learning.

In practice the teacher is still dominant in teaching (teacher center). This is in stark contrast to the modern era of 21st century skills, where students are more active in learning (student center). For example, in the practice of learning big balls such as basketball, the teacher explains a lot of material so that it drains lesson hours. The teacher only provides a final assessment of learning which is carried out through motor movement practice, the assessment should be carried out thoroughly from the affective and cognitive aspects. This has an impact on students not maximizing practice and feeling bored with PJOK subjects which should be fun.

The implementation of HOTS for most teachers is a challenge in itself, most teachers have relatively limited access to self-development. For some teachers, the implementation of HOTS learning is not an easy thing to do. HOTS for teachers who are able to have a high mindset and innovation power. Besides teachers need to really teach learning materials and strategies, teachers are also faced with environmental challenges and the intake of students they teach. Sometimes the teacher has succeeded in learning so that learning activities are interesting, but the responses of the students are still cold, and relatively passive. Starting from this problem, the background for conducting a research entitled "Implementation of HOTS-based PJOK learning (Higher Order Thinking Skill) at the Central Sleman Zoning Junior High School in 2020".

# Implementation of HOTS-Based PJOK Learning (Higher Order Thinking Skill) at Junior High School, Sleman Central Sleman 2020

## METHODS

This research is a descriptive research. Sugiyono (2007: 147), states that descriptive research is used to describe or describe the data that has been collected as it is. The method used in this research is a survey. Arikunto (2006: 152) states that a survey is a research approach that is generally used for extensive and large data collection. This study will describe the implementation of HOTS-based implementation in PJOK learning. The place of research is at SMP Negeri Zoning Central Sleman which consists of 4 sub-districts and 16 schools. This research was conducted in March 2020. Arikunto (2010: 173) states "the population is the entire research subject. The population in this study were PJOK teachers at the Zoning Middle School in Central Sleman, amounting to 29 teachers. Sugiyono (2007: 81) states that the sample is part of the number and characteristics possessed by the population. Sampling technique using total sampling. The instrument or tool used in this study was a closed questionnaire. Arikunto (2010: 168), states that a closed questionnaire is a questionnaire that is presented in such a way that the respondent only needs to put a checklist (v) in the appropriate column or place, with direct questionnaires using a multilevel scale. The stratified scale in this questionnaire uses a modified Likert scale with four answer choices. The instrument grid for the Implementation of HOTS-Based PJOK Learning at the Zonal Middle Sleman Middle School in 2020 is presented in table 1 as follows:

**Table 1. Instrument Grille**

Variable	Factor	Indicator	Item Number
Implementation of HOTS-based PJOK learning at the Central Sleman Zoning Junior High School in 2020	Planning	1. Observing the KD that will be used in the HOTS muatan load	1
		2. Develop indicators based on operational verbs containing HOTS	2
		3. Learning objectives	3
		4. Subject matter	4
		5. Determining supportive learning methods	5
		6. Designing learning steps	6
		7. Select media	7
		8. Designing the type of assessment	8
		9. Determining the assessment instrument	9
	Implementation	1. Apperception	10
		2. Warmup	11
		3. Observe	12, 13
		4. Ask	14, 15
		5. Try	16
		6. Associate	17, 18
		7. Accommodate	19
		8. Reasoning	20
		9. Communicating	21
	Evaluation	1. Cognitive	22, 23
		2. Affective	24, 25
		3. Psychomotor	26
<b>Amount</b>			<b>26</b>

The data collection technique that will be used is by giving a questionnaire to the respondents who are the subjects of the research. The mechanism is as follows: (1) Researchers ask for a research permit from the Faculty. (2) The researcher looks for data on PJOK teachers at the Zoning Middle School in Central Sleman (3) The researcher distributes a questionnaire to the respondents. (4) The researcher then collected the questionnaire and did a transcript of the results of filling out the questionnaire. (5) After obtaining research data, the researcher draws conclusions and suggestions. The data analysis technique in this study used descriptive percentage data analysis techniques.



# Implementation of HOTS-Based PJOK Learning (Higher Order Thinking Skill) at Junior High School, Sleman Central Sleman 2020

$$P = \% \frac{F}{N} \times 100$$

Description:

M: average value (mean)

X: score

S: standard deviation

Widoyoko (2011: 238) states that to determine the score criteria using the Ideal Norms Reference Assessment (PAN) in table 2 as follows:

**Table 2. Rating Norms**

interval	Category
$Mi + 1.8 Sbi < X$	Very good
$Mi + 0.6 Sbi < X < Mi + 1.8 Sbi$	Good
$Mi - 0.6 Sbi < X < Mi + 0.6 Sbi$	Enough
$Mi - 1.8 Sbi < X < Mi - 0.6 Sbi$	Not enough
$X < Mi - 1.8 Sbi$	Very less

(Source: Arikunto, 2010: 207)

Description:

X = average

Mi = (ideal max score + ideal min score)

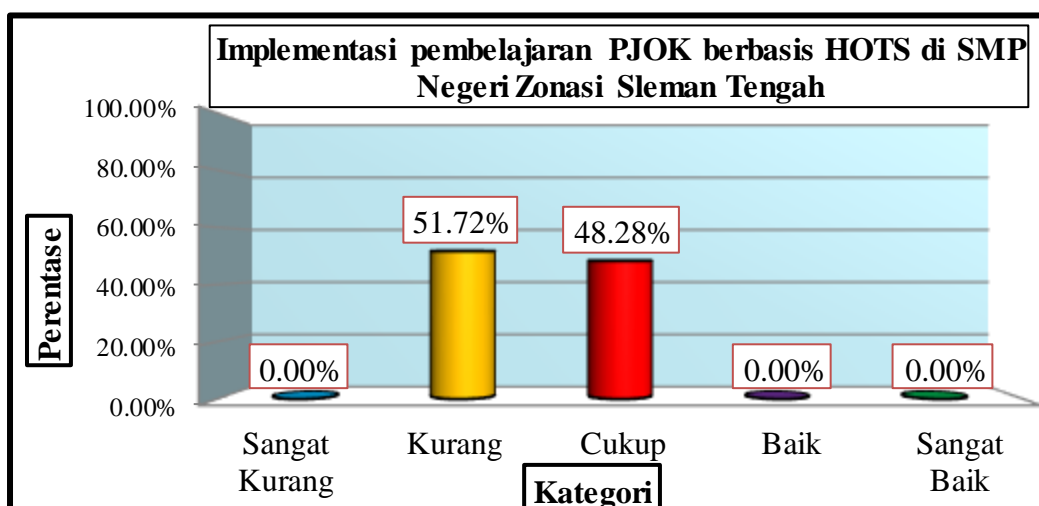
Sbi =  $1/6$  (ideal max score – ideal min score)

Ideal max score = highest score

Ideal min score = lowest score

## RESEARCH RESULTS

Descriptive statistical data on the results of research on the implementation of HOTS-based PJOK learning at the Zonasi Central Sleman Middle School in 2020, the lowest score (minimum) was 50.00, the highest score (maximum) was 69.00, the mean (mean) was 60.03, the median was 58.00, frequently occurring value (mode) 56.00, standard deviation (SD) 5.02. The implementation of HOTS-based PJOK learning at the Central Sleman Zoning Middle School in 2020 can be presented in Figure 1 as follows:



**Figure 1. Bar Diagram of the Implementation of HOTS-Based PJOK Learning at the Central Sleman Zoning Junior High School in 2020**

Based on Figure 1 above, it shows that the implementation of HOTS-based PJOK learning at the Zoning Middle Sleman Middle School in 2020 is in the "very poor" category of 0.00% (0 teachers), "less" of 51.72% (15 teachers), "enough" is 48.28% (14

## Implementation of HOTS-Based PJOK Learning (Higher Order Thinking Skill) at Junior High School, Sleman Central Sleman 2020

teachers), "good" is 0.00% (0 teachers), and "very good" is 0.00% (0 teachers). Based on the average value, which is 60.03, in the "enough" category.

### 1. Planning Factor

The implementation of HOTS-based PJOK learning at SMP Negeri Zoning Central Sleman in 2020 based on planning factors can be presented in Figure 2 as follows:

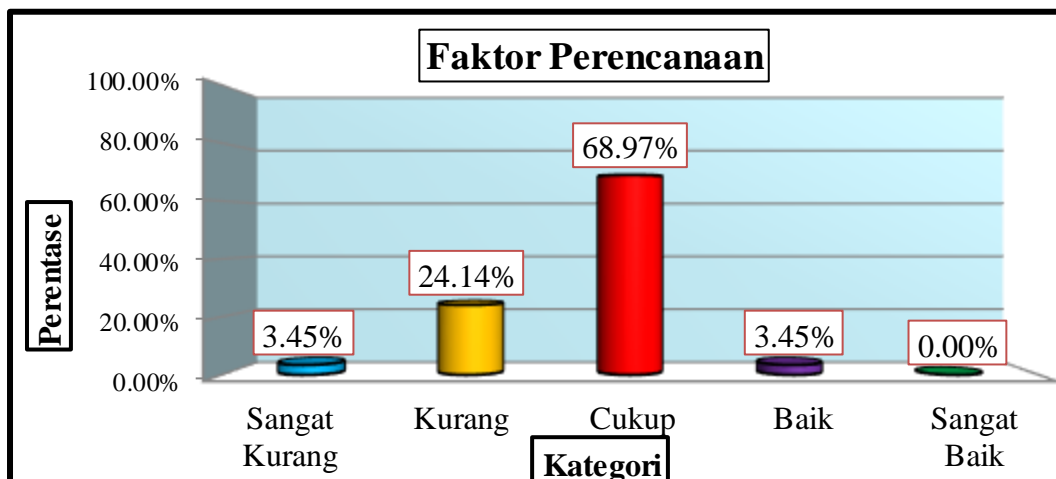


Figure 2. Bar Chart Based on Planning Factors

Based on the table above, it shows that the implementation of HOTS-based PJOK learning at the Zonal Central Sleman Middle School in 2020 based on planning factors is in the "very poor" category of 3.45% (1 teacher), "less" of 24.14% (7 teachers). ), "enough" 68.97% (20 teachers), "good" 3.45% (1 teacher), and "very good" 0.00% (0 teachers). Based on the average value, which is 20.90, the implementation of HOTS-based PJOK learning at the Zoning Middle School of Sleman Tengah in 2020 is based on planning factors in the "enough" category.

### 2. Implementation Factor

The implementation of HOTS-based PJOK learning at the Central Sleman Zoning Middle School in 2020 based on implementation factors can be presented in Figure 3 as follows:

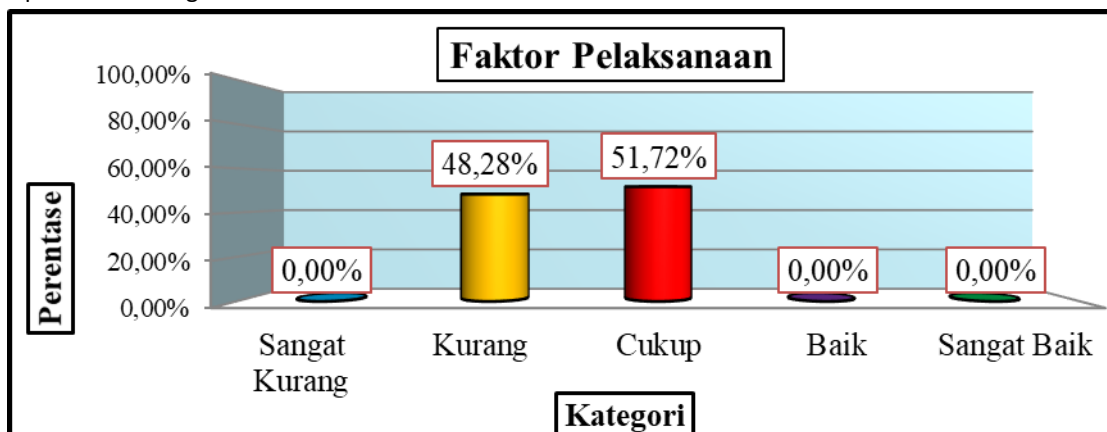


Figure 3. Bar Chart Based on Implementation Factors

Based on the table above, it shows that the implementation of HOTS-based PJOK learning at the Zonal Central Sleman Middle School in 2020 based on the implementation factor is in the "very poor" category of 0.00% (0 teachers), "less" of 48.28% (14 teachers), "enough" at 51.72% (15 teachers), "good" at 0% (0 teachers), and "very good" at 0.00% (0 teachers). Based on the average value, which is 27.52, the implementation of HOTS-based PJOK learning at the Zoning Middle School of Sleman Tengah in 2020 is based on the implementation factor in the "enough" category.

### 3. Evaluation Factor

The implementation of HOTS-based PJOK learning at the Central Sleman Zoning Junior High School in 2020 based on evaluation factors can be presented in Figure 4 as follows:

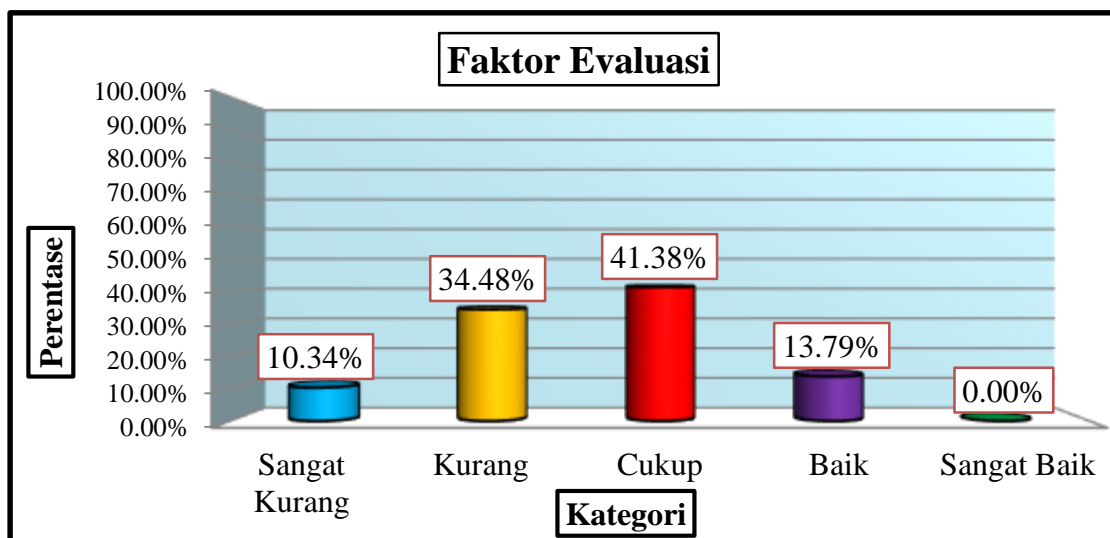


Figure 4. Bar Chart Based on Evaluation Factors

Based on the table above, it shows that the implementation of HOTS-based PJOK learning at the Zonasi Tengah Sleman Middle School in 2020 based on evaluation factors is in the "very poor" category of 10.34% (0 teachers), "less" of 34.48% (10 teachers), "enough" by 41.38% (12 teachers), "good" by 13.79% (4 teachers), and "very good" by 0.00% (0 teachers). Based on the average value, which is 11.62, the implementation of HOTS-based PJOK learning at the Zoning Middle School in Sleman Tengah in 2020 is based on the evaluation factor in the "enough" category.

#### DISCUSSION

This study aims to determine the implementation of HOTS-based PJOK learning at the Zonasi Tengah Sleman Middle School in 2020, which was expressed by a questionnaire totaling 26 items, and was divided into three factors, namely planning, implementation, and evaluation factors. Based on the results of the study, the implementation of HOTS-based PJOK learning at the Zoning Middle Sleman Middle School in 2020 was in the sufficient category. In detail, there are at most in the less category there are 15 teachers or 51.72%, then in the sufficient category there are 14 teachers or 48.28%. The figure of an educator or teacher is very important to realize a better education. As stated by Fetura & Hastuti (2017: 51) that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, Based on the results above, it shows that the implementation of HOTS-based PJOK learning at the Zoning State Middle School in Sleman Tengah is still not maximally applied during learning. Teachers should be able to change the pattern of learning comprehensively based on higher-order and activity-based thinking skills. The way that can be done to adopt this is by developing lesson plans, learning implementation, and authentic HOTS-based assessments for each lesson. However, in practice the development of planning, implementation, and authentic HOTS-based assessment is not an easy thing for teachers to implement. In addition to teachers having to really master the material and learning strategies, teachers are also faced with challenges with the environment and the intake of the students they teach.

This refers to the statement that, "Science education worldwide reforms are derived from the constructivist views of teaching and learning. These reforms are explicitly ask teachers to change their teaching strategies by shifting the emphasis from traditional textbook-based and rote learning, to exploration and inquiry-based learning situated in real-world phenomena", (Miri, 2007: 354). That is, education reform around the world stems from a constructivist view of teaching and learning. This reform explicitly calls for teachers to change their teaching strategies by shifting the emphasis from traditional text-based and rote learning, to exploration and inquiry-based learning that is oriented towards real-world phenomena.

HOTS-based learning in the 2013 Curriculum can be done by compiling competency achievements that not only answer at levels C-1 (knowing), C-2 (understanding), and C-3 (applying), but also at level C-4 (synthesis/ analysis), C-5 (evaluation), and C-6 (creative). Learning to think critically as a feature of HOTS is not like learning about the material directly. Critical thinking is related to how to solve interrelated problems. Critical thinking allows students to find the truth in the midst of events and information that surrounds them every day. Through critical thinking, students will experience a systematic process that allows them to formulate and evaluate their own beliefs and opinions.

## **Implementation of HOTS-Based PJOK Learning (Higher Order Thinking Skill) at Junior High School, Sleman Central Sleman 2020**

Implementation of HOTS-based PJOK learning at the Zoning Middle School in Central Sleman in 2020 based on planning factors in the "enough" category. The HOTS assessment comes from a HOTS-based learning plan with the characteristics of one of the indicators and learning objectives used, which are dominant using cognitive level 3, namely C4-C6. Then from the goals that have been set, learning steps are made that reflect HOTS learning. Learning planning must begin with an understanding of the meaning and purpose, as well as mastering the theoretical and practical elements contained in it. The ability to make plans is the first step for teachers and prospective teachers, as well as the estuary of all theoretical knowledge, basic skills, and in-depth understanding of learning objects and learning situations. Learning planning is designed in the form of a syllabus and lesson plan (RPP) which refers to the Content Standards. Learning planning includes the preparation of learning implementation plans and preparation of learning media and resources, learning assessment tools, and learning scenarios. The preparation of the syllabus and lesson plans is adjusted to the learning approach used.

The implementation of HOTS-based PJOK learning at the Central Sleman Zoning Junior High School in 2020 is based on the implementation factor in the "enough" category. In accordance with Permendikbud, Learning Implementation (RPP) is a face-to-face learning activity plan for one or more meetings. RPP was developed from the syllabus to direct students' learning activities in an effort to achieve Basic Competence (KD). Every educator in the education unit is obliged to compile a complete and systematic lesson plan so that learning takes place interactively, inspiring, fun, challenging, efficient, motivating students to participate actively, and providing sufficient space for initiative, creativity, and independence according to their talents, interests, and the physical and psychological development of students.

The implementation of HOTS-based PJOK learning at the Zoning Middle Sleman Middle School in 2020 is based on the evaluation factor in the "enough" category. Assessment and evaluation of learning needs to be done because with the results of the assessment students can find out their strengths and weaknesses in learning so far. Because the benefits of assessment for students are that students can find out how far they have succeeded in following the learning delivered by the teacher (Widoyoko, 2011). According to Permendikbud number 22 of 2016, the assessment of the learning process uses an authentic assessment approach that assesses the readiness of students, processes, and learning outcomes as a whole. The integrated assessment of the three components will describe the capacity, style, and learning outcomes of students who are able to produce an instructional effect (instructional effect) on the knowledge aspect and the nurturing effect on the attitude aspect. The results of the authentic assessment are used by teachers to plan learning remedial programs, enrichment, or counseling services. In addition, the results of the authentic assessment are used as material to improve the learning process in accordance with the Educational Assessment Standards.

Evaluation of the learning process is carried out during the learning process using the following tools: observation sheets, peer questionnaires, recordings, anecdotal notes, and reflections. Evaluation of learning outcomes is carried out during the learning process and at the end of the lesson unit using methods and tools: oral/action tests, and written tests. The final evaluation results are obtained from a combination of process evaluation and evaluation of learning outcomes.

### **CONCLUSIONS**

Based on the results of data analysis and discussion, it can be concluded that the implementation of HOTS (Higher Order Thinking Skill) based PJOK learning at the Zonasi Tengah Sleman Middle School in 2020 is in the "very poor" category of 0.00% (0 teachers), "less" 51.72% (15 teachers), 48.28% (14 teachers), "good" 0.00% (0 teachers), and "very good" 0.00% (0 teachers).

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## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption



Bambang Daud<sup>1</sup>, Hendra Karianga<sup>2</sup>, Muhammad Tabrani Mutalib<sup>3</sup>

<sup>1,2,3</sup> University of Khairun Ternate

**ABSTRACT:** This study aims, firstly, to find out that the Attorney General's Office is authorized to calculate state financial losses based on the applicable laws and regulations. second, knowing that the court's legal considerations in deciding the elements of state financial losses are fulfilled based on the results of the calculation of the Prosecutor's Office.

The problem to be answered is whether the Prosecutor's Office has the authority to calculate state financial losses based on the applicable laws and regulations? And how can the court's legal considerations in deciding the element of state financial loss be fulfilled based on the results of the prosecutor's calculation?

The approach used is a statutory approach, a conceptual approach and a case approach by analyzing the Court's Decision, namely District Court Decision No. 9/Pid.Sus-TPK/2019/PN Tte

**KEYWORDS:** Prosecutor's Authority, State Loss, Corruption.

### INTRODUCTION

That the crime of corruption is an extraordinary crime that damages and threatens the foundations of the nation's life. Various laws and regulations that are intended to eradicate corruption have been issued, but the practice of corruption is still ongoing and is increasingly complex in its realization. The problem of corruption is actually not a new problem in Indonesia, because it has existed since the era of the 1950s. Even various groups consider that corruption has become a part of life, become a system and integrate with the administration of state government (Chaerudin et.al., 2009: 1).

Comprehensive plans and strategies are urgently needed in disclosing cases of criminal acts of corruption, considering that proving the existence of a criminal act of corruption is not easy, due to the complexity of the modus operandi and sophistication of the transaction model, and is generally carried out by professionals in the field. One of the elements that must be proven in disclosures that often lead to polemics is the element of state losses as stated in Articles 2 and 3 of Law No. 31 of 1999 in conjunction with Law No. 20 of 2001 concerning the Eradication of Corruption Crimes (Marwan Effendy, 2010: 79). Consequently, the eradication of corruption is not solely aimed at getting corruptors to be sentenced to a deterrent prison sentence, but must also be able to restore the state's losses that have been corrupted.

The calculation of state financial losses in corruption can only be carried out after it is determined that it is not against the law as the cause of state financial losses. In accordance with the main objective of enforcing the criminal law of corruption, namely to restore state losses, it is almost certain that in every legal settlement of corruption cases (which can harm legal interests regarding state finances or economy), profits and judges always prove the value (number) of state losses in real terms. At this stage of proving real losses, the role of the auditor becomes very important. To be able to determine and prove the actual amount of property obtained from the crime of corruption, not only enjoy the property controlled by the convict at the time of the court decision, but also the assets resulting from corruption that have been transferred to other people (Efi Laila Kholis, 2010: 5).

In accordance with the main objective of enforcing the criminal law of corruption is to restore state losses. So it is almost certain that in every legal settlement of corruption cases (which can harm legal interests regarding state finances or economy), prosecutors and judge can harm legal interests regarding state finances or economy), prosecutors and judges always prove the value (number) of real state losses. At this stage of proving real losses, the role of the auditor becomes very important. Determining the existence and magnitude of state losses has always been a debate between various parties, for example between the defendant and his defense and the public prosecutor. To determine this, so far the prosecutor has been assisted

## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

by many experts from the Financial and Development Supervisory Agency, or the Inspectorate or other appointed experts. Each party has its own opinion regarding who is authorized to determine the existence of state losses and the amount. In practice,

In that context, this research is intended to examine the problem of how to measure state financial losses in resolving cases of criminal acts of corruption, especially the misuse of village funds based on a case approach by examining several District Court Decisions No. 9/Pid.Sus-TPK/2019/PN Tte. The paradigm of this research rests on the doctrine of *ultimum remedium* or the teaching which views that criminal law should act as the last means, effort, and weapon in resolving corruption cases. This fulcrum was deliberately chosen by reasoning to limit the scope of the study as well as the starting point of analysis in this legal research. From the description of this background is whether the Prosecutor's Office has the authority to calculate state financial losses based on the applicable laws and regulations and how the Court's legal considerations in assessing the elements of state financial losses are fulfilled based on the results of the Prosecutor's Office calculation?

### RESEARCH METHODS

This research is legal research. Therefore, there is no need for a hypothesis to examine and explore legal issues related to the problem in the formulation of the problem, where the purpose of the research is to be able to provide a prescription regarding the legal problem being studied with what should be done without proving the truth of the hypothesis.<sup>1</sup>

In this study, the author uses several approaches, including: first, the statute approach, which is carried out by examining various laws and regulations related to legal issues in the formulation of the problem in this study. Second, a case approach that is different or not the same as a case study, where the prospective researcher conducts a study related to the court decision which is in *casu* South Jakarta District Court Decision No. 1783/Pid.B/2004/PN.Jak-Sel which was terminated on March 3, 2005, in order to explore the ratio decidendi or reasoning from the Court of Justice to arrive at a decision.

Then the third, the conceptual approach, namely moving from the views or doctrines of legal experts and legal principles related to legal issues in the formulation of this research problem. The legal materials used consist of primary legal materials, namely statutory regulations, related court decisions. The secondary legal materials used are from various types of literature, namely books, journals, scientific works (thesis) related to this research. besides that, legal dictionaries, popular dictionaries and so on.

After identifying the legal issues in this research and eliminating irrelevant matters and collecting legal materials. The researcher will conduct a study of the problems that become legal issues based on the data or legal materials that have been collected. Meanwhile, after conducting the study, conclusions were drawn in the form of arguments that answered the question of the statements of witnesses who were not present at the trial and whose statements were read by the Public Prosecutor and the rest of the legal issues related. Then the last step is to give a prescription based on the arguments that have been built in the conclusion. these steps are in accordance with the character of law as a prescriptive or applied science.<sup>2</sup> The author realizes that the nature of science is relative and will always experience continuous change,

### RESULTS AND DISCUSSION

Article 30 of Law Number 16 of 2004 concerning the Prosecutor's Office of the Republic of Indonesia (the "Prosecutor Law") regulates the duties and authorities in the criminal sector, including: (a) prosecuting; (b) implement judges' decisions and court decisions that have permanent legal force; (c) supervise the implementation of conditional criminal decisions, supervisory criminal decisions, and parole decisions. What is meant by "conditional release decision" is a decision issued by the minister whose duties and responsibilities are in the correctional sector;<sup>2</sup> (d) conduct investigations into certain criminal acts based on the law.

The authority in this provision is the authority as regulated for example in Law Number 26 of 2000 concerning Human Rights Courts and Law Number 31 of 1999 concerning Eradication of Criminal Acts of Corruption as amended by Law Number 20 of 2001 jo. Law Number 30 of 2002 concerning the Corruption Eradication Commission. and (e) complete certain case files and for that purpose can carry out additional examinations before being delegated to the court which in its implementation is coordinated with investigators.<sup>3</sup> To complete the case file, additional examination is carried out by taking into account the following matters:

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<sup>1</sup>Peter Mahmud Marzuki, *Penelitian Hukum, edisi revisi*, cetakan kesembilan, (Jakarta: Kencana, 2014), hlm. 70.

<sup>2</sup>Lihat Penjelasan Pasal 30 huruf b Undang-Undang Nomor 16 Tahun 2004 Tentang Kejaksaan Republik Indonesia (Tambahan Lembaran Negara Republik Indonesia Nomor 4401).

<sup>3</sup>Lihat Pasal 30 Undang-Undang Nomor 16 Tahun 2004 Tentang Kejaksaan Republik Indonesia (Lembaran Negara Republik Indonesia Tahun 2004 Nomor 67).

## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

- a. Not carried out against the suspect;
- b. Only for cases that are difficult to prove, and/or can disturb the public, and/or which can endanger the safety of the State;
- c. must be completed in within 14 (fourteen) days after the implementation of the provisions of Article 110 and 138 paragraph (2) of Law Number 8 of 1981 concerning the Criminal Procedure Code;
- d. the principle of coordination and cooperation with investigators.

In carrying out a prosecution, the prosecutor may conduct a pre-prosecution. Pre-prosecution is the action of the prosecutor to monitor the progress of the investigation after receiving notification of the commencement of the investigation from the investigator, studying or examining the completeness of the case file resulting from the investigation received from the investigator and providing instructions to be completed by the investigator in order to determine whether or not the case file can be transferred to the prosecution stage.<sup>4</sup>

Meanwhile, in carrying out court decisions and judges' decisions, the prosecutor's office pays attention to legal values that live in society and humanity based on Pancasila without compromising firmness in attitude and action. Implementing court decisions, including carrying out the duties and authority to control the execution of the death penalty and court decisions on confiscated and confiscated goods for sale at auction.<sup>5</sup>

In addition to the duties and authorities mentioned in Law Number 16 of 2004 concerning the Prosecutor's Office of the Republic of Indonesia, the Prosecutor's Office may be assigned other duties and authorities based on the law. In addition, in carrying out its duties and authorities, the Prosecutor's Office maintains cooperative relationships with law and justice enforcement agencies and state agencies or other agencies.

What is meant by fostering cooperative relations with law enforcement agencies/state agencies/other agencies is that it is an obligation for every state agency, especially in the field of law enforcement and justice to implement and foster cooperation based on the spirit of openness, togetherness, and integration in an atmosphere of familiarity in order to realize integrated criminal justice system. This cooperative relationship is carried out through periodic and continuous horizontal and vertical coordination while respecting each other's functions, duties, and authorities. Cooperation between the prosecutor's office and other law enforcement agencies is intended to facilitate law enforcement efforts in accordance with the principles of fast, simple and low cost, as well as free, honest and impartial in the settlement of cases.<sup>6</sup>

In the field of corruption law enforcement, in addition to carrying out the duties and authorities of the Prosecutor's Office as stated in Law Number 16 of 2004 concerning the Prosecutor's Office of the Republic of Indonesia. The Prosecutor's Office is also given the authority in the event that the investigator finds and is of the opinion that one or more elements of a criminal act of corruption do not contain sufficient evidence, while in fact there has been a state financial loss, the investigator immediately submits the case file resulting from the investigation to the State Attorney for a civil suit or submitted to the aggrieved agency to file a lawsuit.<sup>7</sup>

What is meant by "there has actually been a state financial loss" is a state loss whose amount can be calculated based on the findings of the authorized agency or appointed public accountant.

Based on the provisions of these laws and regulations, in the field of law enforcement for the settlement of corruption cases, the prosecutor's office is not given the authority to calculate state losses because the elements of State Loss or the State Economy in Article 3 of Law Number 31 of 1999 concerning Eradication of Criminal Acts of Corruption are elements important (essential). Moreover, since Article 3 of Law Number 31 of 1999 concerning the Eradication of Criminal Acts of Corruption, a judicial review has been carried out and an official interpretation has been given by the Constitutional Court in Decision No. 26/PUU-XIV/2016, which states in its decree that it reads<sup>8</sup>:

1. Granting the petition of the Petitioners in part;
2. Stating the word "can" in Article 2 paragraph (1) and Article 3 of Law Number 31 of 1999 concerning Eradication of Criminal Acts of Corruption as amended by Law Number 20 of 2001 concerning Amendments to Law Number 31 of 1999 concerning Eradication of Acts Corruption crime (State Gazette of the Republic of Indonesia of 2001 Number 134,

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<sup>4</sup>Lihat Penjelasan Pasal 30 huruf a Undang-Undang Nomor 16 Tahun 2004 Tentang Kejaksaan Republik Indonesia (Tambahan Lembaran Negara Republik Indonesia Nomor 4401)

<sup>5</sup>Lihat Penjelasan Pasal 30 huruf b Undang-Undang Nomor 16 Tahun 2004 Tentang Kejaksaan Republik Indonesia (Tambahan Lembaran Negara Republik Indonesia Nomor 4401).

<sup>6</sup>Lihat Penjelasan Pasal 33 Undang-Undang Nomor 16 Tahun 2004 Tentang Kejaksaan Republik Indonesia (Tambahan Lembaran Negara Republik Indonesia Nomor 4401).

<sup>7</sup>Pasal 32 ayat (1) Undang-Undang Nomor 31 Tahun 1999 Tentang Pemberantasan Tindak Pidana Korupsi (Lembaran Negara Republik Indonesia Tahun 1999 Nomor 140).

<sup>8</sup>Lihat Putusan Mahkamah Konstitusi Nomor 26/PUU-XIV/2016, hal. 117



## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

Supplement to the State Gazette of the Republic of Indonesia Number 4150) is contrary to the 1945 Constitution of the Republic of Indonesia and has no binding legal force.<sup>14</sup>

The dictum of the Constitutional Court's Decision is based on legal considerations (*ratio decidendi*) the Judge stated that "...according to the Court the word "can" in Article 2 paragraph (1) and Article 3 of the Anti-Corruption Law also contradicts the principle of the formulation of a criminal act that must meet the principle of law must be written (*lex scripta*), must be interpreted as it is read (*lex stricta*), and not have multiple interpretations (*lex certa*), therefore it is contrary to the principle of the rule of law as stipulated in Article 1 paragraph (3) of the 1945 Constitution." With the abolition of the word "can" in Article 3 of the PTPK Law, the article 3 a quo offense has changed from a formal offense which only emphasizes the actions of the perpetrator to a material offense which emphasizes the consequences of an act of corruption in *casu* state losses from the actions of the perpetrator. This is explained very clearly and firmly by the Constitutional Court in legal considerations (*ratio decidendi*) as follows<sup>9</sup>:

**"[3.10.3]**Whereas after the Court's Decision Number 003/PUU-IV/2006, the legislators enacted Law Number 30 of 2014 concerning Government Administration (Government Administration Law) which contains provisions including; Article 20 paragraph (4) regarding the return of state losses due to administrative errors that occur due to an element of abuse of authority by government officials; Article 21 regarding the absolute competence of the state administrative court to examine the presence or absence of allegations of abuse of authority by government officials; Article 70 paragraph (3) concerning the return of money to the state treasury because the decision resulting in the payment of state money is declared invalid; and Article 80 paragraph (4) regarding the imposition of heavy administrative sanctions on government officials for violating provisions that cause state losses. Thus, based on these provisions, with the existence of the Government Administration Law, administrative errors that result in state losses and the presence of elements of abuse of authority by government officials are not always subject to criminal acts of corruption. Likewise, the solution is not always by applying criminal law, it can even be said to be in the settlement of state losses, the Government Administration Law seems to want to emphasize that the application of criminal sanctions is a last resort (*ultimum remedium*)." Administrative errors that result in state losses and the presence of elements of abuse of authority by government officials are not always subject to criminal acts of corruption. Likewise, the solution is not always by applying criminal law, it can even be said to be in the settlement of state losses, the Government Administration Law seems to want to emphasize that the application of criminal sanctions is a last resort (*ultimum remedium*)." Administrative errors that result in state losses and the presence of elements of abuse of authority by government officials are not always subject to criminal acts of corruption. Likewise, the solution is not always by applying criminal law, it can even be said to be in the settlement of state losses, the Government Administration Law seems to want to emphasize that the application of criminal sanctions is a last resort (*ultimum remedium*)."<sup>10</sup>

[3.10.6] Whereas the application of the element of financial loss by using the concept of actual loss, according to the Court, provides more legal certainty that is fair and in accordance with efforts to synchronize and harmonize national and international legal instruments, such as the Law on Government Administration as described in paragraph [3.10.2] and paragraph [3.10.3] above, Law Number 1 of 2004 concerning the State Treasury (Law on State Treasury) and Law Number 15 of 2006 concerning the Supreme Audit Agency (BPK Law) as well as the United Nations Convention Against Corruption, 2003 (United Nation Convention Against Corruption, 2003) which Indonesia has ratified through Law Number 7 of 2006. Article 1 number 22 of the State Treasury Law and Article 1 number 15 of the BPK Law define, "Losses to the state/region are shortages of money, securities, and goods, which are real and definite in amount as a result of unlawful acts, whether intentionally or negligently".<sup>11</sup>

The real or actual loss must have actually occurred/real whose amount can be calculated based on the findings of the authorized agency or public accountant. What is meant by "finding findings from the competent authority"? Referring to the Constitutional Court Decision Number 31/PUU-X/2012 explicitly (*expressis verbis*) explains the institution authorized to audit state losses as follows:<sup>12</sup>:

"That the authority of each BPKP and BPK has been clearly regulated in the legislation. BPKP is a government agency that works based on Presidential Decree Number 103 of 2001 concerning Positions, Duties, Functions, Authorities, Organizational Structures, and Work Procedures of Non-Departmental Government Institutions (hereinafter referred to as Keppres 103/2001). In this provision it is stated that BPKP has the authority to carry out government duties in the field of financial

<sup>9</sup>Lihat Putusan Mahkamah Konstitusi Nomor 26/PUU-XIV/2016, hal. 113-114.

<sup>10</sup>Lihat Putusan Mahkamah Konstitusi Nomor 26/PUU-XIV/2016, hal. 111-112.

<sup>11</sup>Lihat Putusan Mahkamah Konstitusi Nomor 26/PUU-XIV/2016, hal. 114.

<sup>12</sup>Lihat Putusan Mahkamah Konsitusi Nomor 31/PUU-X/2012 hal. 52-53

## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

supervision and development in accordance with the provisions of the applicable laws and regulations (see Article 52 of Presidential Decree 103/2001). In the General Provisions of Government Regulation Number 60 of 2008 concerning the Government's Internal Control System (hereinafter referred to as PP 60/2008) states, "The Financial and Development Supervisory Agency, hereinafter abbreviated as BPKP, is the government's internal supervisory apparatus which is directly responsible to the President". Regional-Owned Enterprises, and other institutions or bodies that manage state finances." (see Article 6 paragraph (1) of the BPK Law). Thus, the duties and authorities of each agency such as BPKP and BPK have been clearly regulated in the laws and regulations, so that the duties and authorities do not need to be further stated in the explanation of the KPK Law."

Based on the ratio decidendi a quo, the Constitutional Court has confirmed that the institution authorized to audit state losses is BPK and BPKP. This is in line with the explanation of Article 32 Paragraph (1) "what is meant by "there has actually been a state financial loss" is a state loss whose amount can be calculated based on the findings of the authorized agency or appointed public accountant." The agencies authorized to calculate state losses include the Inspectorate based on the government's internal control system (SPIP) as a way to achieve effective, efficient, transparent and accountable management of the state financial budget.<sup>13</sup>

Besides that, it is also more specific for the judiciary within the Supreme Court, by referring to the Circular Letter of the Supreme Court no. 4 of 2016 concerning the Implementation of the 2016 Supreme Court Chamber Plenary Meeting Results Formulation as a Guide to the Implementation of Duties for the Court, item 6 of the Criminal Chamber Legal Formulation expressly states that:

"5.The provisions for the 60-day time limit for refunding state losses on the recommendation of the State Audit Board/Financial and Development Supervisory Agency/Inspectorate in accordance with the provisions of Article 20 paragraph (3) of Law Number 15 of 2004 concerning Audit of State Finance Management and Accountability do not apply to Defendants who are not Officials (Private) who return losses to the State within the grace period, these provisions only apply to Government Organizers. However, it is not binding if the state administration is refunded after the 60-day deadline. It is the investigator's authority to carry out legal proceedings if an indication of a Corruption Crime is found;

**6.The agency authorized to state whether there is a loss to the state is the Supreme Audit Agency which has constitutional authority, while other agencies such as the BPKP/Inspectorate/SKPD are still authorized to conduct audits and audits of state financial management. However, it is not authorized to declare or declare a state financial loss. In certain cases, the judge based on the facts of the trial can assess the existence of state financial losses and the amount of state losses."**

On that basis, by referring to the legal norms mentioned above, it can be explained that since the issuance of Law Number 30 of 2014 concerning Government Administration, especially Article 20 paragraph (4) jo. Article 70 paragraph (3) and Article 80 paragraph (4) of Law Number 30 of 2014 concerning Government Administration regarding the imposition of severe administrative sanctions on government officials for violating provisions that cause state losses, administrative errors resulting in state losses and elements of abuse authority by government officials is not always subject to corruption.

Thus, based on the provisions of the applicable laws and regulations (be it Law Number 16 of 2004 concerning the Attorney General's Office of the Republic of Indonesia, Law Number 31 of 1999 concerning the Eradication of Criminal Acts of Corruption and Law Number 30 of 2014 concerning Government Administration) and Decisions of the Constitutional Court (Decision No. 26/PUU-XIV/2016 and No. 31/PUU-X/2012) as well as Supreme Court Circular Letter No. 4 of 2016 concerning the implementation of the formulation of the results of the plenary meeting of the Supreme Court Chamber of 2016. The Prosecutor's Office is not given

the authority to calculate state financial losses in corruption cases, but institutions such as the Supreme Audit Agency which has constitutional authority under the 1945 Constitution of the Republic of Indonesia, as well as by the Financial and Development Supervisory Agency, Inspectorate or public accountants, however, are not authorized to declare or declare a state financial loss. Or also In certain cases, judges of the Corruption Court based on the facts of the trial can assess the existence of state financial losses and the amount of state losses.

As for the corruption case which was examined and tried by the Corruption Court at the Ternate District Court with Number: 9/Pid.Sus-TPK/2019/PN.Tte which was decided on 5 September 2019 on behalf of the defendant named Rusni Teapon alias Runi as Treasurer at the Kou Village Office, East Mangoli District, Sula Regency. The defendant Rusni Teapon alias Runi was

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<sup>13</sup>Lihat Peraturan Pemerintah Nomor 60 Tahun 2008 Tentang Sistem Pengendalian Intern Pemerintah, (Lembaran Negara Republik Indonesia Tahun 2008 Nomor 127).

## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

prosecuted by the Sula District Attorney's Office in the Letter of Claim Number: REG. PERKARA : PDS-05/Q.2.14/Ft.1/05/2019 dated August 23, 2021. In the Criminal Prosecution (Requisitoir), the Public Prosecutor The District Attorney's Office of Sula Regency requested that the Corruption Court at the Ternate District Court, which examined and tried this case, decide:

1. Stating that the Defendant RUSNI TEAPON, A.Md. Kom alias RUNI was not legally and convincingly proven guilty of "committing a criminal act of corruption together" as regulated in Article 2 paragraph (1) in conjunction with Article 18 of Law Number 31 of 1999 concerning Eradication Criminal Acts of Corruption as amended by Law Number 20 of 2001 concerning Amendments to Law Number 31 of 1999 concerning Eradication of Criminal Acts of Corruption in conjunction with Article 55 paragraph (1) of the 1st Criminal Code, which is indicted in the Primary Indictment;
2. Declaring that the Defendant, RUSNI TEAPON, A.Md.Kom, alias RUNI, was acquitted of the Primary Indictment;
3. To declare that the Defendant, RUSNI TEAPON, A.Md. Kom alias RUNI, was legally and convincingly proven guilty of "committing a criminal act of corruption together" as regulated in Article 3 jo. Article 18 of Law Number 31 of 1999 concerning Eradication of Criminal Acts of Corruption as amended by Law Number 20 of 2001 concerning Amendments to Law Number 31 of 1999 concerning Eradication of Criminal Acts of Corruption in conjunction with Article 55 paragraph (1) 1 the Criminal Code, which is charged with the Subsidiary Charge;
4. Therefore, the defendant RUSNI TEAPON, A.Md.Kom Alias RUNI was sentenced to imprisonment for 1 (one) year and 6 (six) months and paid a fine of Rp. 50,000,000.- (fifty million rupiah) subsidiary 3 (three) months of confinement, minus the period of detention that has been served by the defendant, with an order that the defendant remains in custody.

In this case, the Public Prosecutor of the Sula District Prosecutor's Office calculated that it was the result of the actions of the defendant together with witness Basir

Duwila Alias Om Ba caused state losses of Rp. 248,907,000,- (two hundred and forty-eight million nine hundred and seven thousand rupiah) with the following description:<sup>14</sup>

- Whereas based on the Order for Disbursement of Funds (SP2D) Number: 3125/SP2D- LS/KS/2016 dated August 16, 2016, 60% of the Phase I Village Fund has been disbursed to the Village Account of Kou in the amount of Rp. 386,300,989,- (three hundred and eighty six million three hundred thousand nine hundred and eighty nine rupiah).
- That it was true that the defendant was together with the village head, Kou Basir Duwila and the village secretary, witness Muhamad. Ali Teapon went to Bank BPD North Maluku to disburse the Village Fund Phase I budget of 60%, with the details of the disbursement as follows

:

No	Disbursement Date	Amount
1.	August 22, 2016	Rp. 186.000.000,-
2.	August 29, 2016	Rp. 100,000,000,-
3.	October 11, 2016	Rp. 50,000,000,-
4.	04 November 2016	Rp. 10,000,000,-
5.	11 November 2016	Rp. 40,000,000,-
Total number		Rp. 386,000,000,-

- That it is true that the defendant as Treasurer of Kou Village, East Mangoli District, Sula Islands Regency, with the knowledge and approval of witness Basir Duwila Alias Om Ba, has abused his authority by means of the defendant even though he knows that 60% of the expenditure of the Village Fund Phase I budget is not fully used to finance activities in accordance with APBDesa but still issued a budget that resulted in a burden on the APBDesa with a total expenditure of Rp. 386,000,000, - (three hundred and eighty-six million rupiah), which is used in part according to the provisions in the APBDesa with details:

<sup>14</sup>Lihat Surat Tuntutan Nomor: REG.PERKARA : PDS-05/Q.2.14/Ft.1/05/2019 tanggal 23 Agustus 2021.

Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

No	Activity	Amount	Realization
1	2	3	4
1.	<b>Field Implementation Village Development</b>		
	<b>1. Development Drainage / Got ± 500 M</b>	<b>Rp. 153,185,000,-</b>	
	a. Shopping goods and services	Rp. 56,575,000,-	
	- Wages	Rp. 45,500,000,-	Rp. 47.235.000,-
	- Executive Committee Honors	Rp. 1.700.000,-	Rp. 1,500,000,-
	- Transportation Rental	Rp. 9.375.000,-	Rp. 12.302.000,-
	b. Capital Expenditure	Rp. 96,610,000,-	
	- Hoe	Rp. 445.000,-	Rp. 400,000,-
	- scope	Rp. 500,000,-	Rp. 500,000,-
	- Crowbar	Rp. 200,000,-	Rp. 400,000,-
	- Sand	Rp. 14,000,000,-	Rp. 29.350.000,-
	- Rock	Rp. 29.400.000,-	Rp. 34,035,000,-
	- Krikil	Rp. 10,000,000,-	Rp. 9.250.000,-
	- Cement	Rp. 35,625,000,-	Rp. 42,000,000,-
	- wood Lata5 size m <sup>3</sup> x5x4	Rp. 1,500,000,-	Rp. 3,600,000,-
	- Wood Board 2.5x25x4 m size	Rp. 3,000,000,-	
	- Ruki's Rope	Rp. 40,000,-	Rp. 60,000,-
	- meters	Rp. 100,000,-	Rp. 150.000,-
	- Wei nails	Rp. 200,000,-	Rp. 400,000,-
	<b>2. Construction of Bridges / Decker 2 units</b>	<b>Rp. 5,625,000,-</b>	
	a. Shopping Goods and services	Rp. 2.450.000,-	
	- Executive Committee Honors	Rp. 300,000,-	Rp. 300,000,-
	- Transportation Rental	Rp. 150.000,-	Rp. 250.000,-
	b. Capital Expenditure	Rp. 3.175.000,-	
	- Wood board 2.5x25x4 m size	Rp. 150.000,-	Rp. 500,000,-
	- Nail	Rp. 50.000,-	Rp. 100,000,-
	- 10 mm iron	Rp. 665.000,-	Rp. 950.000,-
	- 8 mm iron	Rp. 490,000,-	Rp. 140.000,-

## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

	<b>3. Manufacture Road Footprint ± 200 M<sup>3</sup></b>	<b>Rp. 267,374,487,-</b>	
	a. Capital Expenditure	Rp. 212,287,500,-	
	- Ruki's Rope	Rp. 25.000,-	Rp. 40,000,-
2.	<b>Community Empowerment</b>		
	<b>1. Socialization Development Activities Cadre Law about Inheritance</b>	<b>Rp. 14,972,500,-</b>	
	Shop Goods and Service		
	a. Rent Sonsystem Mawaris Legal Cadre Socialization Development Activities	Rp. 1,500,000,-	Rp. 400,000,-
	<b>2. Improvement Activities Role and Functions of Youth Institutions and Functions of Social Institutions, PKK</b>	<b>Rp. 31,181,980,-</b>	
	<b>a. Facility Upgrade and PKK Infrastructure</b>		
	• Goods Shopping and Service	Rp. 21,000,000,-	
	- Official Clothing/ uniform+ attribute	Rp. 21,000,000,-	Rp. 21,000,000,-
	<b>b. Facility Upgrade and Supporting Infrastructure Youth</b>	<b>Rp. 63,971,423,-</b>	
	• Shopping Tenti	Rp. 63,971,423,-	Rp. 25,000,000,-
	<b>c. Youth Leader Election Activities</b>	<b>Rp. 19,000,000,-</b>	Rp. 10,000,000,-

- That it is true that the amount of the Village Fund budget for Phase I of 60% which is implemented in accordance with APBDesa Number: 02 of 2016 concerning APBDesa Kou Year 2016 is Rp. 239,862,000, - (two hundred and thirty-nine million eight hundred and sixty-two thousand rupiah) after deducting Rp. 386,000,000,- (total disbursement of phase I) leaving the Village Fund phase I of 60% of Rp.146,138,000,- (one hundred and forty-six million one hundred and thirty-eight thousand rupiah).
- That it is true that based on the Order for Disbursement of Funds (SP2D) Number: 0067/SP2D-LS/KS/2016 dated February 1, 2017, the Village Fund Phase II of 40% has been disbursed to the Village Account of Kou in the amount of Rp. 257,533,993,- (two hundred and fifty seven million five hundred thirty three thousand nine hundred and ninety three rupiah).
- That it is true that the defendant together with the witness, the Village Treasurer Rusni Teapon, A.Md.Km Alias Runi and the Village Secretary, witness Muhamad Ali Teapon went to the North Maluku BPD Bank to disburse the 40% Phase II Village Fund budget, with the details of the disbursement as follows:

## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

No	Disbursement Date	Amount
1.	03 February 2017	Rp. 257,000,000,-
Total number		Rp. 257,000,000,-

- That it is true that later on the disbursement of the Village Fund budget for phase II of 40% the Defendant as Treasurer of Kou Village, East Mangoli District, Sula Islands Regency, with the knowledge and approval of Basir Duwila Alias Om Ba, has abused his authority by means of the Defendant even though he was aware of the expenditure of the Phase II Village Fund budget. 40% is not fully used to finance activities in accordance with the Village Budget but still issues a budget that results in a burden on the Village Budget with a total expenditure of Rp. 257,000,000,- (two hundred and fifty-seven million rupiahs), which was used by the Defendant in part as stipulated in the Village Budget with details:

No	Activity	Amount	Realization
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1.	<b>Field Implementation Village Development</b>		
	<b>1. Bridge Construction / decker 2 units</b>	<b>Rp. 5,625,000,-</b>	
	a. Shopping for Goods and Services	Rp. 2.450.000,-	
	- Wages	Rp. 2.000.000,-	Rp. 3,000,000,-
	b. Capital Expenditure	Rp. 3.175.000,-	
	- Sand	Rp. 150.000,-	Rp. 500,000,-
	<b>2. Manufacture Road Footprint ± 200 M<sup>2</sup></b>	<b>Rp. 267,374,487,-</b>	
	a. Shop Goods and Service	Rp. 55,086,987,-	
	- Wages	Rp. 41,886,987,-	Rp. 25,066,000,-
	- Honor Committee Executor	Rp. 2.700.000,-	Rp. 1.700.000,-
	- Rent Transportation	Rp. 10,500,000,-	Rp. 9.500.000,-
	b. Capital Expenditure	Rp. 212,287,500,-	
	- Cement	Rp. 39.900.000,-	Rp. 32,000,000,-
	- Rock	Rp. 54,000,000,-	Rp. 32,000,000,-
	- Krikil	Rp. 60,000,000,-	Rp. 22,500,000,-
	- Sand	Rp. 55,137,500,-	Rp. 11.310,000,-
2.	<b>Field Empowerment Public</b>		
	<b>1. Activities coaching Socialization Cadre Law on Inheritance</b>	<b>Rp. 14,972,500,-</b>	
	ShoppiSe Goods and rvice		
	a. Honor Committee Coaching Activities Socialization Cadre Inheritance law	Rp. 2.450.000,-	
	- in chargeab	Rp. 550.000,-	Rp. 550.000,-
	- chairman	Rp. 350.000,-	Rp. 350.000,-

## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

	- Member	Rp. 1.250.000,-	Rp. 250.000,-
	b. Consumption of Coaching Activities	Rp. 1.125.000,-	Rp. 1.125.000,-
	Socialization CadreRose's law		
	- Eat	Rp. 750.000,-	
	- Snack	Rp. 375.000,-	
	c. Print and Material Reproduction Socialization Development Activities Cadre Mawaris Law	Rp. 915.000,-	
	- Print	Rp. 750.000,-	Rp. 500,000,-
	d. Honor Trainer/Resource for Socialization Development Activities Cadre Mawaris Law	Rp. 5.100.000,-	
	- Master of Ceremony	Rp. 350.000,-	Rp. 50.000,-
	- Prayer Reader	Rp. 250.000,-	Rp. 50.000,-
	- Resource Person Honorarium	Rp. 4.500.000,-	Rp. 500,000,-
	e. Rent Mobility Outside Activity Socialization Development Cadre Mawaris Law	Rp. 1,500,000,-	
	- Transportation Assistance Source person	Rp. 1,500,000,-	Rp. 1,500,000,-
	f. Shopping Office stationery Activity Socialization Development Cadre Mawaris Law	Rp. 882,000,-	
	- Noot Bok	Rp. 375.000,-	Rp. 115.000,-
	- Plastic folder	Rp. 112,000,-	Rp. 165.000,-
	<b>a. Activity coaching and Landfill Management</b>	<b>Rp. 13.150.000,-</b>	
	• Shopping for Goods and Services	Rp. 5,400,000,-	
	- TPA Head Honors And Teacher Recite	Rp. 5,400,000,-	Rp. 5.000.000,-
	<b>b. Activity Infrastructure an Improvement</b>	<b>Rp. 6.550.000,-</b>	<b>Rp. 6.500.000,-</b>

## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

	<b>Posyandu Supporters</b>		
	<b>Total number</b>		<b>Rp. 154.231.000,-</b>

- That it is true that the amount of the second phase of the Village Fund budget of 40% in 2016 which is carried out in accordance with the APBDesa Number: 02 of 2016 concerning the 2016 APBDesa Kou is only Rp. 154.231.000,- (one hundred and fifty four million two hundred and thirty one thousand rupiah) so that the remaining 40% of the Phase II Village Fund budget is Rp. 102,769,000,- (one hundred two million seven hundred sixty-nine thousand rupiah) of the total disbursement of the Village Fund phase II is 40% which is disbursed in the amount of Rp. 257,000,000,-. (two hundred and fifty seven million rupiah).
- That it is true that the actions of the defendant together with the Kou Village Head witness Basir Duwila in managing the 2016 Kou Village Fund were not in accordance with the provisions so that there was a difference of:

Stage I 60%	:	Rp. 146.138.000,-
Phase II 40%	:	<u>IDR 102.769.000,- +</u>
<b>TOTAL</b>		<b>Rp. 248,907,000,-</b>

Not used for the benefit of Kou Village but used by the defendant including: Rp. 10,700,000, - (ten million seven hundred thousand rupiah) has been given to witness the Secretary of the Village Secretary Muhamad Ali Teapon in the amount of Rp. 3,500,000, - (three million five hundred thousand rupiah) and the defendant himself in the amount of Rp. 7,200,000,- (seven million two hundred thousand rupiah) and the remaining evidence cannot be shown by the defendant. And also used for the benefit of witness Basir Duwila, among others:

No	Expenditure Description	Date	Amount
1.	Basir Duwila Treatment	08-23-2016	Rp. 15,000,000,-
2.	Juf Down Payment	08-29-2016	Rp. 5.000.000,-
3.	Babinsa Transport Fee	29-10-2016	Rp. 500,000,-
4.	To go to Ambon	11-15-2016	Rp. 3,000,000,-
5.	Cash withdrawal	07-12-2016	Rp. 1.200.000,-
6.	Cash withdrawal	09-12-2016	Rp. 1.000.000,-
7.	Cash withdrawal	26-02-2017	Rp. 1,500,000,-
8.	Buy Deer	04-03-2017	Rp. 2,200,000,-
9.	Ball Transport	26-02-2017	Rp. 1.000.000,-
10.	Ball Registration	26-02-2017	Rp. 2.500.000,-
<b>TOTAL</b>			<b>Rp. 32.900.000,-</b>

- That it is true, besides that, witness Basir Duwila also bought 2 motorbikes without documents which were used for village purposes.
- That it is true that witness Basir Duwila's wife and children often take money from the defendant.
- That it is true that the defendant has returned part of the Village Fund in the amount of Rp. 7,200,000,- (seven million two hundred thousand rupiah) at the time of the investigation.
- That as a result of the actions of the defendant together with witness Basir Duwila caused a state financial loss of Rp. 248,907,000,- (two hundred and forty-eight million nine hundred and seven thousand rupiah) or around that amount.

Based on the demands (requisitoir), in the Ternate District Court Decision Number: 9/Pid.Sus-TPK/2019/PN.Tte, the panel of judges in their legal considerations (ratio decidendi) considered that based on witness testimony, expert testimony, and evidence letter, which was revealed at the trial as follows:

“Considering, that based on the defendant Rusni Teapon together with witness Basir Duwila Alias Om Ba in managing the Kou Village Fund did not comply with the provisions so that there was a difference in stage I of 60% of Rp. 146.138.000,- (one hundred and forty six million one hundred thirty eight thousand rupiah) and Phase II 40% of Rp. 102,769,000, - (one hundred and two million seven hundred and sixty-nine thousand rupiah). So the total difference between stage I and stage



## Determination of State Financial Damages Performed by the Prosecutor in the Settlement of the Crime of Corruption

It is Rp. 248,907,000,- (two hundred and forty-eight million nine hundred and seven thousand rupiah)."

The judge's consideration (ratio decidendi) assessing state losses based on the facts revealed at the trial can be justified because it refers to the Circular Letter of the Supreme Court no. 4 of 2016 concerning the Implementation of the Formula for the Plenary Meeting of the Supreme Court Chamber of 2016 as a Guide to the Implementation of Duties for the Court, number 6 of the Criminal Chamber Legal Formula expressly states that "...In certain cases, judges based on the facts of the trial can assess the existence of state financial losses and the magnitude of state losses." Thus, the assessment of state losses by the panel of judges based on the facts revealed at the trial has a legal basis. However,

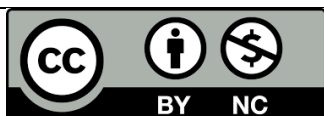
### CONCLUSION

Based on the description in the discussion of chapter IV, it can be concluded as follows:

1. Whereas based on the provisions of the prevailing laws and regulations, the Prosecutor's Office is not authorized to calculate state financial losses in corruption cases, but institutions such as the Supreme Audit Agency which has constitutional authority under the 1945 Constitution of the Republic of Indonesia, as well as by the Financial Supervisory Agency and Development, the Inspectorate or public accountant, however, is not authorized to declare or declare any state financial losses. Or also In certain cases, judges of the Corruption Court based on the facts of the trial can assess the existence of state financial losses and the amount of state losses.
2. That the judge's consideration (ratio decidendi) assessing state losses based on the facts revealed at the trial can be justified because it refers to the Circular Letter of the Supreme Court no. 4 of 2016 concerning the Implementation of the Formulation of the Results of the Plenary Meeting of the Supreme Court Chamber of 2016 as a Guide to the Implementation of Duties for the Court, number 6 of the Criminal Chamber Legal Formulation expressly (expressis verbis) states that in certain cases, judges based on trial facts can assess state financial losses and the amount of loss to the state. Thus, the assessment of state losses by the panel of judges based on the facts revealed at the trial has a legal basis.

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## Integrated Report-Making Benefit



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**ABSTRACT:** In preference to the promotion of a novel reporting form, IR is regarded as an outcome of a prolonged process of global commercial integration (Vitolla et al., 2017). The application of IR is a spectacular advance towards sustainable development and information transparency (Vitolla & Raimo, 2018). This study is conducted for measuring the benefits of integrated reporting for listed firms on the Vietnamese stock market. We employ some descriptive analysis, Cronbach's Alpha and Independent T-test for evaluating and measuring the benefits of integrated reporting for listed firms. The results show that the benefits of integrated reporting for listed firms achieved an average of 3.99 in the Likert of 5 grades. There is not insignificant difference on evaluation of the benefits of integrated reporting for listed firms in terms of gender. But, the study finds differences on evaluation of the benefits of integrated reporting for listed firms in terms of work experiences. Based on findings, some recommendations are given for listed firms to set up integrated reporting.

JEL classification codes: M41, F65, A10

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### 1. INTRODUCTION

Integrated reports are considered a concise communication of a company's strategy, corporate governance, performance and potentials, which can be compared with environmental factors to anticipate the generations, maintainance or depletion of values in the short, medium and long term (IIRC, 2021). Integrated reporting (IR) provides financial and nonfinancial information of enterprises in a report. Not only does IR combine financial statement (FS), annual report (AR) and sustainable development report (SDR) into a report but it also establishes the connection between financial business strategy and sustainable development strategy. IR assists enterprises and related partners in stabilizing their economy efficiency, improving human resources planning and contributing to their environment.

In preference to the promotion of a novel reporting form, IR is regarded as an outcome of a prolonged process of global commercial integration (Vitolla et al., 2017). The application of IR is a spectacular advance towards sustainable development and information transparency (Vitolla & Raimo, 2018).

In recent years, in Vietnam, listed firms in the stock exchange were familiarized with the knowledge of integrated reporting and the framework of International Integrated Reporting Council (IIRC) by the State Securities Commission, International Finance Corporation (IFC) and Association of Chartered Certified Accountants (ACCA). However, these reports were employed by few enterprises. A recent research of PwC denounced the rarity of integrated reporting in listed firms on Vietnam stock exchange, the majority of which managed to include contents complying with IR's structure and risk management; the entirety of all the sections of an integrated reporting, however, was absent.

Sectional properties of the benefits of integrated reporting in firms will be presented, analyzed and measured apparently in this article.

### 2. LITERATURE REVIEW

Eccles and Saltzman (2011) examined the benefits of IR for organization, including (i) internal benefits, which are related to the better decisions of internal resource allocation and greater involvement from shareholders and stakeholders; (ii) external benefits, which are the possibility to satisfy information demands from environmental, social and managerial investors and to mitigate risks. According to Krzus (2011), the application of IR offers significant benefits to overcome current reporting methods' drawbacks, which includes transparency and deeper involvement from administrators.

It is reckoned by Eccles and Saltzman (2011) that not only does IR satisfy the requirement of investors and stakeholders with accurate information, sustainability index and disclosure of non-financial information, but also encourages international convergence to meet the demand of the securities market.

## **Integrated Report-Making Benefit**

Jensen and Berg (2012) studied the difference in the use of IR at national level, as well as the benefits in terms of comparative calculation of accounting information. The study shows that with wide implementation of IR, the comparison of individual IRs in one profession would be less complicated.

According to Frias-Aceituno et al. (2013), it is the internal benefits that directly affect firms. IR will illustrate the methods by which the companies' values are created and managed, by means of the publicity of the impacts of production and business activities to the environment and society. IR application can foster the awareness in departments or regional branches of the firm about the goals and strategies. As a result, these departments can gain a deeper insight and a more precise index to evaluate the performance of those enterprises. Furthermore, they will be able to identify the correlation between non-financial and financial targets, which results in more active decision-making. Besides, they can also recognize the affirmation of commitments of administrators to present and future improvement for staff and stakeholders, which enable staff to assess the company's fulfillment. This is considered to be an efficient communicating platform contributing to stronger attachment and promotion of incentives between managers and employees. IR helps acknowledge the value-setting of companies, enhances awareness among the board of directors with regard to business model & strategy, and improves internal bonds. Therefore, an integrated mindset is promoted to boost the decision-making process related to labor sources allocation.

IR is conclusively proven to enhance administrators' understanding of relations and factors affecting the value creation of organizations in short, medium and long terms (IIRC, 2013). Integrated mindset in the report-making process can induce improvements in communications among departments, and in the internal management accounting system. As a result, specific relevant information can be provided, and commands can be implemented productively.

It is pointed out by Ernst & Young (2014) that one of the benefits of IR is to support stakeholders to make decisions about their capital allocation, help organizations share information in a wider range, which contributes to the creation of value in the future, and demonstrates the business strategies and value creation methods of organizations. Hence, IR provides more transparent information to internal and external entities.

Black Sun's & IIRC (2014) asserts the further possibilities of receiving international capitals thanks to companies' IR implementation because they could provide a clearer understanding of risks, opportunities, business model and strategy of the organization in short, medium and long terms.

Lodhia (2015) believes that, different from regular reporting, IR is a complex mechanism related to a series of activities within the enterprises. It is argued that constructing a business model according to the Environmental, Social and Governance (ESG) context induces the process of switching to IR. Companies should ensure a higher level of internal integration in the IR-making process. Strictly speaking, the structures of enterprises should be modulated in accordance with integrated thinking in all internal activities. The author also renounces IR as an immediate resolution to all the contemporary ES problems, but emphasizes that in order to apply IR successfully, the organizations should understand the current internal mechanism issues to enhance and develop in accordance with the international IR framework.

IR links firm's mission, corporate governance, finance, society and environment to help the internal and external entities properly implement commands and provide users with more transparent information so that they can assess the companies' activities in short, medium and long terms (Schooley & English, 2015). For this reason, IR is an imperative movement to global integration.

The sustainability of environment and social equality, together with the IR performance, can motivate companies to pursue sustainable development goals and open up more opportunities for them to correspond with creditors (Amran & Haniffa, 2011; Eccles & Saltzman, 2011; Stent & Dowler, 2015)

Vitolla & Raimo (2018) analyzed the process and benefits of IR through the typical research of Generali Group, which was involved in the IR's application pilot program of IIRC. The results revealed that IR is an advanced reporting tool of enterprises; the IR's application positively influences the internal and external entities of the enterprises.

According to Steyn (2014); Eccles and Saltzman (2011); Joshi et al. (2018), if firms put IR into use, the investors will obtain fully available information about activities such as finance, management, social responsibility and environment. Consequently, investors can approach, analyze and employ information precisely, then give more rational decisions. Firms with comprehensive IR's proclamation will extend the transparency and reliable level of information provided to national and international investors. IR ensures the reliability for international investors (Dumitru et al., 2015).

Inheriting the results of the above studies, the author constructs the attributes of the integrated report-making benefit (see table 1).

## Integrated Report-Making Benefit

**Table 1: The attributes of integrated report-making benefit**

Code	Attributes	Sources
B1	Firms improves the quality of information published in reports	Eccles & Saltzman (2011), Krzus (2011), Jensen & Berg (2012), Frias-Aceituno et al. (2013), IIRC (2014), Ernst & Young (2014), Black Sun's & IIRC (2014), Lodhia (2015), Schooley & English (2015), Amran & Haniffa (2011); Stent & Dowler (2015), Steyn (2014); Joshi et al. (2018), Vitolla & Raimo (2018), Dumitru et al. (2015)
B2	Provides the managers of the firms with useful information	
B3	Departments and small branches of the firms can comprehend the overall strategic goals of the firms	
B4	Business allocates internal resources more efficiently, and engage more with its shareholders and other stakeholders	
B5	The broad participation of the corporate governance department contributes to the improvement of the internal management accounting system	
B6	Firm has easier access to international capital	
B7	Firm pursue the goal of sustainable development	
B8	It increases opportunities for enterprise to approach the lender	
B9	Investors' demand has been satisfied, which attracts investors	
B10	It is easier to compare different IRs in the same industry	
B11	The process of global integration of firms and the economy has been induced and promoted	
B12	IR is responsible to improving the national reputation in compliance with international standards	

### 3. METHODOLOGY

#### *Data collection*

The data collection tool in the study is a detailed questionnaire. The author conducted direct and indirect surveys of accountants in firms listed on Vietnames stock exchange with many forms such as sending questionnaires directly or emailing from December 2021 to February 2022. The content of the detailed questionnaire includes information about people surveyed, detailed information about work experiences, and information on the scales related to the measurement of the benefits of integrated reporting (B) including 12 observed variables (table 1). The observed variables (scales) are measured on a 5-point Likert scale from 1 "strongly disagree" to 5 "totally agree". The sample size in this study is 120. The size of this sample was consistent with study of Hair et al. (1998) that the research sample must be at least 5 times the total number of indicators in the scales. The questionnaire of this study included twelve (12) indicators, and therefore, the minimum sample size to be achieved is  $5 * 12 = 60$  observations

#### *Data processing*

Then, data from these 120 questionnaires was cleaned and coded with the necessary information in the questionnaires, inputted the software.

Based on the scales inherited from previous studies, the authors tested the reliability and value of the scale through descriptive statistics, Cronbach 'Alpha analysis, and T-Test. This study used SPSS22 software to process data.

### 4. RESEARCH RESULTS

#### *4.1. Descriptive Statistics*

Information of data collected is shown in Table 2. It shows that among the 120 respondents, about 25.8% were male while the remaining 89 (74.2%) were female. Of these, 50.0% of the participants have work experiences for 5 years or higher, and less than 5 years accounted for 50.0%.

**Table 2. Respondents by gender, work experience**

<b>Gender</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	31	25.8	25.8	25.8
	Female	89	74.2	74.2	100.0
<b>Work experience</b>					
Valid	5 years or higher	60	50.0	50.0	50.0
	Less than 5 years	60	50.0	50.0	100.0
<b>Total</b>		<b>120</b>	<b>100.0</b>	<b>100.0</b>	

## Integrated Report-Making Benefit

Next, Table 3 indicates that the respondents agree with the dependent variables of “the benefits of integrated reporting” where twelve (12) attributes were quite high with an average of 3.99 compared with the highest of the Likert 5-point scale. All 12 attributes were rated at an average of 3.91 or higher.

**Table 3: Descriptive analysis of attributes of the benefits of integrated reporting**

	N	Minimum	Maximum	Mean	Std. Deviation
B1	120	3.0	5.0	4.01	.587
B2	120	3.0	5.0	4.08	.582
B3	120	2.0	5.0	3.91	.608
B4	120	3.0	5.0	3.96	.666
B5	120	3.0	5.0	4.02	.565
B6	120	3.0	5.0	4.00	.661
B7	120	3.0	5.0	4.04	.585
B8	120	2.0	5.0	3.91	.608
B9	120	3.0	5.0	3.96	.666
B10	120	3.0	5.0	4.02	.565
B11	120	3.0	5.0	4.00	.661
B12	120	3.0	5.0	4.04	.585
Valid N (listwise)	<b>120</b>			<b>3.99</b>	

### 4.2. Cronbach's Alpha

The benefits of integrated reporting for firms have been measured by the Cronbach's Alpha. Results of testing Cronbach's alpha of attributes are presented in Table 4 below. The results also show that attributes of the dependent variables have Cronbach's Alpha coefficients that are greater than 0.6; and the correlation coefficients of all attributes are greater than 0.3. So, all the attributes of the dependent variables are statistically significant (Hair et al., 2010; Trong & Ngoc, 2008).

**Table 4: Results of Cronbach's Alpha Testing of Attributes**

Cronbach's Alpha	N of Items			
.919	12			
		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
B1		43.93	25.045	.544
B2		43.86	24.761	.601
B3		44.03	24.092	.691
B4		43.98	23.941	.644
B5		43.92	24.632	.648
B6		43.93	23.441	.735
B7		43.89	24.165	.708
B8		44.03	24.092	.691
B9		43.98	23.941	.644
B10		43.92	24.632	.648
B11		43.93	23.441	.735
B12		43.89	24.165	.708

### 4.3. Independent T – test

Comparison of the results of the benefits of integrated reporting for firms between participants have different genders (male and female) can be seen in Table 5. According to the results shown in Table 5, Sig Levene's Test is 0.982, which is more than 0.05. The variance between male and female is not different. Moreover, Sig value T-Test = 0.259 > 0.05, which means that there is not, statistically, significant difference in the level of the benefits of integrated reporting for firms from these different genders (Hair et al., 2010; Trong & Ngoc, 2008).

## Integrated Report-Making Benefit

**Table 5: Differences of the benefits of integrated reporting for firms between Participants have Different Genders - Independent Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Benefits	Equal variances assumed	.000	.982	1.135	118	.259	.10535	.09280	-.07843	.28913
	Equal variances not assumed			1.140	52.734	.260	.10535	.09245	-.08010	.29081

Comparison of the results of the benefits of integrated reporting for firms between participants have different work experiences (less than 5 years and 5 years or higher) can be seen in Table 6. According to the results shown in Table 6, Sig Levene's Test is 0.022, which is less than 0.05. The variance between less than 5 years and 5 years or higher work experiences is different. Moreover, Sig value T-Test = 0.013 < 0.05, which means that there is, statistically, significant difference in the level of the benefits of integrated reporting for firms from these different work experiences (Hair et al., 2010; Trong & Ngoc, 2008).

**Table 6: Differences of the benefits of integrated reporting for firms between Participants have Different Work experience - Independent Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Benefits	Equal variances assumed	5.424	.022	2.513	118	.013	.20000	.07958	.04240	.35760
	Equal variances not assumed			2.513	110.472	.013	.20000	.07958	.04229	.35771

## 5. DISCUSSION AND IMPLICATIONS

The integrated mindset adopted during the report-making process can encourage departments to improve communicative competence and potentially improve internal management accounting systems so as to provide relevant information more accurately, and to make decisions more effectively. In the process of collecting and analyzing information, integrated thinking can help managers allocate resources more efficiently.

In order to make a quality IR, firms should apply integrated thinking at different stages of the reporting process. One point worth noting when applying integrated thinking to IR is to avoid wasting time due to the duplication of existing information through the collection and assessment of various types of capital. The content of IR allows organizations to disclose their value-creation processes by clarifying strategies, corporate governance, and operational performance. The reports also emphasize that managers can identify factors affecting future operations and how sustainable the value chain is. The IR system benefits all stakeholders, as

## Integrated Report-Making Benefit

they believe in the company's ability to create values over time. What all stakeholders look forward to understanding are issues affecting the operation of the firm in the present and future.

Thanks to IR, not only can managers improve internal assessment and control systems, and manage risk better but also improve the production process more efficiently by allocating resources more reasonably.

According to Vitolla & Raimo (2018), one of the most important factors for successful IR application is the internal communication mechanism of the firms. To prepare for the IR implementation, all departments, groups, and public relations must interact and exchange information to each other. In this case, the integrated thinking applied internally from the IR implementation to the official application must unify from the top management to all internal employees within the group. Analysts especially appreciate the brevity and importance of internal media mechanisms within the firm. Although achieving success in the early stages is a consistent, continuous effort of an entire team, the initial benefits are actually much greater than the effort required to implement it. IR can be regarded as a tool for communicating the firm's objectives, strategies, and firm performance.

Enterprises putting IR into use aspire to create a more transparent report that demonstrates their value creating and maintaining process in the future. IR aims to provide comprehensive information on the finances, governance, strategies and prospects of the business in the economic, environmental and social context in which the firm operates.

IR allows enterprises to fully integrate quantified information to specific targets. In contrast to traditional reports, IR helps readers gain the most intuitive and clear view by presenting in the form of graphs, and comparing the financial situation over the years to clearly see the change over the periods.

The firm making IR are shown to comply with regulations and standards on information disclosure according to certain international criteria.

The application of integrated thinking to the IR process will reduce the duplication of work, connections among departments, which promotes value creation in the short, medium and long term. Integrated thinking is the foundation, the basis of the IR application, according to the IIRC.

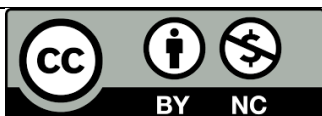
On the grounds of Vietnamese integration into the global economy, making IR adds to firms' image internationally due to the compliance with the regulations and IIRC, which results in the improving of the national prestige image in general and firms' image. Therefore, Vietnamese firms need to develop and complete IR.

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## Why is it Important to have Good Corporate Governance in The Management of Foundation?



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**ABSTRACT:** This study talks about the social foundations that are already in place in the structure of the community's socioeconomic activities, as well as how to use Good Corporate Governance (GCC) in these institutions. A literature review is how this article is shown. It includes references to the legal foundations and the results of previous studies on social foundations. There are rules in place that make it official that the Foundation is a legal entity, Law No. 28 of 2004. People think that the Foundation will be able to become a formal legal activity so that it can act as an umbrella for other organizations that are set up under it. To achieve this goal, it is very important for the Foundation to use Good Corporate Governance (GCG) in its management. This means that it must be transparent, accountable, responsible, and fair. In the future, this will give the Foundation a lot of power when it comes to good management in line with the goals that were set.

**KEYWORDS:** Good Corporate Governance, Social Foundation, Institutional, Indonesia

### I. INTRODUCTION

When people live in a state or country, they can't always get help for all of their problems. This is because the state or government doesn't always have the money and resources to help everyone. In this case, it is important for different groups to help and work with the government to solve social problems in the country. The foundation is one of the institutions that people think of as working with the government to solve social problems.

Foundation is a group of people who are organized and seen from the point of view of their activities, which makes them more visible to people. Foundations can be thought of as legal entities that have separate and ideal assets. They work for the benefit of many people in the social, religious, and humanitarian fields, and they don't try to make money (Septia et al., 2017). From the start, a foundation was not set up for profit or for commercial use. Instead, its goal was to help or improve the lives of other people (Somali, 2018)

In fact, foundations have been set up in Indonesia since before the country became independent. At that time, its main goal was to help solve social problems in the community in a certain area. Since then, the foundation has been called an organization that was not set up for profit alone (non-profit). Even though he needs money from business activities on the way, this still means that business activities are only for getting money, not the main goal of the foundation. What social foundations do to help the government solve social problems. Social problems are not just the government's job; they are also a government and a community job (Hanifah & Unayah, 2011; Septia et al., 2017).

It's usually very important for a foundation to run well and do what it was set up to do. In order for a foundation to be successful, it needs to have a lot of important things, like authorized capital, network capital, trust in the use of good corporate governance principles, and a lot of money to pay for things like salaries and rent. transparently by the foundation's management, and openly and publicly through social media, the foundation's progress is reported and shared. This builds a lot of trust with donors, which means that donations from donors keep coming in every day (Septia et al., 2017).

In general, donors will be more likely to give money to a social foundation if it is set up by someone or a group of people who can be trusted, have good communication and networking skills, and follow the rules. Institutions are so important because people trust that an activity will be run the way it was supposed to, which is why they need them to run it (Heller, 2008). In the case of implementing activities at non-profit institutions, the level of trust of the people who support it will be a big factor in how well it works (Wiyono & Susilawati, 2018). To be able to do this, the institution needs to be run properly. Foundation

## **Why is it Important to have Good Corporate Governance in The Management of Foundation?**

management that is based on the principles of Good Corporate Governance needs to be paid attention to when managing the foundation, because it is the basic pillar that supports its work (Kaihatu, 2016; Maksum, 2005; Simamora, 2012b). If there is a question about how much a foundation can grow in size, type of service, and assets over time, financial management is an important issue that must be addressed by the foundation's management bodies. That's because the bigger a foundation is, the more people who have a say in what it does. This includes the administrators, donors, and also the people who benefit from the work. GCG principles should be used in the management of the foundation to make sure that everyone knows what is going on with the foundation.

### **II. METHOD**

Uses systematic literature review to demonstrate how research and development methodologies are utilized to combine relevant papers on a certain issue. It is the goal of a systematic review of the literature to discover and evaluate all research that address a range of issues in a particular field of study (Sugiyono, 2018). Description analysis is used in this study because it is a methodical way of giving readers information, followed by details on why something happened.

### **III. RESULT AND DISCUSSION**

#### **A. Juridical Aspects of Foundation**

The Foundation is one of Indonesia's governmental organisations dedicated to social and humanitarian causes. Numerous foundations in Indonesia are well-known. There are even people who amass enormous wealth. As legal bodies, foundations are unique. This sort of legal entity was created as a result of a legal act, specifically the division of certain assets from the creator for a specific purpose (Somali, 2018). Generally, this purpose is not for profit.

According to Law No. 16 of 2001 on Foundations (UU No. 16/2001), as revised by Law No. 28 of 2004 on Amendments to Law No. 16/2001 (Law No. 28/2004), the foundation's aims are confined to social, religious, and humanitarian purposes. Along with riches and objectives, an organization is required to accomplish the founding objectives. The law no. 16/2001 regulates the foundation's three organs: trustees, administrators, and supervisors (Somali, 2018). These three organs are responsible and empowered to manage the foundation in such a way that the foundation's objectives are met in accordance with the foundation's purpose of establishment.

According to Article 1 point 1 of Law No. 16/2001, a foundation is a legal entity comprised of distinct assets that is dedicated to achieving certain goals in the social, religious, and humanitarian spheres and is not comprised of members. Separated riches from the founder's fortune is intended for specific social, religious, and humanitarian causes. According to the explanation of Article 8 of Law no. 16/2001, the business activities of foundation business entities cover a broad range of areas, including human rights, the arts, sports, consumer protection, education, the environment, public health, and science. Thus, the foundation may engage in any activity that does not violate public order, morals, or applicable laws and regulations.

#### **B. Classification of Foundation**

According to the general explanation portion of Law No. 8 of 2004, foundations are legal bodies with social, religious, and humanitarian purposes and objectives (Simamora, 2012b). Thus, the legislation permits just three (three) types of foundation businesses: management of social, religious, and humanitarian activities. It encompasses formal and non-formal schooling, orphanages, nursing homes, hospitals, polyclinics, labs, sports development, scientific research, and comparative studies in the social realm. In the religious field, this includes the establishment of worship facilities and Islamic boarding schools, the collection and distribution of zakat and alms, the promotion of religious understanding, the performance of religious symbols, and comparative religious research. While working in the humanitarian sector, such as assisting victims of natural disasters, refugees fleeing conflict zones, the homeless, the destitute, and the homeless.

#### **C. Good Corporate Governance in Foundation Institution**

As a non-profit, the Foundation is meant to work hand in hand with the federal government on social welfare issues. When the foundation is well-managed, it has a lot of potential to aid the government with social welfare issues.

According to the Ministry of Law and Human Rights, numerous foundations are founded to preserve the interests of a certain religion or ethnicity's citizens, for example, foundations formed by places of worship or specific ethnic groups resident in a region (Simamora, 2012a). An operating licence issued by the Ministry of Law and Human Rights is adequate if a foundation's activities do not involve many third parties and the foundation's deed of establishment states its vision and objective. When working with third parties, a foundation must obtain an operational permit from the appropriate body where it conducts business. Foundations in the social sector are required to have a permit from the Social Service before they may begin

## Why is it Important to have Good Corporate Governance in The Management of Foundation?

operations. Because of this, the Social Service also provides assistance in the form of guidelines and operational permissions for other types of non-profit organizations, such as cooperatives.

In general, social groups and social communities that are thought to be able should take care of a legal entity in the form of a foundation. Foundations in the Social Service are called Social Welfare Institutions (LKS) to make them different from orphanages, which are called Child Welfare Institutions. This is to make them clear. As long as foundations can run well and do their jobs, the government will have a big help in dealing with social problems, especially in areas where there is a lot of poor people. However, in reality, there are foundations that aren't evenly spread out across the country, and foundations aren't all the same in terms of their conditions and abilities. This makes foundations' roles uneven and not as effective as they could be. Presidential Regulation 15 of 2010 says that a regional poverty reduction coordination team (TKPKD) will be set up at the provincial and regency city levels. This means that foundations can play a role in the government as a partner. This team is a cross-sectoral and cross-stakeholder team that works at the provincial, district, and city levels to speed up poverty reduction at those levels. The structure and working methods of the TKPK are then outlined in the Regulation of the Minister of Home Affairs (Permendagri) No. 42 of 2010. In the Presidential Regulation, it says that the community and other stakeholders are members of the TPAPD, which is then outlined in the Regulation. In this case, even though it isn't explicitly said that the foundation is a member, it can't be ruled out that the foundation is a big help to the government when it comes to social welfare.

In general, foundations also need money from other people, like donors. There are also many foundation founders who can't afford to keep the foundation going on a long-term basis (Somali, 2018). The reason many of them set up foundations was because they were called to spend their lives giving back to others. So, if the foundation they set up doesn't get money from donors, the foundation's operations and activities won't be able to run smoothly.

Law No. 16 of 2001 explains that in addition to money and goods from the founder, foundations can also get money and assets from donations or non-binding help, waqf or inheritance grants, grants or testamentary grants, and other acquisitions that don't violate the Foundation's Article of Association or applicable regulations. This is what the Foundation Law says about the source of funds for foundation activities.

Social organizations, which also include foundations, are broken down into four types by the Ministry of Social Affairs in Guidelines for Classifying Social Organizations of 2004. Foundations are one of them. 1) Type A/independent, which has met institutional and service standards without government help, can be used as an example of how this type of business can do this. This type of place, Type B/developing, is still a work in progress. It has met most of the institutional and service standards. It still needs help to grow. Type C/growing, which has met some of the institutional and service standards, still needs help to grow. Help is still needed for Type D/embryos, who aren't yet meeting institutional and service standards. They still need help meeting minimum standards.

According to the explanation and classification, it can be seen that not all social groups, such as foundations, can be on their own. For people who aren't independent, of course, they still need help from other people to make their organizations strong and meet institutional and service standards. Most of the foundations don't meet institutional and service standards, and they don't have a lot of people who want to give them money or help them out.

There are foundations that are no longer active, but there are also foundations that are very active in their work. In foundations that are very active, in general, they have met institutional and service standards and have enough money to run them. These foundations keep getting the trust and support of their donors so that they can run their programs smoothly and long-term. For example, if there is a natural disaster, the foundation's operational funds are used to pay for the foundation's regular work and also to help people who need help in other ways.

Foundation managers who are still working and have done a lot to help people in their local communities, it turns out, are able to do this because they have a lot of money from people who give it to them (Yupita et al., 2021). Furthermore, they said that in order to get donors to support and trust them, they run their foundation by following the rules of Good Corporate Governance (GCG). Professional management of the institution is able to use good GCG in line with the reason the institution was set up (Rustini et al., 2022). They think that this is something that really helps their foundation and makes people more likely to donate to it. There are also many institutions that donors trust and support because they were set up or run by people who have a lot of social capital (Heller, 2008). One group is a leader in the community, and another is made up of people whose parents are well-respected. Then their children set up foundations and get a lot of support. With the help and trust of their donors, these foundations do a good job at dealing with social welfare issues, which is in line with their founding goal, which was to work with the government to solve social welfare issues together (Sanjaya, 2018)

An effort is made to apply the principles of Good Corporate Governance. The five principles of good foundation management are being used. Transparency, independence, accountability, responsibility, and fairness are the five principles of fairness (Kaihatu, 2016; Maksum, 2005; Tjager, 2003). The principle of transparency in this case is about how donations from donors are

## Why is it Important to have Good Corporate Governance in The Management of Foundation?

handled, including how much money is received, how it is distributed, and how it is used for the foundation's own needs. The foundation's activities, both routine and non-routine, are also open to the public. This means that the foundation should be able to do its work without any outside pressure or interference, and also without ulterior motives. Foundations should be run professionally without any conflict of interest or pressure from parties or those who don't follow the law or good business practices. The accountability of the foundation's management shows that the foundation's functions and responsibilities are clear so that the foundation's management runs well. If the accountability principle is used correctly, the foundation will not have problems with agencies (conflict of role interests). Foundations must be able to show donors, beneficiaries, and other people how well they did. To do this, the foundation must be run correctly, measurably, and in the best interests of the foundation, while also taking into account the interests of the foundation's donors, beneficiaries, and other stakeholders. With the principle of conformity or compliance, you should manage the principles of a healthy organization and any laws and regulations that apply to your company. Foundation managers have to show that they are responsible for everything they do when they run the foundation. This is a show of trust that the people who run the foundation have in them. When it comes to running the foundation, fairness means being able to do justice and equality for all of the people who have rights based on agreements and laws and regulations. If you want to be fair, you should make sure that all of the foundation's assets are managed properly and wisely and used for the foundation's activities, not just for the benefit of the manager. It's important for foundations to always look out for the interests of their donors, other stakeholders, and everyone else who works with them. Foundations should always act in a way that is equal and fair.

The use of GCG principles by social foundations can help donors have more faith in the foundations. In addition, these donors will be able to keep giving to the social foundation on a regular basis (Heller, 2008). If social foundations get enough money from people, of course they will be able to help the foundation run smoothly and have no trouble paying for things like rent and food. Even if donors give them a lot of money, social foundations will still be able to improve their performance when it comes to social welfare issues on a bigger scale.

## IV. CONCLUSION

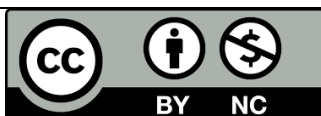
Good Corporate Governance is thought to be the thing that really helps the foundation run and stay alive, and it also makes donors more likely to give money to the foundation. In addition, most of the foundations that donors trust and support are foundations set up or run by people who have a lot of social capital, so they can do things in the social sector that are in line with their goals and vision.

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## Spillover of COVID-19: Impact on National Defense



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**ABSTRACT:** The rapidly spreading impact of Covid-19 has potentially dire consequences for the Ministry of Defense's ability to protect national interests. The unprecedented effects of this pandemic are directly undermining the ability of the Ministry of Defense to carry out the National Defense Strategy. In particular, Covid-19 has harmed the readiness of the Armed Forces, their ability to project power globally, and their speed of modernization for future challenges.

This paper uses a descriptive qualitative approach as the main writing approach and uses the concept of impacts across key organizational pillars by Beth McGrath (2020), including (1) Workforce planning, (2) Training methods, (3) Reprioritizing spending, and (4) Policy.

The results of this study are: (1) The Ministry of Defense must be prepared with a complete set of strategies, (2) Distributed Virtual Reality training is a natural solution to the challenges posed by the current pandemic, (3) The military has no other choice but to make it a priority in spending on defense equipment and in carrying out military operations. The obvious choice is the big-budget items that cause problems, and (4) The defense equipment procurement program, military operations, and Research & Development (R&D) activities are expected to be hampered. As governments seek to prevent and mitigate the impact of this pandemic, the positive role played by military forces can be seen as an excuse to offset some of the expected defense budget cuts.

**KEYWORDS:** Covid-19, National Defense, Policy, Reprioritizing spending, Training methods, Workforce planning

### I. INTRODUCTION

It is known that the 2019-nCoV corona virus originated from the city of Wuhan in China. The virus attacks human respiration and spreads throughout the world, including Indonesia. According to most of the world's leading transmittable disease experts, the Wuhan coronavirus spreading from China is now likely to develop into a pandemic that circles the globe. Its prospect is overwhelming. A pandemic— a spreading outbreak on two or more continents (Osler, 2019).

Coronaviruses are a large virus family usually targeting the respiratory organ. The name is being derived from the Latin word corona, meaning crown, due to the spiky fringe which surrounds these viruses. Many species, such as bats, cats, and birds, get sick. Just seven are known to infect humans like Covid-19, SARS, and MERS.

Researchers are working to understand this new threat and warn current public health efforts, including the potential creation of a vaccine, including how the virus is evolving and moving from person to person. Infectious-disease specialists at Fred Hutchinson Cancer Research Centre, such as Dr. Trevor Bedford, are among the scientists at the front lines of that research effort. Bedford, a computational biologist who studies how viruses grow and spread, is gaining information about Covid-19 which he hopes will help save lives from this emerging respiratory virus disease.

### Corona Virus Data Detail

Country	Deaths	Death rate*	Total Cases
US	915,255	278.8	77,215,428
Brazil	638,673	302.6	27,492,904
India	509,011	37.3	42,665,534
Russia	334,093	231.4	14,102,736
Mexico	312,697	245.1	5,283,852
Peru	208,381	641.0	3,445,680

## Spillover of COVID-19: Impact on National Defense

UK	159,518	238.7	18,266,015
Italy	151,015	250.5	12,105,675
Indonesia	145,176	53.6	4,807,778
Colombia	137,115	272.4	6,020,095

\*Deaths per 100,000 people

**Source:** Johns Hopkins University and national public health agencies, BBC News, (2022). *Covid map: Coronavirus cases, deaths, vaccinations by country*, The Visual and Data Journalism Team

Figures last updated: 14 February 2022, 13:09 GMT

Indonesia is a developing country and the fourth most populous country in the world and thus is expected to suffer greatly and over a longer time. When the novel coronavirus SARS-CoV2 hit China most severely during the months December 2019 – February 2020. On January 27, 2020, Indonesia issued travel restrictions from Hubei province, which at the time was the epicenter of the global COVID-19, while at the same time evacuated 238 Indonesians from Wuhan. President Joko Widodo reported that he first found two cases of COVID-19 infection in Indonesia on March 2, 2020. (Djalante R, et al. (2020)). Patients who were confirmed to have COVID-19 in Indonesia started from an event in Jakarta where the patient was in contact with a foreign citizen from Japan who lives in Malaysia. After the meeting, the patient complained of fever, cough, and shortness of breath (WHO, 2020; Putri, 2020).

The policies issued are required to reduce existing problems. At least efforts to eradicate epidemics and pandemics in Indonesia are carried out through actions, such as self-awareness, handling of sufferers, sources of disease must be destroyed, and socialization to the public. Systematic efforts that have been carried out include planning a national scale movement to eradicate disease and regional and international scale agreements (Sumampouw, 2017).

The Indonesian government attempted to implement a special set of rules: one that has isolated areas affected by the pandemic and enabled the deployment of military forces to deal with disaster-laden emergencies in those regions where transmission of the virus is difficult to control. Despite this, there is no alternative given the nature of national security threats (Power 2020; M. M. Alam et al. (2021)).

The rapidly spreading impact of COVID-19 has potentially dire consequences for the Ministry of Defense's ability to protect national interests. The unprecedented effects of this pandemic are directly undermining the ability of the Ministry of Defense to carry out the National Defense Strategy. In particular, COVID-19 has harmed the readiness of the Armed Forces, their ability to project power globally, and their speed of modernization for future challenges (Govini, 2021). The growing rate of COVID-19 infections is affecting medical facilities, contractors, defense supply chains, performance venues, and military installations. Companies in the Defense Industry are also very vulnerable to COVID-19.

One of the first national security and defense lessons from the COVID-19 pandemic has been that globalization's promises about the security of vertically integrated global supply chains appeared to crumble from the start of this global crisis (Deakin University 2020). After decades of allowing market forces to dictate the shape of just in time global supply chains, many a country was left with severely depleted national industrial capacity: especially, for manufacturing. In many cases, market forces had worked against the maintenance of a scalable industry base (Coyne, 2020).

## II. LITERATURE REVIEW

### A. National defense

According to Victoria (2018), the national defense is one of the functions of state government which is an effort to realize a unified state defense to achieve national goals, namely to protect the entire nation and the entire homeland of Indonesia, promote public welfare, educate the nation's life and participate in implementing world order based on independence, eternal peace, and social justice.

National defense efforts are carried out by building, maintaining, developing, and using the power of state defense based on the principles of democracy, human rights, public welfare, the environment, provisions of national law, international law, and international custom, as well as the principle of peaceful coexistence.

To support the interests of national defense, human resources, natural resources, artificial resources, as well as national facilities and infrastructure that are within and/or outside the management of the department in charge of defense are utilized to the maximum extent possible, both as a reserve component and as a supporting component.

National defense efforts take into account the dynamics of the development of the global, regional and national strategic environment. The geographical constellation of Indonesia, which is at the crossroads of two continents and two oceans, makes

## Spillover of COVID-19: Impact on National Defense

Indonesian waters a very strategic communication route and sea transportation route for the international community, as well as a crossing of the national interests of various countries in the world (Presidential decree (PERPRES) Number 8 the Year 2021). This condition greatly affects the patterns and forms of threats that are increasingly complex and multidimensional, in the form of military threats, non-military threats, and hybrid threats that can be categorized into factual and potential threats. These threats include terrorism, natural disasters, piracy, theft of natural resources, border violations, disease outbreaks, cyber, espionage, narcotics, and open conflict or conventional war.

The Indonesian state defense system is a universal defense system that involves all citizens, territories, and other national resources, and is prepared early by the government and is carried out in a total, integrated, directed, and continuous manner to uphold state sovereignty, territorial integrity and the safety of the whole nation from all threats.

U.S. defense strategy defines the components of a good national defense: (1) operational, (2) future challenges, (3) force management, and (4) institutional risks.

National Defense agencies are working to maintain mission readiness, ensure public safety, and support government-wide efforts in a wide variety of areas. The uncertainty of the current dynamically changing environment makes achieving these goals challenging. This article discusses how organizations can continue to support core response efforts, the safe flow of goods and resources, and consistent communication with the public.

Defense, Security, and Justice agencies at all levels (federal/national, state/regional, local/municipal) can expect impacts across key organizational pillars, including (McGrath, 2020):

- **Workforce planning:** increased focus on enabling remote work and providing scalable, virtual support solutions requiring investments in digital, technology, and cyber services.
- **Training methods:** military and law enforcement training that is conducted in classrooms can pivot to remote methods; however, operational training requires experiential, team-based approaches.
- **Reprioritizing spending:** as government spending shifts toward economic recovery efforts, DS&J organizations may experience decreased budgets requiring them to review investments and operations.
- **Policy:** as organizations reflect on the response to this crisis, the focus will shift toward scenario planning and establishing new policies and procedures to increase performance, preparedness, and resiliency.

### B. Balance of Threat

Walt's threat balance theory emerged in the 1980s. The basic idea is that a country builds a military force as strong as any other country, regardless of whether that country acts aggressively or not. By maintaining the balance of power, no one country is drastically stronger than another, thus ensuring mutual security.

That is the balance of power theory. It was accepted for a long time until Stephen Walt started arguing that history doesn't support it. In contrast, Walt sees states accepting the rise of non-aggressive powers while working to balance a much weaker, but more aggressive threat. As a result, he argued that the state's ideas about security were determined by perceived threats, not the need to maintain a balance of power, and the threat balance theory was born (Muscato, 2017). According to Stephan Walt, states associate their security with perceived threats and seek to balance them through international relations. Four elements define perceived threat. The four elements of threat are aggregate strength, geographical proximity, offensive capability, and offensive intent. Those are the four criteria that countries use to evaluate threats posed by other countries.

According to Law Number 3 of 2002 concerning National Defense, threats consist of military threats and non-military threats. Military threats are the responsibility of the military as the main component to fight together with reserve components and supporting components. Meanwhile, non-military threats are the domain of the relevant ministries to counteract them.

The Indonesian military, like other government institutions, is very disturbed in carrying out its duties to maintain the territorial integrity of Indonesia during this Covid-19 pandemic. Several policies must be made to continue to carry out their duties even with very limited conditions. The most burdensome thing for the military is the dislocation of the military budget to other institutions that are considered more competent in dealing with the coronavirus outbreak. As a result, many military operations were postponed or canceled. Disruption of military operations will affect the security of the territory of the Unitary State of the Republic of Indonesia.

### C. Covid-19

Coronavirus disease (Covid-19) is an infectious disease caused by the SARS-CoV-2 virus (WHO, 2022), and was discovered in December 2019 in Wuhan, China. It is highly contagious and quickly spread throughout the world.

Covid-19 most often causes respiratory symptoms that can feel like a cold, flu, or pneumonia. Covid-19 can attack more than the lungs and respiratory system. Other parts of the body may also be affected by this disease (NCIRD, 2021):

- Most people with Covid-19 have mild symptoms, but some people become seriously ill.



## Spillover of COVID-19: Impact on National Defense

- Some people including those with mild or no symptoms may be suffering from a post- Covid or “long-term” Covid-19 condition.
- Older adults and people with certain medical conditions have an increased risk of severe illness from Covid-19.
- Vaccines against Covid-19 are safe and effective. Vaccines teach our immune system to fight the virus that causes Covid-19.

The emergence of 2019-nCoV has attracted global attention, and on 30 January WHO declared Covid-19 a public health emergency of international concern (Dong Y, et al., 2020). The increase in the number of Covid-19 cases is happening quite quickly and has spread between countries. As of February 27, 2022, a total of 5.289.414 confirmed cases were reported with 4.593.185 deaths (CFR 86.8%) of which cases were reported in 192 countries/regions. Among these cases, several health workers have been reported to be infected (Ministry of Health of the Republic of Indonesia, 2022).

Coronavirus Disease 2019 (Covid-19) is a new type of disease that has never been previously identified in humans. The virus that causes Covid-19 is called Sars-CoV-2. Coronavirus is zoonotic (transmitted between animals and humans) (Putri, 2020). Meanwhile, the animal that is the source of the transmission of Covid-19 is still unknown. Based on scientific evidence, Covid-19 can be transmitted from human to human through coughing/sneezing droplets (droplets). Common signs and symptoms of Covid-19 infection include symptoms of acute respiratory distress such as fever, cough, and shortness of breath. The average incubation period is 5 - 6 days with an incubation period of fever, cough, and shortness of breath. In severe cases, Covid-19 can cause pneumonia, acute respiratory syndrome, kidney failure, and even death (Tosepu, R., et al., 2020).

### III. METHODOLOGY

This paper is analyzed with an analysis of literature review related to the problem of how the Covid-19 pandemic affects the national defense. A literature study is a study whose object of research is in the form of literary works in the form of scientific journals, books, articles in the mass media, and statistical data. This literature review is used to find out the steps taken by the Ministry of Defense of the Republic of Indonesia in dealing with the Covid-19 pandemic from the point of view of defense policy.

### IV. DISCUSSION

Defense, Security, and Justice agencies at all levels (federal/national, state/regional, local/municipal) can expect impacts across key organizational pillars, including workforce planning, training methods, reprioritizing spending, and policy.

#### D. *Workforce planning*

The safety and welfare of civilian and military personnel is a top priority for the Ministry of Defense. Therefore, it is necessary to continue to look for new ways to acquire, develop, recruit, and retain various talents during the Covid-19 pandemic. The Covid-19 pandemic emphasizes the importance of comprehensive emergency planning, especially in terms of staffing. The supply of labor for the Ministry of Defense is one of the biggest barriers to recruitment.

High work volumes, personnel burnout from extra shifts and constant stress, and staff infections/exposures can quickly accelerate staff shortages to crisis levels. Three strategies have proven essential to avoid compromising surge capacity and patient care during new Covid-19 spikes and future virus outbreaks.

- a. Use “out-of-the-box” recruitment tactics to meet temporary and short-term needs (Williams, 2021).
- b. Create a planning strategy for personnel occupying key positions.
- c. Develop efficient plans implemented to meet needs with current or on-leave cross-departmental personnel.

Flexibility and planning go hand in hand to encourage greater staff resilience. The Ministry of Defense must be prepared with a complete set of strategies, starting from implementing advanced practice providers in non-traditional roles, returning staff, and hiring personnel from the Defense University of the Republic of Indonesia.

The ability to quickly and efficiently recruit new personnel, volunteers, and staff is also critical to scaling up quickly in an emergency. The process includes identifying valid competencies, determining fit for need areas, and identifying needs for training or refresher education.

During the pandemic, special consideration should be given to social distancing in the workplace via teleworking. Therefore, the Ministry of Defense's pandemic plan should include (Inspector General, U.S. Department of Defense (2021):

- Use of laptops, high-speed telecommunications links, and other systems that enable personnel to perform essential functions while working remotely.
- Remote work testing and training, as well as the impact of remote work, on the internal network. Testing, training, and practice should also cover the practice of social distancing techniques, including remote working skills, and assessing the impact of staff frameworks on facilities, essential functions, and services.

## **Spillover of COVID-19: Impact on National Defense**

### **E. Training methods**

The coronavirus has a significant effect on daily military operations. And like other countries, the creeping threat of the virus has reached the pockets of many militaries. The best option for the military is to cancel or reduce many hands-on exercises. During an epidemic, training activities, such as basic military training can spread the virus and potentially on a large scale. Military drills requiring the movement of people, via planes, trains, and trucks, to specific locations will increase the spread of the virus. Naturally, this would lead to a military operation readiness dilemma.

This pandemic has an impact on military readiness. And no one can predict when this epidemic will end, thus raising fears within the armed forces for war. Therefore, defense organizations need to start planning for the long-term implications. The main concern for the military is the implications for recruits who must be provided with basic military training. If the military's basic training facilities were to close, it would stop the flow of personnel into the military.

Distributed Virtual Reality training is a natural solution to the challenges posed by the current pandemic. It can be used in times of need, allowing fighters in different locations, from the comfort of their living room couch to military bases or deployments, to practice individual and collective skills. Indeed, many virtual training solutions already exist or are under development (Jennifer McArdle, et al., 2020).

Indonesia's Military Armed Force should be able to adopt VR technology. This technology will be very supportive in national defense, especially in preparing defense human resources to face threats. The use of VR in military training and education will be very helpful, considering that VR technology can be a fully immersive system, where it gives users the closest to reality through the high quality of graphics and performance as well as complete stimuli. The soldier will be easier to understand the material and the surrounding environment because it is also balanced with practice. In addition, military education and training are most dangerous and threaten the safety of soldiers (Herdayatamma, K.L., 2021).

The reality, however, is that the current military cannot be formed by providing distributed VR training on a large scale. If the coronavirus causes the cancellation of long-term drills and the closure of training facilities, military readiness could be seriously disrupted.

### **F. Reprioritizing spending**

The coronavirus disease 2019 (Covid-19) pandemic has dramatically changed the world we live in. Not only has the human suffering unimaginable worldwide, but the necessary protective measures implemented by governments around the world have caused an economic downturn far worse than the 2008–2009 financial crisis and unprecedented since the Great Depression of 1929. This crisis will have an impact on the interpretation of the 2020 military spending data and should have an unexpected impact on its transparency (Tian, 2020).

The current corona crisis has a potentially devastating economic and non-economic impact on non-traditional security threats, particularly if they are not localized. The Covid-19 pandemic is putting pressure on military spending. The government prioritizes the health sector to deal with pandemics that are suffering from the community rather than supporting the development of military forces to deal with insignificant threats. However, military budget items that were deemed unimportant were diverted to the health sector. This of course will have an impact on military operations that are getting weaker. In addition to the reallocation of resources from the military to health institutions that are better able to deal with the threat of the coronavirus, there has been a reduction in economic activity after the coronavirus crisis.

Regarding a very significant reduction in the defense budget, the military has no other choice but to make it a priority in spending on defense equipment and in carrying out military operations. The obvious choice is the big-budget items (planes, ships, tanks...) that cause problems.

### **G. Policy**

As organizations reflect on the response to this crisis, the focus will shift toward scenario planning and establishing new policies and procedures to increase performance, preparedness, and resiliency.

Since the start of the pandemic, all countries introduced measures to protect the health of their armed forces personnel reflecting national policies. These include the introduction of social distancing, a shift to work from home, and a substantial reduction in military training and field drills. As countries relax the measures of the 2020 health protocols, the armed forces are gradually rebuilding their military training programs while introducing quarantine measures for groups of personnel to minimize the risk of transmitting Covid-19 in large numbers of personnel. The Covid-19 outbreak among armed forces personnel has had a major impact on military capabilities. While not all outbreaks are reported in open sources, they do have a markedly communal life and are difficult to identify and isolate.

This pandemic has not had a uniform effect around the world in terms of the absolute number of infections and their trajectories. It is not easy to explain the reasons behind this discrepancy, although it appears to be a mix between the timeliness

## Spillover of COVID-19: Impact on National Defense

and effectiveness of government responses, community preparedness as a result of previous experience with communicable diseases, adherence, and risk sensitivity, community age profile, the influence of sanitary conditions on the immune system and climatic conditions affecting airborne transmission (Expert Workshop, 2020).

Different infection rates, varying government responses, and differing attitudes in society to viruses and other competitive risks may help explain why the impact of the pandemic on local peace and stability also varies. In general, the government will prioritize the health sector to deal with the Covid-19 pandemic by cutting the budget of non-health ministries, including the defense ministry.

However, in terms of the impact of the pandemic on defense spending, it should be noted that so far a policy of dislocation of the defense budget has been implemented to other ministries that have the authority to deal with the Covid-19 pandemic. As a result, the defense equipment procurement program, military operations, and Research & Development (R&D) activities are expected to be hampered (Meyer, et al. 2021). As governments seek to prevent and mitigate the impact of this pandemic, the positive role played by military forces can be seen as an excuse to offset some of the expected defense budget cuts.

The military has to make difficult decisions is rarely made, especially concerning large procurement projects. The Kagan law of defense economics applies here, which states that “When the military is asked if they want more troops or new planes and are told they have to choose one, it always chooses planes” (European Organisation of Military Associations and Trade Unions, 2021).

## V. CONCLUSIONS

Flexibility and planning go hand in hand to encourage greater staff resilience. The Ministry of Defense must be prepared with a complete set of strategies, starting from implementing advanced practice providers in non-traditional roles, returning staff, and hiring personnel from the Defense University of the Republic of Indonesia.

Distributed Virtual Reality training is a natural solution to the challenges posed by the current pandemic. It can be used in times of need, allowing fighters in different locations, from the comfort of their living room couch to military bases or deployments, to practice individual and collective skills. Indeed, many virtual training solutions already exist or are under development. Indonesia's Military Armed Force should be able to adopt VR technology. This technology will be very supportive in national defense, especially in preparing defense human resources to face threats. The fact, however, is that the current military cannot be formed by providing distributed VR training on a large scale. If the coronavirus causes the cancellation of long-term drills and the closure of training facilities, military readiness could be seriously disrupted.

Regarding a very significant reduction in the defense budget, the military has no other choice but to make it a priority in spending on defense equipment and in carrying out military operations. The obvious choice is the big-budget items (planes, ships, tanks...) that cause problems. The military has to make difficult decisions is rarely made, especially concerning large procurement projects.

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## The Adoption of Learning Management System in Teaching and Learning in the New Normal



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**ABSTRACT:** In the middle of a worldwide health crisis that threatens lives and containment measures that endanger our way of life, we are confronted with the sobering reality that the world we return to will be irrevocably altered. Thus, this deadly situation has flipped the offline teaching process and paved the way towards online-based learning. In today's scenario, learning has stepped into the digital world, where teachers and students are virtually connected. It is also the time where the teaching and learning activities were immediately shifted to full web-based learning. Despite the obstacles faced by both teachers and learners, online learning has proven to be a cure for this unprecedented worldwide pandemic. Transitioning from conventional face-to-face learning to online learning may be a completely different experience for both learners and educators, which they must adjust to since there are few or no other options. Hence, in this research investigation, the researcher explored the construct validity of the Technology Acceptance Model (TAM) in analyzing the factors that influence the acceptance of the use of technologies based on the user's perspective in a higher educational institution in the Philippines.

The analysis revealed that utilizing Google Classroom as an LMS was beneficial to the faculty members since it allowed them to complete their academic tasks swiftly and effortlessly. They also have positive attitude towards using LMS and agreed that using various online platforms was simple and easy for them. In addition, the findings also suggest that faculty members have had a great experience utilizing online learning through Google Classroom in their classes, and they are confident that they will continue to use this Learning Management System in the next school years and will promote it to their colleagues. Therefore, educational institutions should pay more attention on the development of its educational and ICT infrastructure most especially in this time of pandemic wherein web-based learning is the current trend in our educational landscape. Furthermore, policy makers should anchor their decisions on the findings of this study most especially on the procurement of various educational technologies and/or ICT infrastructures in their respective educational institutions. Also, educational administrators should develop an understanding on how various factors or variables significantly influences their intention to use a particular learning management system.

**KEYWORDS:** New Normal, Learning Management System, Technology Adoption, COVID-19 Pandemic

### I. INTRODUCTION

The COVID-19 pandemic has become a global health issue. The emergence of this pandemic caused enormous disruptions in people's lives all across the world, and it has had a significant influence on education. This pandemic situation forced educational institutions to shut down to control the spread of this virus, thereby making the teaching professionals think of alternative teaching methods during this lockdown to continue to deliver education and sustain student academic progress. Thus, this deadly situation has flipped out the offline teaching process and paves the way towards web-based learning (Kumar, 2020). Web-based learning is defined as learning that makes use of Information and Communication Technologies (ICTs). In today's scenario, learning has stepped into the digital world where teachers and students are virtually connected. It is also the time where the teaching and learning activities were immediately shifted to full web-based learning.

As the Philippines also faced a critical situation due to the rise of the said health crisis, it has become urgent to explore other innovative learning modalities that will facilitate migration from traditional to remote teaching and learning. Higher Education Institutions (HEIs) in the country adopted a flexible learning scheme. Policies implemented include guidelines for preventing, controlling, and mitigating the spread of COVID-19 in Higher Education Institutions (HEIs). However, despite the

## The Adoption of Learning Management System in Teaching and Learning in the New Normal

concerted efforts made by the administrators and educators to continue teaching and learning beyond the usual face-to-face instruction, teachers were not yet ready for alternative modes of teaching.

In the last decade, online learning has expanded rapidly due to its convenience (Junaini, 2020). However, the world is shaken by the outbreak of the Coronavirus (COVID-19). The outbreak of this pandemic across the world has profoundly altered almost all aspects of life, including education, and the Philippines has not been an exception to these changes. The difficulty of handling the outbreak from spreading more widely has made world leaders develop stringent rules to break the chain of the spread of COVID-19. With this, the implementation of lockdown and social distancing has been enforced as a preventive measure to spread the coronavirus infection, resulting in the complete paralysis of global activities. Because of this crisis, Higher Educational Institutions (HEIs) have resorted to web-based learning to deliver the content of their curriculum on various platforms. Since the outbreak of the COVID-19 virus, educational institutions worldwide have migrated from traditional learning methods to impart education through online means. This reflects that the education system has been suddenly shifted from the conventional classroom environment to electronic devices.

According to Hadjerrouit (2010), web-based learning resources are potentially powerful tools for enhancing teaching and learning processes in school education. These platforms provide teachers and learners with a wide range of new and exciting experiences that are not possible in a traditional classroom. Contrary to face-to-face learning, this learning modality emphasizes internet-based courses which are offered synchronously and asynchronously. Synchronous learning is a form of learning with direct interactions between students and teachers while simultaneously using online forms such as conferences and online chat. Meanwhile, asynchronous learning is a form of learning indirectly using an independent learning approach. Through digital learning, teachers can cater to children's digital skills, which are on the brink of cyber risk, into the educational opportunities to succeed in future ventures, especially in this pandemic where children are wholly dependent on online learning.

Amid the COVID-19 situation, the Philippine Commission on Higher Education (CHED) prepares for the new normal in tertiary education. One of the recommendations of the CHED for State Colleges and Universities (SUCs) is the adoption of flexible learning. Although according to CHED, flexible learning may not necessarily mean that instruction will be delivered purely online. Online education is an inevitable option to decongest classrooms amid physical or social distancing protocol and help mitigate COVID-19 transmission in schools SUCs start to open their campuses and begin classes again. At the same time, it may be argued that complete online modality of the instruction can be feasible and even though Filipinos are among the top users of the Internet worldwide, the lack of preparation of faculty members to conduct online classes along with the problem long before on poor internet connection in the country pose challenges in the adoption of online education in the Philippine context.

There are much enthusiasm and optimism regarding open online learning; however, there are significant barriers that learners still encounter in attempting to succeed in online courses (Marcial, 2020). Like in any country affected by this global crisis, students in the Philippines also confronted several interrelated barriers as they tried to adapt to online learning. Baticulon et al. (2020) identified barriers to online learning in the time of COVID-19 among medical students. They found out that one of the barriers that the students have faced is the limited access to internet resources. This was also corroborated with the study conducted by Marcial et al. (2020), which reveals that access to the internet and technical skills in online platforms was considered a strong barrier to online learning among students and teachers. In addition, this finding also supports the study conducted by Moralista and Oducado (2020), which reveals that teachers have experienced difficulty in terms of computer competency and online teaching. Aside from these challenges the teachers faced, the researcher believes that there is a need for planning, monitoring, and evaluating the learning system being adopted in this new normal. Hence, the need to develop the learning management system in an institution of higher learning in this new normal becomes the impetus of this study.

## II. METHODOLOGY

A descriptive cross-sectional study with internal comparisons was utilized in this study. This study was conducted through an online survey. A written questionnaire consisted of two components. The first part includes the teachers' demographic characteristics that include age, subjects handled, and length of service. The second part encompasses the teacher's perception of usefulness, ease of use, attitudes towards using, and intention to use web-based learning. This includes 23 statements using a 5-point Likert scale. To test the reliability of the survey instrument, this was pilot tested among selected high school teachers from public and private secondary schools in the city. Cronbach's alpha was used to test the internal consistency of the questionnaires. The results showed that Cronbach's alpha of perceived usefulness (PU) was 0.876, perceived ease of use (PEOU) was 0.848, attitude toward using (ATU) was 0.882, and the behavioral intention was 0.803. These alpha values indicate that the survey questionnaires were highly reliable.

## The Adoption of Learning Management System in Teaching and Learning in the New Normal

To answer the questions raised in this study, both descriptive and inferential measures were employed. Descriptive statistics such as frequency count, percentages, and mean were utilized in this study. These measures will describe the respondents' demographic characteristics and assess their challenges in teaching this pandemic through web-based learning.

On the other hand, inferential statistics such as Pearson- correlation and analysis of variance (ANOVA) were utilized to test the hypotheses stated in this study. Pearson Product Moment Correlation was used to determine the relationship between the following: (a) perceived usefulness (PU) and perceived ease of use (PEOU); (b) perceived usefulness (PU) and attitude toward using (ATU); (c) perceived ease of use (PEOU) and attitude toward using (ATU); and (d) attitude toward using (ATU) and behavioral intention to use (BIU). Furthermore, Analysis of Variance (ANOVA) was used to test the differences in the respondents' technology acceptance when they grouped according to age, gender, academic rank, subjects handled, number of seminar workshops and training in online teaching attended, and length of service. All statistical computations were tested at 0.05 level of significance using Statistical Package for the Social Sciences (SPSS).

### III. RESULTS AND DISCUSSIONS

#### Respondents' Evaluation on the Use of Online Learning

The following tables show the respondents' evaluation on the use of online learning through Google Classroom as a Learning Management System (LMS). As mentioned in the previous part of this study, the Technology Acceptance Model (TAM) was used to assess the use of Google Classroom as perceived by the respondents in terms of its usefulness, ease of use, attitude toward using it, and behavioral intention to use this online learning platform.

**Table 1.a Respondent's Evaluation on the Usefulness of Online Learning**

STATEMENTS	MEAN RATING	QUALITATIVE DESCRIPTION
1. <i>Using the Google Classroom in my class helps me to accomplish tasks more quickly</i>	4.34	Strongly Agree
2. <i>Using the Google Classroom improves my teaching performance</i>	3.86	Agree
3. <i>Google Classroom enhances my effectiveness at work</i>	3.83	Agree
4. <i>Google Classroom makes it easier to do my work</i>	4.07	Agree
5. <i>Using Google Classroom supports critical aspects of my job</i>	4.01	Agree
6. <i>Using Google Classroom will reduce the time I spend on unproductive activities</i>	4.10	Agree
<b>OVERALL MEAN RATING</b>	<b>4.04</b>	<b>Agree</b>

**Legend:**

1.0 – 1.79 – Strongly Disagree; 1.80 – 2.59 – Disagree; 2.60 – 3.39 – Neutral; 3.40 – 4.19 – Agree; 4.20 – 5.0 – Strongly Agree

Table 1.a shows the evaluation on the usefulness of Google Classroom as perceived by the respondents. Based on the analysis, out of the six identified statements, statement 1: "*using the Google Classroom in my class helps me to accomplish tasks more quickly*" was strongly agreed by the faculty members having a mean rating of 4.34. Additionally, the mean rating of 4.10 indicates that the respondents agreed on statement 6 that "*using Google Classroom will reduce the time I spend on unproductive activities*". They also agreed on the statement that "*Google Classroom makes it easier to do my work*" with a mean rating of 4.07. Further investigation finds that the overall mean rating of 4.04 suggests that faculty members thought that utilizing Google Classroom was beneficial since it allowed them to complete their academic tasks swiftly and effortlessly.

**Table 1.b Respondent's Evaluation on the Ease of Use of Online Learning**

STATEMENTS	MEAN RATING	QUALITATIVE DESCRIPTION
1. <i>Learning to operate the Google Classroom has been easy for me</i>	4.17	Agree
2. <i>It is easy for me to become skillful at using the Google Classroom</i>	4.14	Agree

## The Adoption of Learning Management System in Teaching and Learning in the New Normal

3. <i>My interaction with the Google Classroom is clear and understandable</i>	4.16	Agree
4. <i>I find the Google Classroom to be flexible to interact with</i>	4.31	Strongly Agree
5. <i>I find the Google Classroom easy to use in my class</i>	4.35	Strongly Agree
<b>OVERALL MEAN RATING</b>	<b>4.22</b>	<b>Strongly Agree</b>

**Legend:**

1.0 – 1.79 – Strongly Disagree; 1.80 – 2.59 – Disagree; 2.60 – 3.39 – Neutral; 3.40 – 4.19 – Agree; 4.20 – 5.0 – Strongly Agree

As shown in Table 1.b, the faculty members highly agreed on the simplicity of using Google Classroom, with an overall mean rating of 4.22. Moreover, among the five identified statements, two statements were strongly agreed by the respondents as indicated by their mean ratings. Statement 5: "*I find the Google Classroom easy to use in my class*" got the highest mean rating of 4.35. This data was followed by statement 4: "*I find the Google Classroom to be flexible to interact with*" having a mean score of 4.31. These data clearly suggest that faculty members perceived that using the Google Classroom was simple and easy to use.

**Table 1.c Respondent's Attitude toward Using Google Classroom**

STATEMENTS	MEAN RATING	QUALITATIVE DESCRIPTION
1. <i>Google Classroom enables me to accomplish tasks more quickly</i>	4.25	Strongly Agree
2. <i>Using Google Classroom in my class is good</i>	4.18	Agree
3. <i>Using Google Classroom in my class is favorable</i>	4.14	Agree
4. <i>It is a trend to use Google Classroom in my class</i>	4.09	Agree
5. <i>It is valuable to use Google Classroom in my class.</i>	4.01	Agree
6. <i>I enjoy using Google Classroom in my class</i>	3.98	Agree
7. <i>Overall, I feel that Google classroom is useful in my job</i>	3.96	Agree
<b>OVERALL MEAN RATING</b>	<b>4.08</b>	<b>Agree</b>

**Legend:**

1.0 – 1.79 – Strongly Disagree; 1.80 – 2.59 – Disagree; 2.60 – 3.39 – Neutral; 3.40 – 4.19 – Agree; 4.20 – 5.0 – Strongly Agree

With regard to the attitude of the respondents toward using Google Classroom, Table 1.c indicates that the faculty members have positive attitude towards using Google Classroom as a Learning Management System (LMS) as described by the overall mean rating of 4.08. This implies that the respondents' perceived the use of Google Classroom to be significant especially in teaching this new normal. Furthermore, the analysis also reveals that the respondents strongly agreed with the statement "*Google Classroom enables me to accomplish tasks more quickly*" having a mean rating of 4.25. They also agreed on the statement that "*Using Google Classroom in my class is good*" with a mean score of 4.18. Also, the mean rating of 4.14 indicates that the respondents agreed that "*Using Google Classroom in my class is favorable*".

**Table 1.d Respondent's Behavioral Intention to Use Google Classroom**

STATEMENTS	MEAN RATING	QUALITATIVE DESCRIPTION
1. <i>I intend to use Google Classroom in my class in the future</i>	4.17	Agree
2. <i>I'd love to use Google Classroom in my class</i>	4.12	Agree
3. <i>I increase the occurrences of using Google Classroom in my class</i>	4.11	Agree
4. <i>I will probably use or continue using the Google Classroom in my class</i>	3.87	Agree
5. <i>I will recommend others to use Google Classroom in their classes</i>	3.64	Agree
<b>OVERALL MEAN RATING</b>	<b>3.98</b>	<b>Agree</b>

**Legend:**

1.0 – 1.79 – Strongly Disagree; 1.80 – 2.59 – Disagree; 2.60 – 3.39 – Neutral; 3.40 – 4.19 – Agree; 4.20 – 5.0 – Strongly Agree



## The Adoption of Learning Management System in Teaching and Learning in the New Normal

The evaluation of the respondents in terms of their behavioral intention to utilize Google Classroom as an online learning platform is shown in Table 1.d. According to the findings, the respondents agreed with all five of the highlighted assertions. The highest mean rating was 4.17 for Statement 1: "I intend to use Google Classroom in my class in the future." This was followed by Statement 2: "I'd love to use Google Classroom in my class," which received a 4.12 average rating. These findings suggest that CTE faculty members have had a great experience utilizing online learning through Google Classroom in their classes, and they are confident that they will continue to use this Learning Management System in the next school years and will promote it to their colleagues.

### Regression Analysis of Perceived Ease of Use (PEU) vs Perceived Usefulness (PU)

The following table shows the relationship between the respondents' perceived ease of use and usefulness of using Google Classroom. Pearson Product Moment Correlation was used with the aid of Statistical Package for Social Sciences (SPSS). This was tested at 0.05 level of significance.

**Table 2. Relationship between Perceived Ease of Use and Perceived Usefulness**

	Correlation Coefficient	Description	p-value	Interpretation
Perceived Ease of Use (PEU) and Perceived Usefulness (PU)	0.71	High Correlation	0.031**	Significant

**Legend:** \*\*Significant at 0.05 level of significance

The link between the respondents' perceptions of the ease of use and usefulness of conducting online learning using Google Classroom is shown in Table 2. It can be gleaned that the correlation coefficient of 0.71 indicates that there is a high positive correlation between the respondents' perception on the ease of use and usefulness of using Google Classroom. The p-value of 0.031 implies that the relationship between perceived ease of use and perceived usefulness toward online learning was statistically significant. This indicates that teachers who have no difficulties with Google Classroom find it beneficial in their academic work. This supports with the study conducted by Angela et al (2018) which reveals that there is a significant correlation between perceived ease of use and usefulness of e-learning system.

### Regression Analysis of Perceived Ease of Use (PEU), Perceived Usefulness (PU), and Attitude towards Using (ATU) Google Classroom

The following table shows the relationship between the respondents' perceived ease of use and usefulness of using Google Classroom and their attitude towards using it. Pearson Product Moment Correlation was also used with the aid of Statistical Package for Social Sciences (SPSS). This was tested at 0.05 level of significance.

**Table 3. Relationship between Perceived Ease of Use and Perceived Usefulness and their Attitude towards Using Google Classroom**

Variable	Correlation Coefficient	Description	p-value	Interpretation
Perceived Ease of Use (PEU)	0.89	Very High Correlation	0.004**	Significant
Perceived Usefulness (PU)	0.92	Very High Correlation	0.001**	Significant

**Legend:** \*\*Significant at 0.05 level of significance

As depicted by the analysis presented by Table 3, the correlation value of 0.89 suggests that perceived ease of use and attitude toward Google Classroom are highly correlated. The statistical significance of the association between these two variables is further confirmed by the p-value of 0.004. Furthermore, the study found a strong link between perceived usefulness and attitudes toward online learning. Their association is statistically significant at the 0.05 level of significance, as indicated by the p-value of 0.001. As a result, faculty members who find Google Classroom, as a Learning Management System, easy to use and find it beneficial in performing their academic tasks have a favorable impression towards it.

## The Adoption of Learning Management System in Teaching and Learning in the New Normal

### Regression Analysis between Respondents' Attitude towards Using (ATU) Google Classroom and their Behavioral Intention to Use it (BIU)

The following table shows the relationship between the respondents' attitude towards using Google Classroom and their behavioral intention to use it. Pearson Product Moment Correlation was used with the aid of Statistical Package for Social Sciences (SPSS). This was tested at 0.05 level of significance.

**Table 4. Relationship between Perceived Ease of Use and Perceived Usefulness**

	Correlation Coefficient	Description	p-value	Interpretation
Attitude (ATU) and Behavioral Intention (BIU)	0.89	Very High Correlation	0.005**	Significant

**Legend:** \*\*Significant at 0.05 level of significance

As described by the analysis presented in Table 4 above, the correlation coefficient of 0.89 indicates that there is a very high positive correlation between the respondents' attitude and their behavioral intention to use the Google Classroom. This implies that those faculty members who have positive attitude towards using Google Classroom are certain to use this platform in the future. Further analysis also indicates that the p-value of 0.005 suggests that the relationship between attitude and behavioral intention to use Google Classroom is statistically significant. This corroborates with the findings of Angela et al (2018) which reveals that the link between attitude and behavioral intention to use is significant.

### Differences in Technology Acceptance in Using Online Learning Technologies

The following table shows the difference in technology acceptance in using online learning technologies when the respondents were grouped according to age, gender, academic rank, subjects handled, number of seminar workshops attended and length of service. To test the significant differences, Analysis of Variance was used with the aid of Statistical Package for Social Sciences (SPSS) tested at 0.05 level of significance.

**Table 5. Differences in Technology Acceptance in Using Google Classroom**

Variable	p-value	Interpretation
Age	0.003**	Significant
Gender	0.184	Not Significant
Academic Rank	0.209	Not Significant
Subjects Handled	0.026**	Significant
Department	0.092	Not Significant
Employment Status	0.087	Not Significant
Seminars Attended	0.041**	Significant
Length of Service	0.002**	Significant

**Legend:** \*\*Significant at 0.05 level of significance

Table 5 above shows that among the variables identified in this study, the respondents' age, nature of the subjects handled, number of seminars attended, and length of service were found to be significantly related to their level of acceptance in using Google Classroom as a Learning Management System. The analysis reveals that those faculty members who are young, have been exposed to training on the use of technology in teaching, and have handled on subjects that need online discussion have a greater degree of acceptance for Google Classroom as a tool for online learning.

## IV. RECOMMENDATIONS

The purpose of this study is determine the construct validity of the Technology Acceptance Model (TAM) in analyzing the factors that influence the acceptance of the use of technologies based on the user's perspective. Hence, based on the findings and conclusions drawn in this study, the following recommendations are offered:

## The Adoption of Learning Management System in Teaching and Learning in the New Normal

1. Educational institutions should pay more attention on the development of its educational and ICT infrastructure most especially in this time of pandemic wherein web-based learning is the current trend in our educational landscape.
2. Instructors/faculty members of institutions of higher learning should undergo intensive trainings on how to use various learning platforms and/or learning management systems effectively and efficiently.
3. Policy makers should anchor their decisions on the findings of this study most especially on the procurement of various educational technologies and/or ICT infrastructures in their respective educational institutions.
4. Educational administrators should develop an understanding on how various factors or variables significantly influences their intention to use a particular learning management system.

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## Analysis of Sediment in Goronyo Dam, Sokoto, Nigeria



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**ABSTRACT:** Reservoir sedimentation has been a global bottle neck in maintaining the design storage capacity of reservoirs. Reservoir sedimentation leads to the reduction of the original capacity which affects irrigation, hydropower, flood control, drinking water supply and recreational activities. Introduction of mechanized farming without due regard to the nature of the environment is aggravating the erosion and sediment problem. This study has discussed and analyzed the most important parameters (bulk density, sediment volume, sediment mass, trap efficiency, sediment yield etc) for 31 years (1984 -2015) using Empirical Method and Goronyo Dam Stage Capacity Curve. The Mean bulk density (dBD) was gotten as  $0.97\text{gcm}^3$ , Sediment Volume (SV) as  $26,179,302\text{m}^3$ , Sediment Mass (SM) as 25,393,922.94 tones, average annual sedimentation as  $819,158.81\text{ty}^{-1}$ , Trap Efficiency (TE) as 90.2%, Sediment Yield (SY) as  $908,158.00\text{ty}^{-1}$ , Specific Sediment Yield (SSY) as  $42.35\text{tkm}^{-2}\text{y}^{-1}$ , The loss of storage ( $26,179,302\text{m}^3$ )

**KEYWORDS:** Stage Capacity Curve, Sediment Volume, Trap Efficiency, Sediment Mass, Sediment Yield.

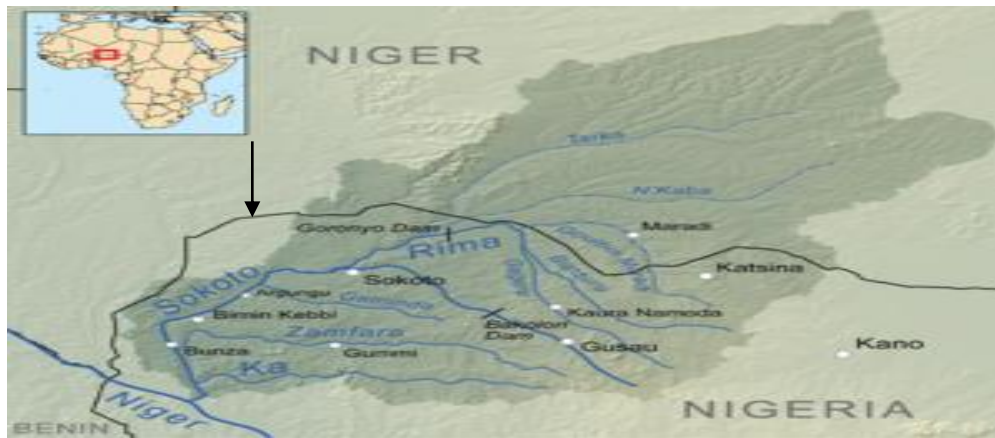
### INTRODUCTION

A reservoir is a body of water used for storage, regulation and control of water resources (Saenyi, 2002). Reservoir sedimentation leads to the reduction of the original capacity which affects irrigation, hydropower, flood control, drinking water supply and recreational activities. Sediment are fragments of rocks and minerals that are broken down by weathering and erosion, and are subsequently transported by water, wind or ice (Hoven, 2010). Sediments in reservoirs are heterogeneous mixture of soil particles and rock fragments, detached from the earth's crust, transported and deposited in the reservoir basin (De Villiers, 2006). Introduction of mechanized farming without due regard to the nature of the environment is aggravating the erosion and sediment problem. Due to lack of reservoir management practices such as periodical sediment flushing, reservoir sediment routing and catchment management to reduce the soil erosion, the sedimentation of reservoirs is inevitable and it has gradually becoming a greater threat for many countries around the world (Revel *et al.*, 2013). Sediment pollution of water creates several problems: early silting up of reservoir, low water transparency in rivers and reservoirs, which adversely affects fish populations, and high water treatment costs, reduce navigability, increased flooding and blockage of irrigation canals (NESAT, 1991). The study of soil erosion helps in understanding of the interaction between sediment generation and sediment yield in a drainage basin (Msadala, 2009). There is need for an integrated approach in the determination of soil erosion, sediment yield, sediment transport and reservoir sedimentation in all catchments (Saenyi, 2002). Sediments that are transported and deposited in reservoirs are derived from catchment erosion (Hassanzadeh, 1995). The aim of all good sediment management techniques is to reduce the accelerated erosion (Desta, 2005). Soil erosion by water is the most common and widespread form of erosion in the world (Shaozu *et al.*, 2003). Reservoir trap efficiency is the ratio of the deposited sediment to the total sediment inflow (Rupasingha, 2002; Licher, 2003; Letsie, 2005; Ji, 2006). It is simply the proportion of the total incoming sediment that is deposited or retained in the reservoir (Verstraeten and Poesen, 2000; Letsie, 2005; Kim, 2006). Trap efficiency is often expressed in percentage (Campos, 2001). The aim of this study is to analyzed the most important parameters (bulk density, sediment volume, sediment mass, trap efficiency, sediment yield etc) for 31 years (1984 -2015) using Empirical Method and Goronyo Dam Stage Capacity.

### Location of Goronyo Dam on Rima River

The location of Goronyo Dam on Rima River is shown in Plate 1

## Analysis of Sediment in Goronyo Dam, Sokoto, Nigeria



**Plate1. Location of Goronyo Dam on Rima River**

Source: SRRBRDA, 1991

### Some Geographical Details of Goronyo Dam

Some of the Geographical details of Goronyo Dam are shown in Table 1

**Table 1. Some Geographical Details of Goronyo Dam**

<b>Location</b>	Sokoto State, Nigeria	
<b>Coordinates</b>	<b>Latitude</b>	13°31'50"N
	<b>Longitude</b>	05°52'56"E
<b>Opening date</b>	1992	
<b>Dam and Spillways</b>	Impounds	Rima River
	Height	21m
	Length	12.5km
<b>Reservoir</b>	Total capacity	976 million m <sup>3</sup>

Source: SRRBRDA, 1991

### Salient Features of Goronyo Dam

The salient features of the reservoir are as shown in Table 2 below.

**Table 2. Features of the Reservoir**

Parameter	Value
Maximum storage level	288 m
Minimum useful storage level	279.50m
Gross Storage capacity	942 x 10 <sup>6</sup> m <sup>3</sup>
Dead storage	21.50 x 10 <sup>6</sup> m <sup>3</sup>
Lake area	200 km <sup>2</sup>
Spillway capacity	1,540 m <sup>3</sup> /s
Tributaries	River Gagare, River Bunsuru and Gada/Maradi River

Source: SRRBRDA, 1991

## Analysis of Sediment in Goronyo Dam, Sokoto, Nigeria

### Goronyo Dam

The Plate 2 below shows Goronyo dam

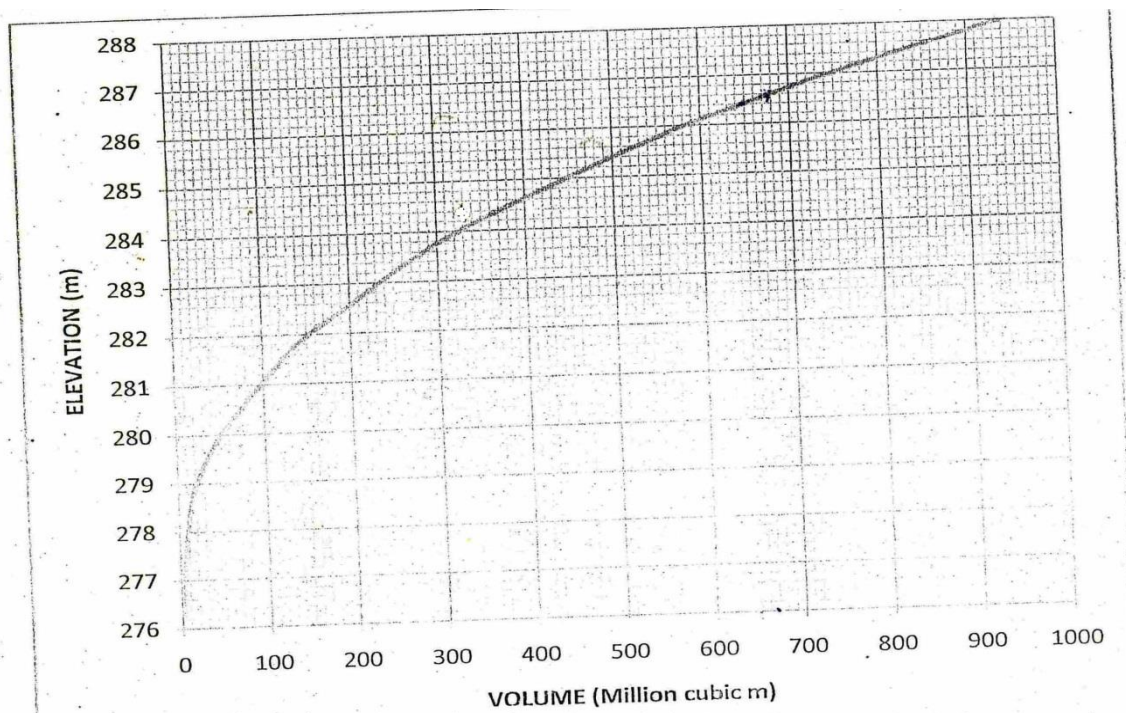


**Plate 2 : Goronyo Dam**

**Source: SRRBRDA, 1991**

### MATERIALS AND METHODS

Empirical Method and Goronyo Reservoir Stage Capacity Curve were used in the study. Empirical Method was used for calculating the significant parameters while the Goronyo Reservoir Stage Capacity Curve was used for obtaining reservoir's readings of initial and current volume ( $m^3$ ) at their respective elevations (m). The stage capacity curve is a graph of water level (Y-axis) plotted against reservoir volume (X-axis). It was designed by Impresit Bakolori Nigeria Limited (IBNL) in 1979 with storage capacity of  $942,000,000m^3$  at 288 m elevations. The designed stage-capacity curve of Goronyo Reservoir is shown in figure3.



**Figure 1: Goronyo Reservoir Pre-impoundment Capacity**

**SOURCE: SOURCE: IBNL, 1979**

### RESULTS AND DISCUSSIONS

Goronyo Dam Sedimentation

#### Goronyo Reservoir Sediment Volume

The sediment volume of the reservoir was calculated as the difference between the original and current capacity of the reservoir. The data was given as follows:

## Analysis of Sediment in Goronyo Dam, Sokoto, Nigeria

At 286.4m, initial reservoir storage capacity = 650,000,000m<sup>3</sup>

At 286.6m, current reservoir storage capacity = 623,820,698m<sup>3</sup>

Therefore, Reservoir Sediment Volume (SV) can be determine using equation (1) and the relation is as follows:

SV = Initial reservoir storage capacity – current total water volume in the reservoir (1)

$$SV = 650,000,000\text{m}^3 - 623,820,698\text{m}^3 = 26,179,302\text{m}^3$$

In comparison, Mohammed (2014) calculated the sediment volume of Goronyo Reservoir from 1984 to 2013 (29 years) as 24,490,315m<sup>3</sup>.

### Sediment Mass and Average Sedimentation Rate

The sediment mass of Goronyo Reservoir is computed using equation (2) as follows:

$$SM = SV \times dBD \quad (2)$$

Where

<i>SM</i>	Sediment mass
<i>SV</i>	Sediment volume
<i>dBD</i>	Mean bulk density

The parameters used to calculate the average annual sedimentation rate of the Reservoir are:

Sediment volume (SV) = 26,179,302m<sup>3</sup>

Mean bulk density (dBD) = 0.97gcm<sup>3</sup>

Reservoir age (y) = 31 years

Substituting the values into equation(2) gives:

$$SM = 26,179,302\text{m}^3 \times 0.97\text{gcm}^3 = 25,393,922.94 \text{ tones}$$

Therefore, the total quantity of sediment deposited in the Reservoir from 1984 to 2015 is 25,393,922.94 tones. In comparison, Haregeweyn *et al* (2008) calculated the mean sediment mass of 42,000 tones for 11 reservoirs in Tigray, Northern Ethiopia.

The average annual sediment rate of Goronyo Reservoir was calculated by dividing the sediment mass by the age (years) of the reservoir.

Therefore, the average annual sedimentation rate of the reservoir (RS) is the relation of equation (3) as follows:

$$RS = \frac{SM}{y} \quad (3)$$

Where

RS	Average annual sedimentation rate
SV	Sediment volume
dBD	Mean bulk density
y	Reservoir age (years)

Substituting the values into equation (3) gives:

$$RS = \frac{25,393,922.94}{31 \text{ years}} = 819,158.81\text{ty}^{-1}$$

Therefore, the average annual sedimentation of Goronyo Reservoir is 819,158.81ty<sup>-1</sup>. In comparison with that of Opa Reservoir was calculated as 38,830.26ty<sup>-1</sup> (Adediji, 2005). It can also be compared with the mean annual sedimentation rate of 6,625ty<sup>-1</sup> as computed for some reservoirs of Tigray, Northern Ethiopia (Haregeweyn *et al.*, 2006). The average annual sedimentation rate shows the amount of sediment in unit mass that enter into the reservoir per year.

### Trap Efficiency

The Parameters used for calculating the sediment trap efficiency of Goronyo Reservoir is presented below:

**Table 3. Parameters used to calculate the trap efficiency of Goronyo Reservoir**

SN	Parameter	Value
1	D	0.1
2	C	942,000,000 m <sup>3</sup>
3	A	21,445 km <sup>2</sup>

Source: IBNL, 1979; Adwubi *et al*, 2009.

The trap efficiency of Goronyo Reservoir is the relation of equation (4) as follows:

$$TE = 100 \left( 1 - \frac{1}{1 + 0.0021D \frac{C}{A}} \right) \quad (4)$$

## Analysis of Sediment in Goronyo Dam, Sokoto, Nigeria

Where	TE	Trap efficiency
	D	Coefficient
	C	Total Reservoir storage capacity
	A	Catchment area of the Reservoir

Substituting the values into equation (4) gives:

$$TE = 100 \left( 1 - \frac{1}{1 + 0.0021 \times 0.1 \times \frac{942,000,000}{21,445}} \right) = 100 \left( 1 - \frac{1}{1 + \frac{197,820}{21,445}} \right) = 100(1 - 0.098) = 90.2\%$$

The trap efficiency of Goronyo Reservoir is 90.2 percent. This shows that Goronyo Reservoir has high trap efficiency. For comparison, (Adediji, 2005) calculated the trap efficiency of Opa Reservoir as 79.6 percent. Also (Haregeweyn *et al.*, 2012) calculated the mean trap efficiency of some reservoir in Ethiopia as 97 percent.

### Sediment Yield

The sediment yield of Goronyo Reservoir is calculated using parameters as shown in Table 4.

**Table 4. Parameters used to Calculate the Sediment Yield of Goronyo Reservoir**

SN	Parameter	Value
1	Sediment Volume (SV)	26,179302.24m <sup>3</sup>
2	Mean Bulk Density (dBD)	0.97 gcm <sup>3</sup>
3	Trap Efficiency (TE)	90.2%
4	Age of Reservoir (Y)	31 yr

The sediment yield of the Reservoir is the relation of equation (5) as follows:

$$SY = 100 \frac{S.V \times dBD}{TE \times Y} \quad (5)$$

Where	SY	Sediment yield
	SV	Sediment volume
	dBD	mean bulk density
	TE	Trap efficiency
	Y	Age of the Reservoir in year

Substituting the values into equation (5) gives:

$$SY = \frac{26,179,302m^3 \times 0.97cm^3}{90.2\% \times 31 \text{ years}} = 100 \times \frac{25393922.94}{2,796.2} = 100 \times 9,081.58 = 908,158.00 \text{ ty}^{-1}$$

Therefore, the sediment yield of Goronyo is 908,158 .00 ty<sup>-1</sup>

### Specific Sediment Yield of Goronyo

The area Specific Sediment yield of Goronyo Reservoir is calculated using equation (6) as follows:

$$SSY = \frac{SY}{A} \quad (6)$$

Where	SSY	Area Specific Sediment Yield
	SY	Sediment Yield
	A	Catchment area of the reservoir

Substituting the values into equation (6) gives:

$$SSY = \frac{908158.00\text{ty}^{-1}}{21445\text{km}^2} = 42.35 \text{ tkm}^{-2}\text{y}^{-1}$$

## CONCLUSION

The sediment volume of Goronyo Reservoir was gotten as 26,179,302m<sup>3</sup> for 31 years (1984 -2015).The reservoir dead storage = 21,500,000m<sup>3</sup>,the loss of storage (26,179,302m<sup>3</sup>) is above the dead storage This means that Goronyo Reservoir has lost storage capacity at about its dead storage. The loss of storage when compared with the design storage capacity (942,000,000m<sup>3</sup>) of the dam shows that the reservoir is high and adequate to satisfy its design mandates (irrigation, water supply, hydropower etc). The reservoir laboratory analysis of sediment collected from the reservoir provides relevant information on bulk density and particle size distribution of the sediments. The average annual sedimentation of the reservoir represents average sediment export from the catchment area for 31yrs of operation. The reservoir's sediment yield is a pointer to soil erosion processes and sediment transport in the catchment area. The result of the study will serve as a tool for planning and management of the reservoir. Despite the fact that, sediments are inevitable in the reservoirs, it can be curtailed upstream by aforestation, minimized mechanized



## Analysis of Sediment in Goronyo Dam, Sokoto, Nigeria

farming, minimized digging of holes for hunting underground animals (rats, giant rats, hedgehogs etc), planting of carpet grasses and sediment flushing.

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## How to Cariogenic Food Habits in Children aged 9-10 Years? - Caries Severity Index (CSI)



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**ABSTRACT:** Caries in children is higher than caries in adults. The factor that causes the high caries rate in children is the dietary factor. Cariogenic foods are foods that contain lots of carbohydrates, are sticky and break easily in the mouth. Objective: This study aims to determine the relationship between food of cariogenic to caries severity index (CSI) child of age 9-10 years. Methods: Type of Research is descriptive with device of cross sectional, date which is concerning free variables and the variable trussed will be collected during which at the same time. Subject of Research as much 65 children, have age 9-10 years old. instrument using Food of cariogenic measured by Dietary is Recall Method and for measurement hard; level of caries after conducted by inspection tooth and mouth measured to use caries severity index (CSI). The Result of statistical analyzes with Chi-square to know relationship between food of cariogenic to caries severity index (CSI). Results: The results of obtained by statistical test value of p-value  $p=0,000$  according to statistics very have a meaning at storey; level of belief 95% by 0.05. Because  $p\text{-value} < 0.05$  inferential hence there is relation between child consuming food of cariogenic hardly caries that happened at child of age 9-10 year. Result of obtained by statistical Analysis of value OR = 29,714 by 95% confidence of international 6,816-129.540 of its meaning that child. Conclusion: there is a significant relationship between cariogenic food habits and caries severity index (CSI) children of age 9-10 years

**KEYWORDS:** Cariogenic food, Children, Caries Severity Index (CSI).

### I. INTRODUCTION

School children around the world 60-90% and almost 100% of adults experience dental caries, which often causes pain and discomfort. Basic Health Research data in 2013 showed an increase in the prevalence of active caries in the Indonesian population compared to 2007, from 43.4% (2007) to 53.3% (2013). Excess sugar consumption tends to lead to dental caries [1-3] The factors causing the high caries rate in elementary school-aged children are dietary factors and various foods such as ice cream, cakes, donuts and refined flour, chocolate, confectionery and others that are very liked by children. Elementary school age is a critical age for teeth and gingival growth. Children's eating habits tend to be rich in fat, cholesterol, refined sugar, and salt [4,5].

The type of cariogenic food that has the greatest influence on the plaque formation process is the type of carbohydrate, especially the type of sucrose. Cariogenic foods are often consumed by school-age children and do not immediately brush their teeth regularly will facilitate the occurrence of caries in these teeth [6,7].

Cariogenic foods are foods that can cause dental caries. The nature of cariogenic foods is that they contain lots of carbohydrates, are sticky and break easily in the mouth. Plaque will be formed from food residue that is attached to between the teeth and bacteria grow that convert glucose into acid so that the pH of the oral cavity decreases to 5.5, in this condition the structure of tooth enamel will dissolve or there will be demineralization of the enamel resulting in caries [8-10].

The results of the pre-study at SDN Sangkali grade II as many as 52 people showed that the caries prevalence reached 89.56%, while the 2010 National target for caries prevalence in elementary school-aged children at least 10 percent of children experienced caries. Based on the things above, the authors are interested in conducting research on the relationship of cariogenic foods to the caries severity index (CSI) of children aged 9-10 years.

### II. METHOD AND MATERIAL

This type of research is descriptive correlational with cross sectional design, data concerning independent variables and dependent variables will be collected at the same time [11]. The research subjects were 65 children aged 9-10 years.

## How to Cariogenic Food Habits in Children aged 9-10 Years? - Caries Severity Index (CSI)

Measurement of cariogenic food was measured using the Dietary Recall Method and for measuring the severity of caries after dental and oral examination was measured using the caries severity index (CSI).

The technique of taking research subjects was total sampling, all children aged 9-10 years. The data obtained directly are from the results of the CSI examination and interviews about diet surveys for 3 consecutive days in grades III and IV SDN Sangkali, Tamansari District, Tasikmalaya City. Analysis of the data used is the Chi-square to know relationship between food of cariogenic to caries severity index (CSI).

### III. RESULT

**Table 1. Univariate test results for cariogenic food habits**

Variabel	N	Mean	SD	Min-Max	CI 95%	
					Lower	Upper
Cariogenic food habits	65	1.7077	0.45836	1.00-2,00	1.5941	1.8213

Table 1 shows that the results of the study on cariogenic food habits at the age of 9-10 years at SDN Sangkali from the number of respondents 65 people, the mean value of subjects with cariogenic eating habits was 1.7077, standard deviation 0.45836, min-max 1.00-2.00 and 95% significance value, the lower limit is 1.5941 and the upper limit is 1.8213.

**Table 2. Univariate test results for caries severity index (CSI).**

Variabel	N	Mean	SD	Min-Max	CI 95%	
					Lower	Upper
Caries severity index	65	52.0462	16.44444	23-80	47.9714	56.1209

Table 2 shows that the results of the Caries Severity Index (CSI) study aged 9-10 years from the number of respondents 65 people obtained an average CSI value of 52.0462, standard deviation of 16.44444, min-max 23-80 and a significance value of 95% the lower limit 47.9714 with an upper limit of 56.1209.

**Table 3. Bivariate test results cariogenic food habits and caries severity index**

Cariogenic food habits	Caries severity index				Total		OR 95 %CI	p value
	High		Low					
	n	%	n	%	n	%		
High	39	92.9	7	30.4	46	100	29.714 6.816-129.540	0.000
Low	3	7,1	16	69.6	19	100		
Total	42	64.6	23	35.4	65	100		

Table 3 shows that the results of the analysis between cariogenic food habits and the Caries Severity Index (CSI) showed that there were 39 people (92.9%) of children who consumed cariogenic foods with high frequency associated with caries severity tended to be high. Meanwhile, children who consumed low cariogenic foods were associated with low caries severity as many as 16 people (69.6%). The results of statistical tests obtained p value = 0.000 then there is a difference in the proportion of incidence of caries severity between children who eat cariogenic foods with a high frequency and children who eat cariogenic foods with low frequency, thus there is a close relationship between the consumption of cariogenic foods and the severity of caries. It can be concluded that there is a relationship between the consumption of cariogenic foods and the severity of caries in children aged 9-10 years. The results of statistical analysis obtained an OR value of 29 times which means that children who consume high cariogenic foods tend to have 29 times higher caries severity or Caries Severity Index scores compared to children who consume low cariogenic foods.

## How to Cariogenic Food Habits in Children aged 9-10 Years? - Caries Severity Index (CSI)

### V. DISCUSSION

The results of the measurement of cariogenic food consumption in children aged 9-10 years show that the criteria for children who often consume cariogenic foods with high criteria are 46 people (70.8%) and 19 people (29.2%) low carbohydrate consumption criteria. It is suspected that the results of a diet survey conducted 3 days in a row on students of SDN Sangkali grade III and IV on average often consume carbohydrates in the form of flour which are sticky and easily crumble in the mouth such as cakes, bread, ice cream, syrup, candy and sweetened condensed milk. This statement is supported by research by Giacaman who proved that in vitro experiments condensed milk caused more demineralization than powdered milk [12].

The results of the Caries Severity Index (CSI) measurement in children aged 9-10 years show that the criteria for children experiencing CSI caries severity are high criteria from 65 people as many as 42 people (64.6%) and low criteria only 23 people (35.4%).

The results of the analysis of cariogenic food habits at the age of 9-10 years at SDN Sangkali from the number of respondents 65 people, the average value (mean) of subjects consuming cariogenic food was 1.7077, standard deviation 0.45836, min-max 1.00 -2.00 and a significance value of 95%, the lower limit is 1.5941 and the upper limit is 1.8213. The results of the Caries Severity Index (CSI) study aged 9-10 years from the number of respondents 65 people obtained an average CSI value of 52.0462, standard deviation of 16.44444, min-max 23-80 and a significance value of 95% lower limit 47.9714 with an upper limit of 56.1209.

The results of statistical tests obtained p value = 0.000 then there is a difference in the proportion of incidence of caries severity between children who eat cariogenic foods with a high frequency and children who eat cariogenic foods with low frequency, thus there is a close relationship between the consumption of cariogenic foods and the severity of caries. It can be concluded that there is a relationship between the consumption of cariogenic foods and the severity of caries in children aged 9-10 years. with an OR value of 29 times, it means that children who consume high cariogenic foods tend to have 29 times higher caries severity or CSI scores compared to those who consume low cariogenic foods. This is supported by research by Talibo which states that there is a relationship between the consumption of sticky foods and the occurrence of dental caries [13]. Food residue in the oral cavity is not cleaned immediately, plaque will form on the tooth surface, gradually the enamel structure will dissolve. Overcoming the consumption of carbohydrates that often causes acid products by bacteria to become more frequent so that the pH of the oral cavity is up to 4.5 this will result in more dissolved enamel, so that dental caries occurs [14,15].

### VI. CONCLUSIONS

Based on the results of the study, it can be concluded that there is relationship between cariogenic food habits and caries severity index (CSI) children of age 9-10 years

### ACKNOWLEDGMENT

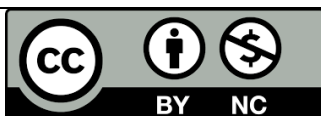
This study was done by self- funding from the authors. The authors thank to all partisipants and research assistan.

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## Administrators' Financial Accountability and Perceived Internal Efficiency of Public Secondary Schools in Cross River State, Nigeria.



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**ABSTRACT:** This study titled "administrators' financial accountability and perceived internal efficiency of public secondary schools in Cross River State, Nigeria" was carried out to assess the relationship (if any) between administrators' financial accountability and perceived internal efficiency of public secondary schools. The study area is public secondary schools in Cross River State, Nigeria. The staff in the public secondary schools formed the population of the study and a total of five hundred and twenty-nine (529) sample size was gotten from the population. The questionnaire was used as the main instrument for data collection. From extent observation and analysis, the study reveals that administrators' financial accountability significantly influence internal efficiency of public secondary schools in the study area., that is, when financial resources are not only adequately provided but judiciously used the performance of students in public secondary schools is bound to change especially in external examinations like WAEC and NECO. Therefore, school financial records of all income and expenditures should be religiously kept by school administrators. Also, school administrator should maintain reports on financial metrics. Finally, they should be adequate report on financial projections.

### INTRODUCTION

Financial accountability is a practice in education that is key to enabling efficient management of secondary schools in Nigeria. It is an aspect of the economics of school management strategies that enables the school administrators to not only keep the financial records of the school but how this adequate management is properly adhered to bring about efficiency and effectiveness. The management of financial resources in education is a vital issue in secondary education. Secondary education and the problems of financial resource management have been largely blamed for the poor status of school physical and human resources and poor academic achievement of students (Okoye, 2004 in Nwosu and Ozioko, 2020). The continued financial assistance given to schools by the government and non-governmental organization is inadequate to enable them achieve their goals (Nwosu and Ozioko, 2020). Schools are established in almost every community in Cross River State but many of the schools are in a deplorable state because of issues in managing the available financial resources. It has long been recognized that the achievement of educational goals depends on adequate financial management. The issue of financial management is a very crucial one and demands serious attention by government and the educational stakeholders at all levels. According to Babayemi (2006) in Nwosu and Ozioko (2020), the role of every school financial manager includes organizing the staff, preparing the school budget, administering capital out layand debt services, administering school purchases, accounting for school monies and property, providing for a system of internal accounting, the need to display accountability in schools financial management and the need to provide a meaningful account on how the financial resources of schools are utilized for the success of a reformed structure which will improve the quality of service delivery at the secondary educational level (Ofojebe, 2007 in Nwosu and Ozioko, 2020). It will equally influence the perceived attractiveness of school attendance as well as the learning achievement of students. The internal efficiency of public secondary schools can as well be assessed in terms of the enrolment ratio, performance in external examinations like WAEC and NECO repetition and dropout rates.

Accountability in education has become imperative considering the fact that the society expects very much from the school system. All operators in the school system have an obligation to live up to their responsibilities by making the education system very responsive, competitive and productive. Educational administrators are both accountable to the entire stakeholders

## **Administrators' Financial Accountability and Perceived Internal Efficiency of Public Secondary Schools in Cross River State, Nigeria.**

in education as well as accountable for achieving the goal of education using available resources. Accountability in education desires an administrator that is proficient to mobilize the necessary actors and factors in the system to achieve the desired goals of education and render account of such stewardship thus enhancing seamless adjustment into the change agenda of present administration in Nigeria as a whole and Cross River State to be specific (Usman, 2015). Financial accountability suggests being prudent, discipline and responsible with income and expenditure in the administration of secondary schools in Nigeria. The principle of accountability makes it imperative for schools to devise a means of providing a statement of detailed income and expenditure of schools. Babayemi (2006) stated that when funds are given out for the procurement of materials, adequate care must be taken to see that the goods are purchased with the money spent on them and receipts are expected to be issued for accounting purposes. Accountability also demands good record keeping. School finance officers record all items and amount of money approved to be used for every term. Vouchers have to be prepared before any payment is made. They must not be destroyed or misplaced.

The School administrator is the head of the school system with clearly defined functions based on a hierarchy of authority as prescribed by the Ministry of Education (Cross, River State Ministry of Education, 2017). The prudential and judicious management of both human and material resources rest on his leadership acumen. The school administrators are entrusted with inputs such as facilities, funds, and personnel among others that need to be managed efficiently for desired outputs to be obtained. School management is one of the important factors that affect internal efficiency of schools. Susy (2008) submits that school management has an important role in improving the learning capacity of learners, because they coordinate teachers in setting standards, teaching the curriculum in relevant way and providing additional support. Kathmandu (2001) remarks that school management practice could be influenced by top management, qualification of head teachers, qualification and training of school teachers, and most importantly the commitment and initiative taken by the head teachers and teachers. All these could lead to efficiency as school inputs are judiciously managed for desired outputs or products of the school system.

Efficiency suggests the ability to perform well in a given task even with limited resources or manage limited resources well in an assigned role. The inputs into the secondary school system include the students, teachers, furniture, equipment and facilities as well as finance and time, while the output comprises the students who graduate at the end of the system (Adeyemi & Adu, 2012). Efficiency is seen as a situation in which the educational administrators are able to satisfy the needs of the human elements within the system in admission procedure, staffing, management of funds and other variables in the business of education so as to achieve maximum output with little input or effort. Secondary schools management is expected to apply inputs (human and material resources and also administrative exigencies or demands) from the school system and outputs (academic achievement or excellence of students, high level of productivity) to produce maximum output with minimum possible inputs in keeping with set standards. Efficiency of school systems can be seen from two perspectives: external and internal efficiency. External efficiency of the school system looks at the attainment of social goals or objectives while internal efficiency is concerned with the relationship between inputs and outputs of the school system (Yang, 2014). However, the focus of this study is on internal efficiency of the school system.

Internal efficiency of education refers to the relationship between learning achievements (outputs) and corresponding inputs used to create them (Ebhojimen, 2009). Longe and Durosaro (2008) stated that internal efficiency is the extent to which the educational system's ability can maximize cost and reduce educational wastage. This makes internal efficiency a milestone of any educational institution. Internal efficiency acts as a mirror of operation system of organization. This implies that secondary schools would have good results and their students are able to secure good jobs and a bright future. Subedi (2009) explained that internal efficiency is affected by system flow factors especially drop-out, retention, promotion, and cycle completion among others which are dependent on input, process and output related dynamics.

Internal efficiency is the extent to which resources made available to the educational system are being used to achieve the goals for which the educational system has been set up. In this regard, the input into the system and the output from it needs to be measured. The inputs such as classroom, teachers, furniture, textbooks, and computers for information and communication technology (ICT), internet services among others, can be quantified as the cost per student, per year. Thus, the smaller the wastage rate the more efficient the system (Babalola, 2003). Similarly, Lerotholi (2001) pointed out that the internal efficiency of an education system is revealed by grade promotion, repetition and dropout rates. Akinwumiju (1995) in Yang (2014) stressed that an internally efficient educational system is one, which turns out graduates without wasting any student's year or without dropouts and repeaters. This is to a great extent dependent on the accountability of school systems.

School accountability as described by Figlio and Loeb (2011) is the process of evaluating school performance on the basis of student performance measures. That is, a well financial accountability to them is a catalyst to workers' motivation which



## **Administrators' Financial Accountability and Perceived Internal Efficiency of Public Secondary Schools in Cross River State, Nigeria.**

in turn is translated into hard work in terms of teaching and the output is on measured by student's performance. The authors explained that accountability in education is a broad concept that could be addressed in many ways. These include the use of political processes to assure democratic accountability, introduction of market-based reforms to increase accountability to parents and children, or development of peer-based accountability systems to increase the professional accountability of teachers. To Ahmed (2000), accountability refers to holding the providers of services answerable to the beneficiaries and other stakeholders regarding both process and outcome of a programme. Accountability in education has three dimensions. Firstly, education staffs are accountable to those in the educational hierarchy above them. Secondly, school administrators have to demonstrate to zonal education office staff that they are doing their jobs, and they must also show their local board of governors and Parent-Teachers Association (PTA), that the school is meeting up to its requirements. Thirdly, the institution through the education system is accountable to parents and the community. The adults in the community pay fees for children to be educated, and they are expected to be presented with evidence that learning has occurred as advertised.

Accountability demands that an effective leader is able to mobilize, motivate and utilize subordinates to achieve organizational goals. This means that the school administrator (Principal or Vice Principal) must be perceived as a principal actor in management processes. He measures the performance of the organization by establishing targets with which to determine both performance of the organization and that of every person in the organization. He analyzes, appraises, and interprets performance and communicates the outcome to the subordinates, colleagues and superior (Eferekeya, 1999). Particularly, his functions include initiating, strategies and providing direction to all in the institution. These strategies may be geared towards cost benefits, cost effectiveness and cost analysis in terms of utilizing men and materials for operation of the education system. His effectiveness in leadership is in facilitating the release of human potentials in order to synthesize and utilize the available resources to achieve goals without wastage.

Accountability in secondary school includes effective finance management processes. Federal Republic of Nigeria (FRN, 2013) recognizes this fact, when it stated that education is an expensive social service that requires adequate financial provision from all tiers of government for a successful implementation of the educational programmes in the country. Also, Durosaro (2000) believed that a very vital aspect of the function of the school manager was the management of the school fund and facilities, while Oguntoye (1983) in Olatoun (2012) also stated that finance is positively related to the quality of education. This implies that school administrators raise the needed funds, prioritize needs, budget, and report expenditures in details. Educational management could be improved both by finding alternative sources of funding to meet school needs, prudent utilization and reporting of existing funds.

The school administrators supervise both human and material resources within the school for the attainment of desired objectives. The human resources are the teachers and students while the material resources include classrooms, machines, laboratories, chalkboards, offices among others. Frankie- Dolor (2002) asserted that of all the pre-requisites for effective management of an organization, the most vital is the human resources. Olatoun (2012) also stated that the success of any type of organization, be it social, political, religious or economic, depends to a large extent on the human beings that make up the organization. School administrators as supervisors take decisions, which provide the knowledge, discipline, energy and co-operation through which school objectives are achieved and with which leads to maximum efficiency.

Efficiency typically means a potential for increase in the desired outcomes of education without increases in the physical quantities of resources used. Efficiency has two major aspects: production efficiency which refers to the efficiency with which inputs are combine in the education process to achieve desired outputs and exchange efficiency which refers to the efficiency with which appropriate educational outcomes are matched with the country's educational needs. Inputs of the education are composed of the students, the teachers, the time factors, the physical infrastructure and other equipment, and recurrent expenditure. On the other hand, output refers to intangible characteristics that pupils acquire in the course of education programmed, knowledge, skills, behavior, and attitudes normally revealed by examination results such as WAEC and NECO.

According to Yin and Wang (2005), internal inefficiency is a phenomenon that describes the relationship between inputs and outputs of education system. Internal inefficiency may permeate much of primary, secondary, and higher education. This is because infrastructure, administrative staff, and teachers become underutilized as a result of falling rate of enrolment. Subsequently, this creates avenues of inefficiency waste, and lower productivity. Waste/wastage in education entails the application of human and material resources committed on students who may have to repeat, and failures or drop out of school before completing a cycle. Wastage may take place in one of the following ways: wastage may be used to describe those who fail to graduate and leave the system before the completion of the course; it may occur between grades caused by repeating the grade; and those who drop out of the system between the grades.

## **Administrators' Financial Accountability and Perceived Internal Efficiency of Public Secondary Schools in Cross River State, Nigeria.**

In Cross River State, the researcher is concerned as to whether school administrators are not utilizing their management competencies in ensuring the supervision of financial facilities for accountability of the educational process. A recurring decimal in the State is the poor performance in annual external examinations (WAEC and NECO) and inability of such graduates especially from the public secondary school sector to adequately satisfy the entry requirements for admission into tertiary institutions. The researcher's concern over this development therefore necessitated this study with a focus on determining the influence of accountability amongst administrators and perceived internal efficiency of public secondary schools in Cross River State, Nigeria. Therefore, the study will be examining the significant relationship (if any) between administrators' financial accountability and perceived internal efficiency of public secondary school in Cross River State.

### **THEORETICAL FRAMEWORK**

The study is based on two theories: Human Capital Theory and the System Theory. Schultz (1960), maintained that increase in any output could only be realized by investing in human capital, hence, the Human Capital Investment Theory. Investing in human capital through education is to enable graduates respond to changing opportunities (Schultz, 1971). The convention theory of human capital advocate for by Becker (1992), and Miner (1974) in Ouma (2017) views education and training as the major sources of human capital accumulation. Secondary schools therefore should participate in enabling students acquire knowledge, skills and attitudes which are very crucial for human capital base.

A system is a group of interrelating interdependent parts that form a complex whole. Ludwig von Bertalanffy initially proposed general systems theory in 1928. According to Ludwig, a system is featured by interactions of its components and nonlinearity of the interactions. Systems can be either controlled or uncontrolled. The researcher considered 246 secondary schools as processing systems comprising of different components: administrator, teachers, students, time, resources and facilities. The raw materials (input) are the students enrolled into the schools, processed through teaching and learning to give rise to finished products (output) which are the graduated students. The more the school system is internally efficient, the more qualitative are the graduates, with less wastage. Both the Human Capital Theory and the System Theory reinforces the main purpose of education. That is to improve learners' ability to make positive contribution in controlling and shaping of environment and its degradation. Government, policy makers and civil society have emphasized that developing countries need to invest more in education and ensure that systems of education are managed efficiently, that limited national resources allocated to the education sector yield maximum impact, and that cost-recovery measures are adopted. Even though these two theories look at learners as "machines" to be sharpened for better production, they still prove the best for this study since Nigeria being one of the developing countries has embarked on educating her citizens as a way of empowering them to take responsibilities in the society and to improve their productivities.

### **LITERATURE REVIEW**

The role administrators play is regarded primarily as that of a head teacher who keeps things in good order, disciplines students, submits reports, performs whatever clerical work as necessary and keeps tracks of students' records and maintain accurate financial records. All these are aimed at achieving the goals for which the principal is to be held accountable. When financial transactions are properly documented and kept in records, incidence of fraud, overspending and financial waste, will be curtailed to an extent. Records such as cash book, bank account book, cheque book, account ledger and receipt for payments, are useful records for this purpose.

The administrator carry out financial management and parents have to be assured that the finances are managed properly at the schools under their custody, since payment of school fees is obligatory at all secondary and high schools. According to Moet (2000), the income of the school shall consist of all fees charged by the school. It is obligatory for principals to ensure accountability and prudence in the utilization of school funds. Principals are appointed on the basis of teaching experience, as well as their academic and professional qualifications (Mosoeunyane, 1999). Training in or even having a working knowledge of financial management is not considered a prerequisite for appointment to the position of principal (Kotele, 2001). Poor management of funds by principals often led to shortage of critical resources in schools. Poor management of funds by principals often led to shortage of critical resources in schools. Accountability in financial administration according to Bisschoff (1997) in Ekundayo (2010), involves three aspects: sound relationships, communication with all stakeholders and internal as well as external and motivation of all the people concerned with school finances. Niemann (1997) believed that financial activities are dealt with most effectively when both the administrative and academic personnel are involved in the process. This implies that financial activities can be attained perfectly with the application of system theory where all hands must be on deck. The financial planning of school finances and its control are interdependent and closely linked with each other (Ntseto, 2009).

## **Administrators' Financial Accountability and Perceived Internal Efficiency of Public Secondary Schools in Cross River State, Nigeria.**

Oche (2009) conducted a study to ascertain financial management practices of secondary school principals in Benue State. Four research questions were raised and two null hypotheses were formulated to guide the study. The study employed a survey research design. The population was not sampled due to the manageable size hence 624 principals of government grant aided secondary schools were used. A forty-seven item questionnaire tagged "financial management practices of secondary school principals' questionnaire" was administered on 312 junior principals and 312 senior principals respectively. Mean rating and standard deviation were used to answer the four research questions while t-test statistics was used to test the two null hypotheses. The test of the two null hypotheses showed that there was no significant difference in the mean ratings of junior and senior secondary school principals on sources of funds for secondary schools, and there was no significant difference in the mean ratings of senior and junior secondary school principals on how funds are managed in secondary schools in Benue State. The findings of the study revealed that principals explore other sources for funds such as P.T.A. levies, funds from school farms, magazines, speech and prize giving day, and canteens. Money raised from these sources is included in school budget therefore such funds are accounted for. Budgetary plans are made in collaboration with heads of departments but not strictly adhered to in terms of implementation. Furthermore, the findings showed that there were several factors militating against financial management such as ghost workers, untimely disbursement of funds, lack of ICT training in the bursary department and neglect of internal auditing.

According to Nwankwo (1999), the school administrator needs specific skills in financial management which are as follows:-Revenue generation, Assessment of the school needs, Planning and programming, Prioritizing areas of pressing needs, Cost benefit analysis, Stock taking, Market survey, Budgeting, Financial record keeping, Receipts, Banking strategies, Delegation of staff for financial matters, Auditing and Accountability. Financial management practices of principals in Cross River State has become a sensitive issue over the years because of the growing public and government interest in the provision of funds for the implementation of school programmes. The public expects the school administrators to ensure prudent management of school funds but on the contrary there are speculations and accusations of financial mismanagement by principals such as lack of initiative by principals to create other sources of funding the school, neglect of budgetary plans in financing school programmes, poor disbursement of funds, lack of trained personnel's such as the bursars and cashier, lack of training in financial management by some principals, illegal levies imposed on students, non-completion of projects already approved and paid for by the government, abuse of P.T.A funds, poor record keeping and poor auditing and accounting system.

The administrators cannot make policy statements without interference. their performance is being subjected to increasing criticisms by parents and other stakeholders who sees the management of the school as not just the responsibility of the principal alone but a collective responsibility of the entire community. According to Tafida (2005) accountability would include setting correct goals evaluating their degree of achievement and at what price, presenting and interpreting the information to the public, and accepting responsibility for any results that are perceived as adequate. Accountability according to Adesina (1997) in Tafida(2005) is largely a legal concept defined by recommended or required procedures in record keeping and financial transactions. It also requires procedures for reviewing and disciplining individuals who tend to violate professional ethics and standards. It involves an audit to ascertain whether resources have been used for specified purpose according to practices or requirements. Principals who are appointed outside merit or due to political considerations may not possess the management expertise and experience needed for efficient and effective school management (Udoh et al., 1997).

In a study conducted by Adaobi (2001) to investigated how principals ensure accountability in managing secondary school funds and the problems that limit principals' accountability in managing the funds in Anambra State. The study, which was a survey, was based on two research questions and two null hypotheses. A sample of four hundred and forty-three respondents (443) was selected through proportionate stratified-random sampling technique, Data was collected through a researcher-developed questionnaire, and analyzed using mean scores, standard deviation and Analysis of Variance. The findings of the study indicated that the principals did not display acceptable levels of accountability in managing their school funds. Some problems that limit principals' financial accountability include: inadequate allocation of resources and funds for school activities, non-availability of guidelines on school financial accounting; lack of bursars' compliance with principals directives regarding school accounts; inadequate training on innovations in financial accountability. It was recommended among other things that in-service training should be provided to principals on innovations in financial accountability; government should provide adequate funds to schools, and bursars should show maximum compliance with principals' directives regarding school accounts.

According to Samir (2006) the word 'efficiency' is often used as synonymous to 'productivity' in the economic literature. The economists particularly developed and refined the concept of efficiency. The concept of efficiency in education' was also first evolved and discussed by them (Blaug, Brimer and Pauli). It refers to the relationship between the inputs into an education system and outputs from that system. An education system can be said to be efficient if maximum output is being obtained from

## Administrators' Financial Accountability and Perceived Internal Efficiency of Public Secondary Schools in Cross River State, Nigeria.

a given input or a given output is being obtained with the minimum possible inputs. But what constitutes inputs in education system? From educationists' point of view, it is obviously the structure and facilities, teacher quality, teaching learning provision, curriculum and textbook, students' background, etc. On the other hand, output is the number of graduates and their quality. The former can be expressed in terms of expenditure per student year and the later as number of student-years spent by the graduates of the cohort.

### METHODOLOGY

The research design that was used for this study is the survey design. Survey research is the collection of data attained by asking individuals questions either in person, on paper, by phone or online (Owens, 2017). Conducting surveys is one form of primary research, which is the gathering data first-hand from its source. The information collected may also be accessed subsequently by other parties in secondary research. Survey research is used to gather the opinions, beliefs and feelings of selected groups of individuals, often chosen for demographic sampling (Owens, 2017). This design will be used in this study because it is economical, allowed a large population to be studied with less expense and its findings can be generalized to other areas outside the study area.

The study area is Cross River State. Cross River State is one of the 36 states in Nigeria that has both internal and international boundaries. The state has 18 local government areas with its capital in Calabar municipality. She equally has three Education Zones, which include Calabar, Ikom and Ogoja. There are two hundred and forty-six (246) public secondary schools and six (6) higher institutions in the state (Cross River State Ministry of Education, Calabar, 2017). The population of the study was 5,277 teachers in 246 public secondary schools in Cross River State obtained from the Ministry of Education, Calabar for the 2016/17 academic session. Teachers are accountable to the school administrators, government and parents in the course of discharging their duties. As such they will be able to provide data about accountability. The sampling technique adopted for this study was stratified random sampling technique. The stratified random sampling according to Nwoagu (2002) is where the population is first categorized into groups that are distinctly different from each other on relevant variables and which the elements are drawn at random within each stratum, is such that the relative proportion of the strata in the resultant sampling are the same as they exist in the present population. Stratified random sampling technique is chosen because of its capacity for the proportional representation of subjects from the different units or communities of the population. From each of the different educational zones stratified, the various schools in the various zones were selected using hat and draw simple random sampling technique, a sample size of 529 was drawn. Questionnaire was the main instrument used in collecting data while Simple linear regression used to test the hypothesis which states that there is no significant relationship between administrators' financial accountability and perceived internal efficiency of public secondary school in Cross River State.

### ANALYSIS

In this section the main variables of the study are identified, their mean and standard deviation calculated and presented. The means and standard deviations of research variables is presented in the Table below.

**TABLE 3.1 General description of research variables n=529**

Variable	Mean	Standard deviation
Financial accountability	17.05	2.13
Internal efficiency	24.63	3.04

Simple linear regression analysis of the influence of financial accountability on internal efficiency of schools						
Variable	Mean	SD	R	R <sup>2</sup>	Adjusted R	
Internal efficiency	24.68	3.04	0.117 <sup>a</sup>	.124	.139	
Financial Accountability	16.02	2.08				

Model	Sum of squares	Df	Mean square	F-ratio	P-level
Regression	72.346	1	26.143		.012 <sup>b</sup>
Residual	491.063	527	5.431	3.357	
Total	563.409	528			

a) Dependent variable : Internal efficiency

b) Predictor (Constant): Financial accountability is accounted for by financial accountability.

## **Administrators' Financial Accountability and Perceived Internal Efficiency of Public Secondary Schools in Cross River State, Nigeria.**

The P-value (.012) associated with the computed F-value (3.357) is less than the level of significance (.05). Consequently the null hypothesis was rejected. This implies that there is a significant influence of administrators' financial accountability on internal efficiency of secondary schools. The implication of this result is that good financial accountability by school administrators significantly contributes to internal efficiency of public secondary schools in Cross River State. It follows therefore that in schools where financial accountability is poor, internal efficiency may be jeopardized. Respondents therefore exhibited commonality and objectivity in their responses which is a true reflection of their active involvement in the running of the school system.

### **DISCUSSION**

It is revealed that administrators' financial accountability significantly influences internal efficiency of public secondary schools in the study area. This finding agrees with Ekundayo (2010) who stated that the principal is the chief executive and accounting officer entrusted with the responsibility of controlling the revenue accruing from the school and ensuring judicious utilization of PTA levy. Bush (2004) also said that principals possess authority legitimized by their formal positions within the schools and are accountable to school governing bodies for their activities. Ntseto (2009) posited that administration of a school's finances is an integral part of effective school administration. Financial accountability is the hub of success for every organization including the school system. Where this competence is lacking in school administrators, internal efficiency would be impeded and school goals and objectives would not be achieved.

### **CONCLUSION**

This essay is an empirical research that examined administrators' financial accountability and perceived internal efficiency of public secondary school in Cross River State. As revealed in the analysis and discussion of the findings, there is a significant relationship between administrators' financial accountability and perceived internal efficiency of public secondary schools in the study area and beyond. This implies that accountable financial record keeping system is a catalyst to the overall growth and management of school system not only in Cross River State but in Nigeria as a whole.

### **RECOMMENDATIONS**

1. School financial records of all income and expenditures should be religiously kept by school administrators.
2. School administrator should maintain reports on financial metrics.
3. They should be adequate report on financial projections.
4. The principle of accountability should be held to a very high esteem.

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## The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT Employees. Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat



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**ABSTRACT:** This study aims to determine the effect of motivation, work discipline and work environment on the performance of employees of PT. Java Bali Generation Services PLTU Banjarsari Research is included in the field research design category. The researcher focuses attention on the phenomena that exist in the field so that the direct involvement of the researcher is limited to observations as material for cross-information obtained from the object. Location of PT. Java Bali Generation Services PLTU Banjarsari Lahat Regency. The research sample is 112 employees as respondents. The first sample was tested using the Instrument Validity Test and Instrument Reliability Test. The analytical model used in this study is multiple linear regression analysis. The results of the analysis show that there is a positive and significant effect of motivation, work discipline and work environment together on the performance of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari. Partially, the results of the analysis show that there is a positive and significant effect of work motivation, work discipline and work environment on the performance of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari.

**KEYWORDS:** Motivation, Work Discipline, Work Environment, Performance

### I. INTRODUCTION

Human resources (HR) is a very important factor that cannot even be separated from an organization, both institutions and companies. Human resources are also the key that determines the development of the company. In essence, human resources in the form of humans who are employed in an organization as movers, thinkers and planners to achieve organizational goals.

Empowerment of human resources is one of the important and strategic tools to improve the performance of an organization in the service sector as well as private organizations or profit-oriented companies. This can provide better performance than before, strength in human resources in the form of abilities, namely knowledge, skills, attitudes or behaviors that exist in humans. Whereas in setting work criteria, in general, it is closely related to the nature, behavior, competence, achievement of goals and potential for improvement. Therefore, the placement of personnel in accordance with the needs and demands of the organization, authority, responsibility, trust, leadership and motivation will have an impact on employee performance towards a conducive and harmonious performance environment. Employees need satisfaction with what they receive such as wages/salaries, career paths and welfare. High performance will be more guaranteed if a company has the right way to motivate its employees and at the same time can develop its performance capabilities.

One of the factors that influence the level of success of an organization is employee performance. Where the notion of employee performance itself is defined as work ability in terms of quality and quantity (Khan.et.al., 2010: 297). Khan's opinion above can be understood that performance is a work performance (performance) both quantity and quality achieved by a person during a certain period usually within one year.

Performance is the result of work that has a strong relationship with the organization's strategic goals, customer satisfaction, and contributes to the economy (Wibowo, 2017: 7). In general, employee performance is defined as the results displayed by the employee in carrying out daily tasks. According to Setiyawan and Waridin (2006:126) employee performance is the result or



## **“The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT. Employees, Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat”**

employee performance which is assessed in terms of quality and quantity based on work standards determined by the organization. Good performance is optimal performance, namely performance that is in accordance with organizational standards and supports the achievement of organizational goals. A good organization is an organization that seeks to improve the capabilities of its human resources, because this is a key factor to improve employee performance.

There are many things that can affect performance, according to Kasmir (2016: 65-71), namely: competence, knowledge, work design, personality, job satisfaction, work environment, loyalty, commitment, work discipline, personality, work motivation, leadership, leadership style, organizational culture.

One of the efforts to improve employee performance, including increasing motivation. According to Kasmir (2016: 65-71) Motivation is something that needs to be the main consideration. Motivation is a set of attitudes and values that influence individuals to achieve specific things according to individual goals. According to Rivai (2014: 89) Motivation is something in humans that gives energy, which activates and moves towards behavior to achieve certain goals. According to Dessler (2016: 128) Motivation is a driving force that causes a person to be willing to move the ability of energy and time, carry out activities that are his duties and responsibilities, participate in realizing the goals and objectives to be achieved by the organization. Humans have many basic motivations that play an important role in the world of work, namely the motivation given by organizations related to financial livelihood security.

Another effort that can be made to improve employee performance is to increase employee work discipline, because work discipline is one of the determining factors for success and progress in achieving the goals of an organization. Disciplinary actions that are carried out incorrectly will create unfavorable conditions and even damage the attitudes of employees and the organization. Therefore, disciplinary action must not be applied arbitrarily, but requires wise consideration. The relationship between employees and the organization is something dynamic. The relationship is constantly changing according to the expectations of the other and the contributions that will be made in return.

Another determining factor that can improve employee performance is the work environment. According to Sondang (2015: 160) the work environment is something that is around workers that affects them in carrying out their duties, such as work space, coloring, cleanliness, lighting, ventilation, music, security, noise, air pollution, and air temperature. The condition of the work environment is said to be good if it allows a person to increase his work productivity both physically and psychologically. The work environment is closely related to the level of employee satisfaction, if the work environment is good, then it can have a positive influence on employee job satisfaction, as well as better. Employees can work well and comfortably if they are supported by a pleasant working environment. However, if the environmental conditions are not good and do not provide health and safety guarantees for employees, then employees will be lazy to work, bored, not calm and can lead to ineffective use of time.

The research of Yuyun et al (2018) that the rewards, discipline and motivation that exist in PT. The State Electricity Company (Persero) Tasikmalaya Area simultaneously has a significant effect on the performance of PT. State Electricity Company (Persero) Tasikmalaya Area. Meanwhile, Ananta Dwikristianto et al (2017) that work discipline has no significant effect on the performance of employees of PT. Modern Widya Technical Jayapura Branch. It can be seen that employees can still maintain their performance even though they arrive late and leave early. Rizki et al (2018) that the organizational culture and work environment of PT. PLN (Persero) West Java distribution in the Majalaya Area have a positive and significant influence on employee job satisfaction and employee performance of PT. PLN (Persero) West Java distribution in the Majalaya Area. Meanwhile, Gita et al (2019) showed that the work environment had an effect but not significant on the performance of PT. PLN (Persero) Central Java Distribution Parent Unit and Yogyakarta D.I Implementation Unit of Salatiga Customer Service It can be seen that the work environment is considered an external factor which includes the work environment itself, colleagues and superiors or leaders. J. W., & Simmons, B. L. (2007) that the development of a work environment that is oriented towards organizational goals can be a more effective means to improve employee performance. Given the consistency of employees' work attitudes, the significant relationship between goal-oriented work environment and performance raises the argument that managers should do more to try to improve the work environment in a positive way so that the work can be a more rewarding, rewarding experience. Camilleri, E., & Van Der Heijden, B. I. (2007) that work motivation has a positive effect on employee performance. Public service organizations must continue to pay attention to human resource policies, especially work motivation because it becomes an important focus on individual performance.

PT. Pembangkit Jawa Bali Services is a company engaged in Operation and Maintenance services, Power Plants which include PLTU, Hydroelectric Power Plants and Steam Gas Power Plants spread throughout Indonesia, such as Operation & Maintenance which is currently being carried out at PLTU Banjarsari, South Sumatra. . Recruitment of employees at PT. There is only one way to generate Java Bali Services, namely recruitment is carried out at the head office of PT. Java Bali Power Generation Services

## **“The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT. Employees, Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat”**

Sidoarjo East Java. However, PLTU Banjarsari has a problem where local employees are recruited not because of their abilities but because of problems with the land parcels or land they occupy and because they are residents of ring 1 of the PLTU Banjarsari Unit so that there is a mismatch of criteria for recruited employees. At PLTU Banjarsari there are 2 groups of employees, namely elementary employees and organic employees. Organic employees are employees who have met the specified requirements, are appointed and are given income according to applicable regulations and for recruitment areas throughout Indonesia with education starting at the SMA/SMK level up to S1 level. This recruitment system is a standard that applies at PT. Java Bali Power Generation Services. Elementary employee is a designation for employees below the basic competency level who serve as support for the company's business implementation and for the recruitment area around ring 1 (village) and ring 2 (district) with education level at SMA/SMK equivalent. Elementary is a transition to the level that applies at PT. Java Bali Power Generation Services.

The information above is known that there are several phenomena that occur in employee performance in terms of the quality of work produced by employees is not good, such as the repetition of work that has been done by employees such as unit maintenance carried out by employees, causing employees to repeat the work and have an impact on the efficiency of working hours that should not need to work more or overtime becomes more work or overtime and if overtime work is carried out it has an impact on employee dishonesty in reporting employee overtime hours so that overtime hours are more every month.

Some elementary employees committed disciplinary violations such as 5 employees who were penalized with a warning letter. One example of a disciplinary violation committed was being absent for 2 days, Sara, and sleeping during working hours. There were 5 employees who were penalized with a warning letter, 2 examples of disciplinary violations committed, namely smoking, delaying transfers and repeating disciplinary violations, and 5 employees being penalized with warning letters 3 examples of disciplinary violations committed, namely forging the signature of the unit manager and being absent for more than one month. There were a total of 12 employees who resigned from the company because there was a mismatch in the work environment such as due to remote placement, often there were demonstrations by local residents and demonstrations by elementary employees so that employees resigned. Employees experience health problems such as hearing loss because employees do not comply with the regulations for the use of personal protective equipment at work with the current problems. Management has a goal to further develop its employees, both local / elementary recruits and employees who are accepted with national recruitment. Management develops employees by providing training to all employees by inviting consultants from outside the company, Coaching, Mentoring and Counseling by their respective supervisors.

Based on the background, researchers are interested in conducting research with the title of the effect of work motivation, work discipline and work environment together and partially on the performance of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency.

### **Performance**

According to Armstrong and Baron (2005: 203) performance is the result of work that has a strong relationship with the organization's strategic goals, customer satisfaction and contributing to the economy. According to Bernardin and Russell (2003:232), performance is a record of the results obtained from certain job functions or certain activities over a certain period of time. Mathis and Jackson (2004:234) employee performance is what employees do and don't do. Thus, employee performance is the quality (quality) and quantity (quantity) of the work of a person or group in carrying out their duties and obligations for a certain period of time as a result of their natural abilities or abilities from the learning process and the desire to excel.

Wibowo (2017:3), states that performance is the implementation of the plans that have been prepared. Performance implementation is carried out by human resources who have the ability, competence, motivation, and interests. Hasibuan (2014:94) performance is the result of work achieved by a person in carrying out the tasks assigned to him based on skills, experience, sincerity and time. Mathis (2012: 135), performance is a record resulting from the function of a particular job or activity over a certain period of time. Kasmir (2016: 182) states that performance is the result of work and work behavior that has been achieved in completing the tasks and responsibilities given within a certain period.

Wirawan (2009:80) to measure performance can use the following indicators: 1) Quantity of work results, namely the ability of employees to complete a number of daily tasks. 2) Quality of work, namely the ability of employees to show the quality of work in terms of accuracy and neatness. 3) Efficiency, namely the completion of employee work quickly and precisely. 4) Work discipline, namely the willingness of employees to comply with company regulations relating to punctuality in entering/leaving work and attendance. 5) Accuracy in the ability of employees to carry out work in accordance with what is ordered by superiors. 6) Leadership, namely the ability of employees to convince others so that they can be mobilized optimally to carry out their main

## **“The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT. Employees, Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat”**

tasks. 7) Honesty, namely the sincerity of an employee in carrying out his duties and the ability not to abuse the authority given to him. 8) Creativity is the ability to put forward constructive new ideas/proposals for smooth work, reduce costs, improve work results and increase productivity.

### **Motivation**

Siagian (2014: 340) defines motivation as a driving force that causes a member of the organization to be willing and willing to mobilize abilities in the form of expertise or skills, energy and time to carry out various activities that are their responsibility and fulfill their obligations, in the context of achieving goals and various targets. predetermined organization.

Furthermore, Widodo (2015: 187) states that motivation is a force that exists in a person, which drives his behavior to take action. The magnitude of the intensity of the power from within a person to perform a task or achieve a goal shows the extent of the level of motivation. Meanwhile, Hasibuan (2014) that motivation is the provision of a driving force that creates enthusiasm for one's work, so that they want to work together, work effectively and be integrated with all efforts to achieve satisfaction. Luthans (2011: 234) states that work motivation is a driving force, so that employees want to empower their abilities in carrying out various activities that are their responsibility and prioritize obligations in order to achieve predetermined organizational goals. Robbins and Judge (2008:2008:221) define motivation as a process that explains the intensity, direction, and persistence of an individual to achieve his goals.

Luthans (2011:236) stated that there are several factors that influence employees in carrying out their duties, namely: 1) Responsibility Someone who has good motivation will try to work hard, has a high sense of responsibility, is motivated to achieve predetermined goals, and feels at one with the work. 2) Work Performance Someone who has high motivation will have a strong internal drive to succeed, be able to capture the feedback given to him, and excel in the field of work. 3) Self Development Employees who are strong in themselves will generally try to develop themselves such as trying to improve their skills, looking for opportunities to be able to attend education and training, and looking for opportunities to improve their formal education. 4) Independence An employee with high work motivation will work independently and likes challenges.

### **Work Discipline**

Sutrisno (2009:97) work discipline is a tool used by managers to communicate with employees to be willing to change a behavior as well as an effort to increase one's awareness and willingness to obey all company regulations and applicable social norms. Handoko (2012:238) that work discipline is the willingness of someone who arises with his own awareness to follow the rules that apply in the organization. According to Rivai (2014: 825), discipline is a tool used by managers to communicate with employees so that they are willing to change a behavior as well as an effort to increase one's awareness and willingness to obey all company regulations and applicable social norms. Hasibuan (2014: 193) suggests that Discipline is the awareness and willingness of a person to obey all applicable social rules and norms. Discipline is able to reflect the magnitude of a person's responsibility for the tasks assigned to him. This will encourage work enthusiasm, morale and the realization of organizational goals.

According to Hasibuan (2016: 194), basically there are many indicators that affect the level of discipline of an organization's employees, including:

- 1) Goals and abilities Goals and abilities influence the level of employee discipline. The goals to be achieved must be clear and ideally defined as well as challenging enough for the employee's abilities. This means that the goals (work) assigned to the employee must be in accordance with the ability of the employee concerned, so that he works seriously and is disciplined in doing it.
- 2) Leading example Leaders do not expect good employee discipline if he himself lacks discipline. Leaders must realize that their behavior will be imitated and imitated by their subordinates. This is what requires leaders to have good discipline so that subordinates also have good discipline.
- 3) Reply To realize good employee discipline, companies must provide relatively large remuneration. Employee discipline may not be good if the remuneration they receive is not satisfactory to meet the needs of their lives and their families.
- 4) Justice Managers who are good at leading always try to be fair to their subordinates and good justice will create discipline. Justice must be applied properly to every company so that employee discipline is good.
- 5) Waskat Waskat (attached supervision) is the most effective concrete action in realizing the discipline of company employees. Waskat means that superiors must be active and directly supervise the behavior, morals, attitudes, passion, and work performance of their subordinates. This means that superiors must always be present and present at work so that they can supervise and give instructions, if any of their subordinates have difficulty completing their work.

## **“The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT. Employees, Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat”**

- 6) Penalty sanction Punishment plays an important role in maintaining employee discipline. Sanctions are getting heavier, employees will be more afraid of violating company regulations, attitudes, and undisciplined behavior of employees will be reduced.
- 7) Firmness The firmness of the leadership in taking action will affect the discipline of the company's employees. Leaders must be brave and firm, act to punish any employee who is not disciplined in accordance with the sanctions that have been set. Leaders who dare to act decisively in applying punishment to employees who are not disciplined will be respected and recognized for their leadership by subordinates.
- 8) Human relations Managers should strive to create an atmosphere of harmonious and binding human relations. The creation of a harmonious human relationship will create a comfortable work environment and atmosphere. This will motivate good discipline in the company. So, employee discipline will be created if the human relationship in the organization is good.

### **Work environment**

According to Sedarmayati (2011:26) that broadly speaking, the type of work environment is divided into 2 (two) parts, namely: the workplace environment or physical work environment and the work atmosphere or non-physical work environment. The physical work environment is all physical conditions that exist around the workplace that can affect employees both directly and indirectly and the non-physical work environment is all conditions that occur related to work relationships, both relationships with superiors and relationships with fellow co-workers or relationships with subordinates. The work environment is the environment in which employees perform their daily work. A conducive work environment provides a sense of security and allows employees to work optimally. The work environment is everything that is around the workers that can affect them in carrying out the tasks they carry out.

The physical work environment can be divided into two categories, namely:

- 1) Environment that is directly related to employees such as: work center, and work environment.
- 2) The intermediary environment or the general environment can also be called the work environment that affects the human condition. For example, temperature, humidity, air circulation, lighting, noise, mechanical vibration, unpleasant odors, colors, and others.

Sedarmayanti (2011:21) suggests several factors that can affect the formation of a working environment condition associated with the ability of employees, including:

- 1) Illumination/lighting in the workplace.
- 2) Temperature/air temperature in the workplace.
- 3) Humidity at work.
- 4) Air circulation in the workplace.
- 5) Noise at work.
- 6) Mechanical vibration at work.
- 7) Bad smell at work.
- 8) Coloring in the workplace.
- 9) Decoration at work
- 10) Music at work.
- 11) Safety at work.

## **2. METODOLGY**

Research design is a work guideline so that research can run effectively and efficiently. Design is not only useful for research implementers but is useful for all those involved in the research activity. The research design can be prepared based on the formulation of the problem and the hypothesis to be tested. Based on the time dimension, this research is a research with a cross section design where data collection is done at one time and comes from different objects to describe the situation. Meanwhile, based on the study environment, the research is included in the field research design category. The researcher focuses attention on the phenomena that exist in the field so that the direct involvement of the researcher is limited to observations as material for cross-information obtained from the object. Meanwhile, based on the purpose, a descriptive design is used because it will only explain one independent variable.

This study on employees of PT. Java Bali Generation Services PLTU Banjarsari Lahat Regency. The population is the whole group of people, or things of interest that the researcher wants to investigate (Sekaran & Bougie, 2013: 240). Total population is 155

# “The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT. Employees, Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat”

people. The sample according to Sekaran & Bougie (2013: 241) is described as “a subset of the population.” In other words, a sample is part of the population. The number of samples in this study was determined based on the Slovin formula. The research sample obtained is 112 employees as respondents.

## Definition of Variable Operationalization

Research variables are basically something that is being studied, which can distinguish or change values. All variables in this study are described in description and each variable is developed into the following indicators:

**Variable (Y): Performance** is the result or work performance of employees who are assessed in terms of quality and quantity based on work standards determined by PT. Java Bali Power Plant Services Unit PLTU Banjarsari. The indicators are Quality, Efficiency, Work Discipline, and Honesty

**Variable (X1): Work Motivation** is an urge from within humans to awaken themselves in taking positive actions to achieve the goals of PT. Java Bali Power Plant Services Unit PLTU Banjarsari. The indicators are Responsibility, Self-Development, and Independence

**Variable (X2): Work Discipline** is a tool used by PT. Java Bali Power Plant Services Unit PLTU Banjarsari to communicate with employees to increase employee productivity. The indicators are Goals and Capability, Leading Example, Retribution, and Punishment

**Variable (X3): Work Environment** is an environment where employees do their daily work in PT. Java Bali Power Plant Services Unit PLTU Banjarsari. The indicators are Lighting, Temperature, Air Circulation, Noise and Security

The data needed in this study is qualitative data, namely data that cannot be measured on a numerical scale. Qualitative data in this study is ordinal data. However, because in statistics all data must be in the form of numbers, this qualitative data will be quantified so that it can be processed further.

Types of data collection methods are interviews (interviews), list of questions (questionnaire), observations, documentation, or trials. In this study used a list of questions.

Questionnaires are more efficient to use when the researcher knows clearly the variables being measured and what is expected of the respondents. In addition, the questionnaire is also suitable for use when the number of respondents is quite large.

The data analysis technique in this study uses multiple regression analysis techniques (multiple regression analysis) with the help of the SPSS 20 program. The stages of implementing the analysis include:

- a) Validity Test
- b) Reliability Test
- c) Analysis Techniques

## 1). Multiple Regression Analysis

It is used to determine how much influence the variables of Work Motivation (X1), Work Discipline (X2) and Work Environment (X3) have on Employee Performance (Y). Multiple linear regression is used because the influence variable (X) is more than one, with the formula:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \epsilon$$

### Information:

Y = Employee performance variable

A = constant value

b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub> = multiple linear regression coefficient

X<sub>1</sub> = Motivation

X<sub>2</sub> = Work discipline

X<sub>3</sub> = Work environment

ε = Error of Term

## 2). Simultaneous Testing (F Test)

Simultaneous test regression analysis (F test) was carried out to prove the research hypothesis of the significant effect of the independent variables together on the dependent variable. The test criteria are as follows:

Ho accepted : sig F > 0,05 dan F<sub>hitung</sub> < F<sub>tabel</sub>.

# “The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT. Employees, Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat”

Ho rejected : sig F  $\leq$  0,05 dan  $F_{hitung} \geq F_{tabel}$ .

Ho: There is no effect of Work Motivation, Work Discipline and Work Environment together on Employee Performance.

Ha: There is an effect of Work Motivation, Work Discipline and Work Environment together on Employee Performance.

### 3).Partial Test (T Test)

Regression analysis of the partial test of each independent variable on the dependent variable can be explained by using the t test.

The test criteria according to Sugiyono (2017) are: Test the hypothesis with the t test, namely testing the hypothesis of variable X on variable Y partially or one by one. The test criteria are as follows:

Ho accepted : sig t  $>$  0,05 dan  $t_{hitung} < t_{tabel}$ .

Ho rejected : sig t  $\leq$  0,05 dan  $t_{hitung} \geq t_{tabel}$ .

Ho: There is no partial effect of Work Motivation, Work Discipline and Work Environment on Employee Performance.

Ha: There is a partial influence of Work Motivation, Work Discipline and Work Environment on Employee Performance

## 3. RESULTS AND DISCUSSION

Data analysis carried out is instrument test, multiple regression basic assumption test, model and hypothesis test, as follows:

### Instrument Test Results

Based on the results of calculations using the SPSS for Windows Version 18.00 program, the results of the data validity test on the question items on the variables of Employee Performance (Y), Work Motivation (X1), Work Discipline (X2) and Work Environment (X3) are stated valid at the real level ( $\alpha$ ) = 5%, so it can be used as a valid measuring tool in the next analysis.

Based on reliability testing on the dependent variable, namely Employee Performance (Y), Work Motivation (X1), Work Discipline (X2) and Work Environment (X3), it can be seen that all Cronbach's alpha of each variable is above 0.600, declared reliable, p. This means that all the question items in each of these variables can be used as a reliable measuring tool in the subsequent analysis.

### Analysis Techniques

#### Multiple Linear Regression Analysis

It is used to determine how much influence the variables of Work Motivation (X1), Work Discipline (X2) and Work Environment (X3) have on Employee Performance (Y). Based on the calculation results, the estimated function of the multiple linear regression equation is obtained, namely:

$$Y = 7,103 + 0,305X_1 + 0,452X_2 + 0,109X_3$$

The regression equation can be described as follows:

- A constant of 7.103 means that if Work Motivation, Work Discipline and Work Environment have a fixed value then the Employee Performance is 7.103
- The coefficient value of the Work Motivation variable is 0.305. This means that for every increase in the number of work motivation variables, the Employee Performance variable will increase by 0.305 with the assumption that the other independent variables of the regression model remain.
- The coefficient value of the Work Discipline variable is 0.452. This means that every increase in the number of Work Discipline variables, the Employee Performance variable will increase by 0.452 with the assumption that the other independent variables of the regression model remain.
- The coefficient value of the Work Environment variable is 0.109. This means that every increase in the number of Work Environment variables, the Employee Performance variable will increase by 0.109 with the assumption that the other independent variables of the regression model remain.

#### Simultaneous Testing (F Test)

# “The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT. Employees, Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat”

**Table 1. F test results**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	827.625	3	275.875	44.088	.000 <sup>b</sup>
	Residual	675.794	108	6.257		
	Total	1503.420	111			

a. Dependent Variable: Y

Based on the results of the F test above, the data obtained that the significance value is 0.000, smaller than the alpha value ( $\alpha$ ) = 0.05. From these results it can be said that together the variables of work motivation, work discipline, and work environment simultaneously affect employee performance.

## Partial Test (t test)

**Table.2. t test Results**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	7.103	2.321		3.061	.003		
Motivation	.305	.120	.241	2.542	.012	.464	2.154
Work Disciplin	.452	.094	.443	4.792	.000	.488	2.049
Work Environment	.109	.043	.188	2.564	.012	.774	1.292

Based on the results of data processing on SPSS above, where the confidence interval is 5 percent ( $\alpha=0.05$ ), it appears that the significant variable explaining employee performance is the variable with a significance value of less than = 0.05. In this case, the independent variables used are work motivation, work discipline, and work environment. From the results of the analysis of the three variables significantly affect employee performance, namely the variables of work motivation, work discipline, and work environment. The significance values are the work motivation variable has a significance value of 0.012, the work discipline variable has a significance value of 0.000, and the work environment variable has a significance value of 0.012.

## The Influence of Work Motivation, Work Discipline, and Work Environment on the Performance of Employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency.

Based on the results of the analysis that has been described above, it was found that together the employee performance variables of PT. The Generation of Java Bali Services Unit PLTU Banjarsari Lahat Regency is influenced by work motivation, work discipline, and work environment in a positive and significant way.

The existence of a positive and significant influence on the variables of work motivation, work discipline, and work environment on the employee's performance illustrates the achievement of company goals. Performance is a real behavior that is displayed by everyone as work performance produced by employees in accordance with their role in the company. The results of this study are supported by Mohammad Hairul Imam et al (2016), Yuyun et al (2018), Sukarani (2013), and Rony Prasetyo (2013) which state that collectively, employee performance is influenced by work motivation, work discipline, and and work environment.

Performance is an achievement or work result both in quality and quantity achieved by employees in carrying out their duties in accordance with the responsibilities given to them. According to Wirawan (2009: 7-8) there are two factors that affect employee performance, namely employee internal factors such as work motivation and work discipline and supervisor external factors such as the work environment.

Based on the results of respondents' answers, there are still respondents who answered in a negative direction to the questions given by the researcher, which relates to the variable performance of employees of PT. Java Bali Power Plant Services Unit PLTU Banjarsari Lahat Regency. On the question "Employees have work efficiency exceeding existing standards" who answered neutrally as many as 19 people (17.0%). The results of these respondents' answers illustrate that there are still many employees of PT. Java Bali Power Plant Services Unit PLTU Banjarsari Lahat Regency does not have existing work efficiency standards so that it still causes having to work overtime to do the work assigned. Steps that can be taken by the leadership in this case are to

## **“The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT. Employees, Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat”**

socialize how to implement time efficiency in working according to existing standards so that employees can complete work on time without having to do more work/overtime.

### **The Influence of Work Motivation on Employee Performance at PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency.**

The results of hypothesis testing (H1) have proven that there is an influence of work motivation on the performance of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency. The results of this study are supported by Camilleri, E., & Van Der Heijden, B. I. (2007), Rony Prasetyo (2013), and Sukarani (2013) in their research found that work motivation variables affect employee performance. In addition, according to Wirawan (2009: 7-8) one of the factors that affect employee performance is employee internal factors such as work motivation.

Partially, the motivation variable has a positive and significant effect on employee performance. This means that when the work motivation variable is increased, the employee's performance will also increase. Vice versa, if employee motivation decreases, employee performance will also decrease. So that the results of this study can be input for companies to strive in such a way as to increase employee motivation. Some things that can be improved are employee responsibility, self-development, and employee independence.

Luthans (2011: 234) states that work motivation is a driving force, so that employees want to empower their abilities in carrying out various activities that are their responsibility and prioritize obligations in order to achieve predetermined organizational goals. Furthermore, he stated that there are several factors that can influence motivation, including responsibility, work performance, self-development, and independence.

Based on the results of the respondents' answers, there were still respondents who answered in a negative direction to the questions given by the researcher, which were related to the work motivation of the employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency. On the question "Employees are trying to find opportunities to improve their formal education" 23 people answered neutrally (20.5%) and 1 person disagreed (0.9%). The results of these respondents' answers illustrate that there are still many employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency is not trying to find opportunities to improve formal education because employees of PT. Generation Java Bali Services Unit PLTU Banjarsari Lahat Regency only the certificates that are recognized by the company are the most recently registered and there is no certificate equivalent. The steps that can be taken by the leadership in this case are to rethink the issue of equalizing diplomas owned by employees so that employees will be enthusiastic in taking further formal education, not only stopping at the current education level.

### **The Influence of Work Discipline on Employee Performance at PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat**

Based on the results of hypothesis testing (H2) has proven that there is an effect of work discipline on the performance of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency. The results of this study are supported by Yuyun et al (2018) and Sukarani (2013) in their research finding that work motivation variables affect employee performance. In addition, according to Wirawan (2009: 7-8) one of the factors that affect employee performance is employee internal factors such as work discipline.

Partially, the work discipline variable has a positive and significant effect on employee performance. This means that when the work discipline variable is increased, the employee's performance will also increase. Vice versa, if the employee's work discipline decreases, the employee's performance will also decrease. So that the results of this study can be input for companies to strive in such a way as to improve employee work discipline. Some things that can be improved are goals and abilities, leadership examples, remuneration, and sanctions.

According to Sutrisno (2009: 97) work discipline is a tool used by managers to communicate with employees to be willing to change a behavior as well as an effort to increase one's awareness and willingness to obey all company regulations and applicable social norms. There are several indicators that can affect employee work discipline, including (Hasibuan, 2016: 194): goals and abilities, leadership role models, remuneration, justice, waskat, punitive sanctions, firmness, and human relations.

Based on the results of respondents' answers, there are still respondents who answered in a negative direction to the questions given by researchers, which relate to the work discipline of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency. On the question "Repayment can increase employee loyalty" 15 people answered neutrally (13.4%) and 1 person disagreed (0.9%). The results of these respondents' answers illustrate that the employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency does not expect remuneration to increase loyalty.

Steps that can be taken by the leadership of PT. Generation of Java Bali Services Unit PLTU Banjarsari Lahat Regency in this case is to support employees who do not always expect compensation from the company.



# **“The Influence of Motivation, Work Discipline and Work Environment on the Performance of PT. Employees, Java Generation Bali Services Unit PLTU Banjarsari Regency of Lahat”**

## **Influence of Work Environment on Employee Performance of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat.**

Based on the results of hypothesis testing (H3) has proven that there is an influence of the work environment on the performance of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency. The results of this study are supported by Mohammad Hairul Imam et al (2016), Rizki et al (2018), Westerman, JW, & Simmons, BL (2007), and Rony Prasetyo (2013) in their research found that work environment variables affect employee performance. . In addition, according to Wirawan (2009:7-8) one of the factors that affect employee performance is employee external factors such as the work environment.

Partially, the work environment variable has a positive and significant effect on employee performance. This means that when the work environment variable is increased, the employee's performance will also increase. Vice versa, if the employee's work environment decreases, the employee's performance will also decrease. So that the results of this study can be input for companies to strive in such a way as to improve the work environment of employees. Some things that can be improved are adequate lighting, cool temperatures, smooth air circulation, no noise, and security guarantees.

According to Sedarmayati (2009: 21) the work environment is the overall tools and materials encountered, the surrounding environment in which a person works, work methods, and work arrangements both as individuals and as groups. Furthermore, he stated that there are several factors that can affect the work environment including lighting/light in the workplace, temperature/air temperature in the workplace, humidity in the workplace, air circulation in the workplace, noise in the workplace, mechanical vibrations in the workplace, workplace, Bad odors at work, Coloring at work, Decoration at work, Music at work, and Safety at work.

Based on the results of respondents' answers, there are still respondents who answered in a negative direction to the questions given by researchers, which relate to the work environment of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency. On the question "The security unit at the employee's workplace has worked well so that employees feel comfortable" who answered neutrally as many as 18 people (16.1%) and who answered disagreed 5 people (4.5%). The results of these respondents' answers illustrate that the employees of PT. Java Bali Generation Services Unit PLTU Banjarsari Lahat Regency feels that the employee's workplace is not safe, informal demonstrations often occur and theft often occurs in the PLTU environment. Steps that can be taken by the leadership of PT. PJB Services Unit PLTU Banjarsari Lahat Regency in this case is a company working with the government to maintain security in the power plant environment.

## **4. CONCLUSIONS**

Based on the results of the research that has been described in the previous chapter, it can be concluded:

- a. There is a positive and significant influence of motivation, work discipline and work environment together on the performance of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari.
- b. There is a positive and significant influence of work motivation, work discipline and work environment partially on the performance of employees of PT. Java Bali Generation Services Unit PLTU Banjarsari.

## **5. RECOMMENDATION**

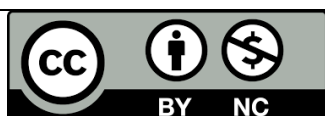
- a. Management of PT. PJB Services Unit PLTU Banjarsari needs to socialize how to manage time efficiency at work so that employees can complete their work on time without having to work more/overtime. The need for work motivation in terms of improving formal education, then management needs to review related to the equalization of diplomas owned by current employees.
- b. Management of PT. PJB Services Unit PLTU Banjarsari needs to support employees who do not expect remuneration at work and must also pay attention to security conditions in the employee's workplace and management needs to cooperate with the government to maintain security in the employee's work environment.
- c. This research is limited to the variables of work motivation, work discipline, and work environment. Therefore, for further researchers to be able to use other variables relating to factors that affect performance and expand the object of research by including compensation variables, job satisfaction, workload, work culture, and many other factors.

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## Management of Fitness Center Health and Sport Center (HSC) Yogyakarta State University



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**ABSTRACT:** This study aims to determine the management at the Fitness Center HSC UNY which consists of planning, organizing, directing, and supervising. This study uses a qualitative descriptive research approach. The data analysis technique used qualitative data analysis from Miles & Huber Man. The results of the study indicate that planning has been integrated with the objectives of the Fitness Center HSC UNY. Organizing related to the pattern of working relationships between managers, fitness instructors, and as a Front Office approaching conformity to sports management The process of directing employees can be carried out at any time, from leaders such as the Chancellor, Dean, and manager. Evaluation of the UNY Business Unit Entity is carried out every 3 months. The way to improve organizational management is in recruiting employees, the first is to graduate from FIK UNY who comes from the Sports Science study program.

**KEYWORDS:** static stretching, dynamic, back muscle strength, flexibility.

### INTRODUCTION

Sport is one way to maintain health and improve physical fitness. Exercising regularly can be used as a preventive measure from disease, however, the participation rate of the Indonesian people in exercising in general is still relatively low. Data from the Central Statistics Agency shows that in 2015, the number of people who regularly exercised did not reach a third of the total population, only 27.61 percent of the Indonesian population did exercise at least once a week. The market value of the fitness industry in Indonesia is estimated to be around Rp. 2-3 trillion and is projected to increase due to the low membership of the fitness center business in Indonesia, which is around 1% of the total population.

Yogyakarta as one of the big cities in Indonesia, there are many choices of fitness centers ranging from cheap rates to lux fitness centers located in five-star hotels. Yogyakarta State University as one of the universities in Yogyakarta which has various facilities and infrastructure in the field of health and sports, namely swimming pools, sports buildings, athletic tracks and football stadiums, basketball courts, and others. UNY also has a fitness center, namely the Fitness Center Health and Sport Center (HSC) which is open to students and the general public which is located at the Health and Sport Center (HSC) Building which is located at Jl. Colombo No. 1 Yogyakarta.

Fitness Center HSC UNY has several advantages including having various employees who are graduates of S1 and S2 Sports Science, so they understand to serve members in sports. The facilities offered to members not only provide fitness equipment, but there are several exercise programs offered, namely physical fitness, body shaping, weight gain, body building & rehabilitation therapy.

Based on the observations made, most of the Fitness Centers are located on the first floor, but the HSC UNY Fitness Center is very different, located on the third floor. Access to the UNY HSC Fitness Center is still lacking, because it is on the third floor. The location is close to the University, so this place experiences a density of visitors at night, and visitors are quiet, especially in the morning and afternoon. This causes most of the fitness equipment to be used alternately at night, and this has also been complained of by some consumers at the fitness center who stated that this fitness center was very crowded at night and always queued up to use the equipment such as dumbbells, bench press machines and others.

More and more people come here continuously to become fitness members. The author is interested in conducting research on the management of the UNY HSC Fitness Center based on the theory of management functions, namely planning, organizing,

## “Management Of Fitness Center Health And Sport Center (HSC) Yogyakarta State University”

actuating, and controlling. Management is a process of managing a company both from the human resource system with the approach of planning (planning), organizing (organizing), directing (actuating), and controlling (controlling). Planning is a process for managers to think about human resources before they are implemented. From this thinking it is usually done by various methods, logic is not only based on guesses and hunches. Organizing is part of the manager's job, the manager coordinates human and other material resources. The ability of the organization lies in the ability of managers to determine resources to achieve their goals. Directing is a manager's action to direct, lead and influence subordinates.

Sports management has a strategic position in the program to improve the quality of fitness training at the fitness center. Therefore, to produce good quality, it is necessary to apply managerial processes (planning, organizing, directing and monitoring) in the organization of every substance of fitness center administration effectively and efficiently, so that it really supports the realization of a productive fitness center. Sports management is a combination of skills related to planning, organizing, mobilizing, and supervising the context of an organization whose main products, both services and goods, are related to sports. This combination requires the human resources involved in the organization to be united in a system to work towards achieving goals. Management plays an important role in the management of a fitness center that has a commercial purpose, so this research needs to be done. This raises the question of how planning (planning), organizing (organizing), directing (actuating), and controlling (controlling) which is used as the basis for researchers to conduct research entitled "Management of Fitness Center Health and Sport Center (HSC) Yogyakarta State University".

### METHODS

This study uses a descriptive qualitative research approach. This study aims to obtain in-depth information in the form of data regarding the management of the Fitness Center Health and Sport Center (HSC) Yogyakarta State University in the month of observation carried out on January 1 – March 29, 2020 and the interview was held on 26 February – 06 March 2020. The sampling technique uses snowball sampling or the sample develops according to existing needs or circumstances. The subject of this research is the management of the Fitness Center HSC UNY, which consists of managers, fitness instructors, and front office. Data collection instruments are tools that are selected and used by researchers in their collecting activities so that these activities become systematic and facilitated by them. The forms of supporting instruments used in this study are as follows: Observation, Interview and Documentation. With the instrument grid as follows:

**Table 1. Grid of Documentation Guidelines**

Observed aspects	Looking for indicators	Source
Fitness Center HSC UNY HSC UNY . Fitness Center Building Documentation	HSC UNY Fitness Center Building	Documentation
	State of the UNY HSC Fitness Center	
	Equipment at the UNY HSC Fitness Center	
	Visitors to the HSC UNY . Fitness Center	

The data collection technique in this research section uses data triangulation in order to enrich and reproduce the data obtained with good credibility. Then continued with data analysis techniques by means of data reduction, data display, and conclusion drawing/verification. This research uses two kinds of technique triangulation and source triangulation. Both are used together with the aim that the resulting data can be trusted. In the triangulation technique, the researcher combines the data from observations and in-depth interviews. In triangulation of sources, researchers combine data from various sources including research subjects, namely managers, fitness instructors, and front office.

### RESEARCH RESULTS AND DISCUSSION

This research was conducted at the Fitness Center HSC UNY which is located at Jl. Colombo No. 1 Yogyakarta, HSC Building Lt. 3. Observations were carried out on January 01-March 29, 2020 and interviews were conducted on February 26-March 06, 2020. The subjects of this study were the employees of the UNY HSC Fitness Center. The sample of this study amounted to 6 people.

#### Profile of UNY's HSC Fitness Center

Fitness Center GOR FIK UNY was established on March 1, 2009 located at GOR UNY until 2018 which later changed to Fitness Center Health and Sport Center located in Health and Sport Center Building UNY in 2019, inaugurated by the Dean of the Faculty of Sports Science UNY by Prof. Sumaryanto, M.Kes., also coincided with the resumption of Sunday morning gymnastics in front of the GOR FIK UNY. Besides being used to facilitate education and academic research of UNY, this Fitness Center is also used to

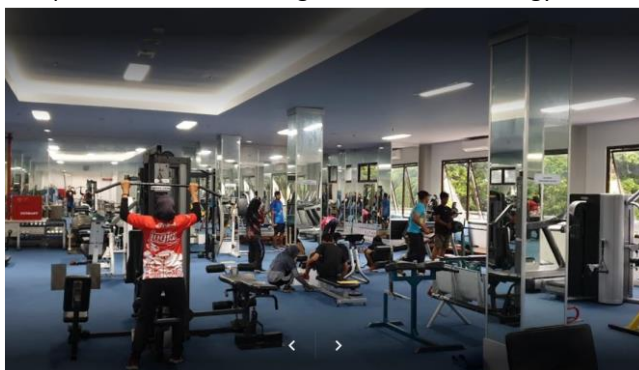
## “Management Of Fitness Center Health And Sport Center (HSC) Yogyakarta State University”

serve the general public. HSC UNY Fitness Center in March 2019 the fitness center moved to the HSC building on the 3rd floor to be exact.



**Figure 4. Location of the UNY HSC Fitness Center Building**  
(Source: Personal Documentation)

Fitness Center HSC UNY has a spacious, comfortable and clean place to do sports. The HSC fitness center has organizations such as Managers, Front Offices, and Personal Trainers who always help members do sports at the fitness center. They are very friendly and helpful to all members, so many members come and enjoy doing sports at the UNY HSC Fitness Center. In addition to being supported by good management, the HSC Fitness Center also has various facilities and services offered such as physical fitness training programs, body shaping, weight gain, body building & therapy rehabilitation. In addition to the exercise programs above, there are also various sports facilities including a treadmill, electric gym. machin, rest room, and others.



**Figure 5. UNY . HSC Fitness Center Facilities**  
(Source: Personal Documentation)

### **UNY HSC Fitness Center Planning Function**

Based on the results of the interview with FA, the Manager of the Fitness Center Division showed that the short-term work program plan for the Fitness Center HSC UNY has been well laid out under FIK UNY starting from the first, second, third, and fourth quarters, always monitoring what has been done every quarter. conducted. After the 1st, 2nd, 3rd, 4th quarters were implemented, the corrections were made. The long-term work program plan is held in a meeting with the leadership to determine the work program target for 1 year. Realizing the vision and mission depends on the human resources and facilities, the human resources consist of the Front Office and Trainers. In terms of facilities, it is very supportive and the tools are modern. Marketing also uses various media, both print and non-print. FA, stated that the way to realize the vision and mission is to work together with FIK UNY and UNY itself to facilitate education, especially those related to physical fitness. Advertising is essentially persuading the public to use an advertised product. With brochures, social media, and using print media to support the achievement of the stated goals, namely marketing targets by increasing the number of members. Planning will result in efforts to achieve something in a more coordinated way. Organizations that do not carry out planning are very likely to experience conflicts of interest, waste of resources, and not succeed in achieving goals because parts of the organization work independently without clear and directed coordination. Planning in this case holds the directive function of what the organization must achieve. Based on the results of the interview with FA, the Manager of the Fitness Center Division showed that the short-term work program plan for the Fitness Center HSC UNY has been well laid out under FIK UNY starting from the first, second, third, and fourth quarters, always monitoring what has been done every quarter. conducted.

## **“Management Of Fitness Center Health And Sport Center (HSC) Yogyakarta State University”**

### **Functions of Organizing Fitness Center HSC UNY**

The organizational structure in providing services to members for either Front Office or Instructors, Instructors serve members in training while the Front Office serves in administration. There are special guidelines in serving members, namely working with UNY leaders as stated in the Chancellor's Decree such as the duties of managers, Front Office, and Instructors. Services to members of course have special guidelines. Provide services to members by allowing members to enter the HSC fitness center. The front office will help members to explain and provide information of course administration so that they become members both internally and externally. From the internal side, UNY students and lecturers are asked to show their identity because the price is different from general members. Front Office records and makes member payment receipts. After making payment, the Front Office will take the member to the Personal Trainer. The Personal Trainer will measure whether it's weight, body fat, to check the health of members. Members will be introduced to fitness equipment and an exercise program is made. The Personal Trainer will create a program for members according to the member's needs. After completing the exercise the member will return the locker key and take the card made by the Front Office. The Personal Trainer will create a program for members according to the member's needs. After completing the exercise the member will return the locker key and take the card made by the Front Office. The Personal Trainer will create a program for members according to the member's needs. After completing the exercise the member will return the locker key and take the card made by the Front Office.

### **UNY HSC Fitness Center Briefing Function**

The directive function is the main function of management that can be carried out after the planning functions and organizational functions have been carried out. In the management structure, top management will provide direction to management at levels below it. Management at the middle level will provide direction to management at lower levels. Directing is a management function that stimulates actions so that they are actually implemented. Because these actions are carried out by people, direction includes giving orders and motivation to the personnel who carry out these orders. Directing is to get or get employees to do what they want, and should do. Based on the results of interviews with the FA, the Manager of the Fitness Center Division showed that the process of directing employees can be carried out at any time, from leaders such as the Chancellor, Dean, and manager. For briefing from the manager, it can be done every day through the WhatsApp Group if there is something crucial and for other briefing processes it is carried out once a month through a special internal meeting for Fitness Center employees which aims to correct the work of the previous month's employees. Briefing by the FIK leadership is carried out once a year. The method is for the facilities to work optimally, of course, at all times or before closing, for example, the gym will be cleaned for our own equipment such as a treadmill, we will use silicone to clean the sweat, then we always check the equipment first if there is any which if for example there is sweat or something slides on the tool, of course we will fix it first before tomorrow morning we reopen so that members feel at home using fitness equipment. Supervision in the management of an organization/company has an important role both internal and external supervision. Through monitoring activities, it is hoped that it will be immediately known if there are deviations in the running of the organization's management that are not in accordance with the predetermined plan. In general, the notion of supervision is a process to ensure that all activities carried out are in accordance with the established plans. A more complete definition of supervision is an effort that is systematically arranged to determine work references in the information feedback system planning process, compare work results with work references, analyze deviations,

### **Planning**

Based on the results of the study, it was shown that the planning at the UNY HSC Fitness Center had been combined with the objectives of the UNY HSC Fitness Center. The main goals and objectives of the UNY HSC Fitness Center are members, which consist of lecturers, students, and the general public, so that members become the main planning factor. The planning of the UNY HSC Fitness Center consists of a long-term and short-term work program that has been well laid out with reference to sports management. In planning there are specific goals. These goals are specifically written down and accessible to all members of the organization. Planning covers a certain period of the year. Obviously, there are specific program actions to achieve this goal, because management has a clear understanding of what part they want. This is in accordance with the opinion of Johnson, et al. that planning is a series of predetermined actions. By planning various visions, missions, strategies, goals and objectives of the organization which at the initial level use decision making which is also the core of management. Planning is a guide to where the goals that have been previously set. Through planning, uncertainty can be reduced, focusing more on goals and facilitating monitoring.

### **Organizing**

Based on the results of the study indicate that the organization related to the pattern of work relationships between managers,

## **“Management Of Fitness Center Health And Sport Center (HSC) Yogyakarta State University”**

fitness instructors, and as a Front Office is close to conformity with sports management. This is supported by the opinion of Terry & Leslie that organizing is: «Organizing is the establishing of effective behavioral relationship among persons, so that they may work together efficiently and gain personal satisfaction in doing selected tasks under given environmental conditions for the purpose of achieving some goal or objectives». If the HSC Fitness Center building includes sub-divisions that contain the main manager, secretary, equipment section, staffing section, and treasurer. The duties of each employee have been carried out clearly in the Chancellor's Decree.

### **Briefing**

Based on the results of the study, it showed that the direction developed by the Fitness Center HSC UNY was carried out by building a work team through a personal approach to employees. Based on this, that the function of directing the Fitness Center HSC UNY is in accordance with management theory. Terry & Leslie provide the understanding "actuating is setting all members of the group achieve and to strike to achieve to objective willingly and keeping with the managerial planning and organizing efforts. Direction also serves to regulate their behavior, so that these members can work together and work effectively Directing serves to regulate human behavior. The process of directing employees can be carried out at any time from leaders such as Chancellors, Deans, and managers. Briefing by the FIK leadership is carried out once a year.

### **Supervision**

Based on the results of the study, it was shown that the supervision at the HSC UNY Fitness Center was carried out well. The operational and marketing processes in the Fitness Center HSC UNY are very influential between one another. Human Resources Planning for human resources at the HSC UNY Fitness Center includes the activities of the recruitment process, the selection of these human resources according to the needs, and whether the person concerned is good and suitable for the task to be given.

### **Research Limitations**

Research limitations on the implementation of research that has been carried out by researchers cannot be separated from various limitations. Therefore, researchers need to explain several things related to the limitations of the research carried out, including: In disclosing the financial sector, the researcher does not ask this question, because finance and salary are internal rights of the company, so it is unethical to ask this question, the researcher does not conduct interviews. to members of the UNY HSC Fitness Center.

## **CONCLUSIONS**

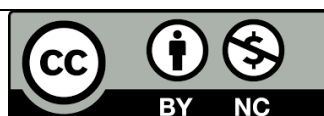
The research shows that (1) Planning has been integrated with the objectives of the UNY HSC Fitness Center. (2) Organizing related to the pattern of working relationships between managers, fitness instructors, and as a Front Office approaching conformity with sports management (3) The process of directing employees can be carried out at any time, both from leaders such as the Chancellor, Dean, and manager. Directions from managers can be done every day via WhatsApp Groups. (4) Supervision at the UNY HSC Fitness Center is carried out properly. Managers carry out the evaluation process every day, while the faculty evaluates once a month along with financial reports and targets achieved. Evaluation of the UNY Business Unit Entity is carried out every 3 months. The way to improve organizational management is in recruiting employees, the first is to graduate from FIK UNY who comes from the Sports Science study program. Every year Managers are given training on SOPs, entrepreneurship conducted by BPPU.

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## Increased Activities and Learning Outcomes of Volleyball through Sponge Ball Modification for Junior High School Students



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**ABSTRACT:** The not yet optimal learning activities and learning outcomes in learning physical education, sports and health, especially volleyball lessons underlie this classroom action research. This study aims to improve learning activities and learning outcomes through modification of a sponge ball for students of SMP Negeri 1 Moyudan. This research is a Classroom Action Research (CAR) which was carried out in three cycles. The research subjects were students of class VIIA SMP Negeri 1 Moyudan totaling 32 students. The research instruments, namely: observation guidelines, learning activity observation sheets, observation sheets for assessing the process and results of volleyball. Indicators of success, namely learning activities and learning outcomes of at least 85% of the total students completed (KKM 75). The data analysis technique used in this research is descriptive qualitative and quantitative. The results showed that through the modification of the sponge ball, learning activities and volleyball learning outcomes could be obtained. This is shown from the learning activity data showing an increase in cycle three an average of 3.4 and included in the very good category (A). Cognitive Aspect 100% or 32 students completed and Psychomotor Aspect 90.62% or 29 students completed. Based on the results of the study indicate that classical completeness has been fulfilled. Cognitive Aspect 100% or 32 students completed and Psychomotor Aspect 90.62% or 29 students completed. Based on the results of the study indicate that classical completeness has been fulfilled. Cognitive Aspect 100% or 32 students completed and Psychomotor Aspect 90.62% or 29 students completed. Based on the results of the study indicate that classical completeness has been fulfilled.

**KEYWORDS:** Volleyball, Learning Activities, Learning Outcomes

### INTRODUCTION

Physical education, sports, and health or Physical Education is an integral part of general education which is carried out systematically through physical activity (physical) with the aim of total growth and development of all children (Pangraz and Daur in Stephani, 2014: 2). The growth and development competencies in question are comprehensive, not only physical but also aspects of knowledge, aspects of attitudes, and aspects of skills. Teachers have a unified and functional role to educate, guide, teach, and train (Sopian, 2016: 90). This makes a professional teacher very important role in conducting effective learning. Several studies state that the teacher's role significantly affects student achievement or learning outcomes (Wibowo & Farnisa, 2018). The effectiveness of learning can be seen from the objective data, design, submission of learning materials, duration data used, management of learning, management of student activities, feedback and teacher responsibilities (Winarno, 2006: 11). The learning success factor is also not only from the teacher, but the student learning activity factor also has an important role. Student attitudes in the learning process such as participation in finding goals, student and teacher interactions, teacher acceptance when students make mistakes, close relationships as a group and student opportunities affect student learning outcomes (Ningsih, 2018).

The same thing was conveyed by Sirait, (2016) that the interest of students must be considered by the teacher because it is able to influence the activities and learning outcomes of students. management of student activities, feedback and teacher responsibilities (Winarno, 2006, p.11). The learning success factor is also not only from the teacher, but the student learning activity factor also has an important role. Student attitudes in the learning process such as participation in finding goals, student and teacher interactions, teacher acceptance when students make mistakes, close relationships as a group and student opportunities affect student learning outcomes (Ningsih, 2018). The same thing was conveyed by Sirait, (2016) that the interest

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Volleyball is one part of the basic competencies of the big ball game played by two teams which is carried out in a game area that is limited by a net (Fallis, 2013). The volleyball game has specific movements that must be learned by students, specific movements that must be improved in skills, namely bottom passing, top passing, smash, service and block. (Muhajir, 2017: 25). Passing is a way of hitting the ball with two hands joined and swinging from below (lower passing) or hitting the ball with two separate hands with open fingers above the head slightly forward (upper pass). Block exercises and random exercises with high and low coordination levels affect passing skills (Rahmayati, 2015: 11) Based on the initial observation activities carried out by the researchers, the results showed that if the volleyball learning activities in class VII with standard balls, students were less active in participating in learning activities. The learning activities of students are still low with an average of 1.99 and are still in the sufficient category.

The data on the value of aspects of students' cognitive learning outcomes regarding the understanding of specific motion material for lower service, lower passing and upper passing of volleyball is still weak. It is evident from the cognitive value of students with an average value of 77. From this average 37.5% or 12 students have got a KKM score of 75, but there are 62.5% or 20 students who have not yet reached the KKM. Furthermore, from the aspect of specific motion skills, bottom service, bottom passing and volleyball top passing are also still far from the minimum completeness criteria value of 75, this is evidenced by the value of learning outcomes with an average value of 67 and only 37.5% or 12 students who meet the minimum KKM, while 62.5% or as many as 20 students still do not meet the KKM.

The results of observations found problems related to volleyball learning for class VII, it was necessary to use methods and innovations from the teacher to minimize these problems. The need for methods and tool modifications as alternative approaches needs to be done (Muhajir, 2017: 2). Sponge ball media is expected to motivate students to take part in volleyball lessons. Sodikin & Yono (2020: 27) said that the modification of learning media in the form of a sponge ball can be used for learning volleyball because it has lighter criteria than the original volleyball. Sponge balls are made of plastic balls whose concept is similar to the original so that they are more comfortable to use for learning. Arianto & Hidayat's research, (2014: 549) and Gumilang & Ramadan, (2019: 56) obtained the results that the use of modifications with sponge ball media was able to improve learning outcomes on volleyball material and a more significant improvement with sponge ball media compared to the original volleyball (Hudah & Rais, 2020: 100). Furthermore, the learning process is designed to meet the competency objectives, therefore it is necessary to use the discovery learning learning method because this model can be used as a solution to the problem of learning activities in volleyball games for Class VII students. It is hoped that students will be able to be active and have high motivation to take part in volleyball game learning activities, because the ball feels light and easy to play, even children will feel happy to participate in these learning activities (Showab & Djawa, 2019: 307).

### METHODS

CAR is classroom action research that aims to improve learning in the classroom to improve the quality of learning (Arikunto, 2019, p.2). The research approach uses Kurt Lewin (1940) (in Khosy, 2005) and each cycle is divided into 4 stages, namely planning, action, observation, and reflection stages. This research was conducted on students of class VII A SMP Negeri 1 Moyudan. The research was carried out in a span of 2 months in semester 2 of the 2020/2021 Academic Year. This research was carried out in 3 cycles in which each cycle contained two meetings. In detail Cycle 1 will be held on Wednesday, February 24 and

# Increased Activities and Learning Outcomes of Volleyball through Sponge Ball Modification for Junior High School Students

March 3, 2021, Cycle 2 on Wednesday, March 10 and 24 2021, Cycle 3 on Wednesday March 31, and April 7, 2021. The sample used in this study were students of class VIIA at SMP Negeri 1 Moyudan with a total of 32 students with details of 16 male students and 16 female students who were determined using random sampling. Then the implementation of this research is assisted by two collaborators who have the task of observing the learning process. One of the collaborators in this study had a master's degree in education and the other had a bachelor's degree education who had a volleyball player and coach background so that they would support this research process. Then the implementation of this research is assisted by two collaborators who have the task of observing the learning process. One of the collaborators in this study had a master's degree in education and the other had a bachelor's degree education who had a volleyball player and coach background so that they would support this research process. Then the implementation of this research is assisted by two collaborators who have the task of observing the learning process. One of the collaborators in this study had a master's degree in education and the other had a bachelor's degree education who had a volleyball player and coach background so that they would support this research process.

The data collection in this study used a questionnaire instrument, a student activity self-assessment questionnaire, a written test for assessing the knowledge aspect and a volleyball performance test for the process and product skills aspect. RPP, teacher and student observation sheets, knowledge and skills assessment instruments have been carried out by expert judgment by expert validators of PJKR Lecturers from FIK UNY. This research uses descriptive percentage data analysis technique. The criteria for the success of CAR are that students are able to carry out learning activities as well as possible, are active, and the results of the learning process meet the KKM > 85% which achieve a score of > 75.

## RESEARCH RESULTS

The action research process carried out at SMP Negeri 1 Moyudan especially for class VIIA students, the researchers and collaborators observed the process of PJOK learning activities in increasing learning activities and learning outcomes for volleyball material using the discovery learning method with sponge ball media which was carried out for three cycles. , which in each cycle there are 2 meetings. At the end of each cycle an evaluation of learning activities, processes and learning outcomes of volleyball material is carried out. The implementation of learning or implementation is observed by researchers and collaborators who will be used as a basis for assessment and reflection. The observation method was tried at each meeting while the learning was running.

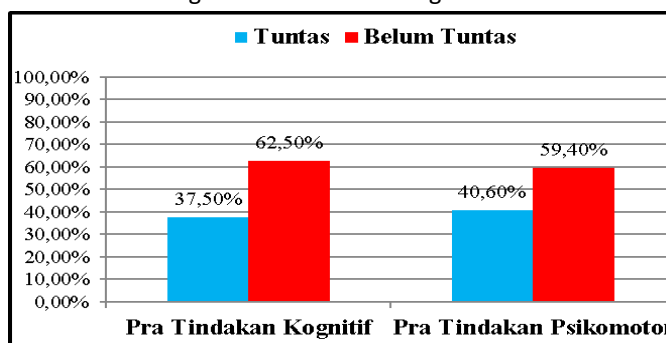
### Pre Action

The initial data assessment was carried out according to the hours of teaching and learning activities at school by involving the entire class of 32 students. Preliminary data shows that the learning outcomes of cognitive and psychomotor aspects of the fundamental movement material, namely bottom passing, top passing and bottom service, are still low. Then the pre-action learning activity data is also still low. The results of the initial data on the volleyball abilities of class VIIA students can be seen in table 1, namely:

**Table 1. Pre-Action Data on Volleyball Learning Outcomes Class VII A**

Information	Pre-Cognitive Action	Pre-Psychomotor Action
The number of students	32	32
Average	77	70
Complete	37.5% (12)	40.6% (13)
Not Completed	62.5% (20)	59.4% (19)

The results from table 1 if made in the form of a diagram can be seen in Figure 1 below:



**Image 1. Bar Chart of Pre Action Results of Volleyball Learning Outcomes**

## **Increased Activities and Learning Outcomes of Volleyball through Sponge Ball Modification for Junior High School Students**

Based on Figure 1, it can be seen that the achievement of volleyball learning outcomes at the pre-action stage of the cognitive aspect is still low, namely 37.5% (12 students Complete) and 62.5% (20 students Unfinished). Then on the psychomotor aspect, there are 40.6% (13 students Completed) and 59.4% (19 students Unfinished). Pre-action observation data on student learning activities from 32 students obtained the following results: student learning activities in the very good category 0% or 0 students, for the good category 12.5% or 4 students, for the fairly good category 65.62% or 21 students, for the less category 21.88% or 7 students, very less 0% or 0 students. Based on the average value of 1.99 or 39.8%, it shows that the activity in PJOK learning for class VIIA is still in the sufficient category.

### **Cycle I**

#### **Observation of Teacher**

According to the results of observations made by collaborators on teachers who carry out learning activities using the discovery learning method in the first cycle, it shows that the results of the observations of the first meeting score 19 are included in the good category and at the second meeting the score 23 is in the very good category. This means that the learning activities carried out by the teacher in the first cycle have been going very well.

#### **The results of observing student learning activities**

Based on observations by collaborators, aspects of student enthusiastic learning activities, student and teacher interactions, interactions between students, and student activities when carrying out volleyball lessons have increased. This can be seen from the average of the first cycle in the pre-action of 1.99 which is included in the sufficient category (C). After going through the first cycle there was an increase to an average of 2.84 students and included in the Good category (B).

Data on the results of the Pre-Action Stage of Cognitive Aspects from 32 students obtained an average score of 77, 37.5% or 12 students completed and 62.5% (20 students) had not. Based on the results of the true-false test carried out in the first cycle of volleyball learning with sponge ball media, it can be said to have increased even though it has not succeeded optimally because the average score of 81 is still in the sufficient category and 71.9% of students who complete (23 students) while those who have not completed as many as 28.1% (9 students).

#### **Student Skills Test Results**

Based on the results of the observation of the skills test for bottom passing, top passing and volleyball bottom service in the first cycle of volleyball learning through sponge ball media, it can be concluded that there was a good improvement. The ability of students in carrying out activities and the results of volleyball skills in the first cycle has increased the average score of students before being given action 67 (37.5% of Completed students) increased to 76 (68.75% of Completed students) in the first cycle, but these results have not succeeded in achieving the classical criteria to be achieved, namely 85% of students meet the KKM so that it continues to cycle II.

#### **Reflection Cycle I**

The results of the implementation of the reflection stage in the first cycle are:

- 1) Collaborator 1's observations on class observations of teachers showed that all indicators of teacher activity observed in carrying out the desired process appeared so that it could be concluded that teacher activities in learning were very good. For this reason, teacher activities in the teaching and learning process need to be maintained or improved.
- 2) Student learning activities are still not successful because only 21.88% or 7 students are included in the good category. However, the results of filling out student questionnaires stated that their learning activities were in the good category with an average score of 61%.
- 3) In the cognitive aspect, it still does not meet the classical KKM with the results of the complete student scores only reaching 71.9% (23 students).
- 4) In the psychomotor aspect, it has not yet achieved classical completeness with an average student score of 76 (68.75% of Completed students).
- 5) Students have experienced an increase in ability, but they still need to adapt to the learning model with this sponge ball modification.
- 6) From the results of reflection, it is concluded that it is necessary to continue to carry out cycle II to prove whether the modification of the sponge ball can improve learning activities and volleyball learning outcomes for class VIIA students at SMP Negeri 1 Moyudan according to classical completeness criteria.

# Increased Activities and Learning Outcomes of Volleyball through Sponge Ball Modification for Junior High School Students

## Cycle II

### Observation of the teacher

According to the results of observations of teachers in conducting learning using the discovery learning method in cycle II, it shows that the results of classroom observations of teachers in the second cycle of the first meeting, the score of 25 is included in the very good category and maintained at the second meeting with a score of 25 with a very good category, the learning that was tried by the teacher in the second cycle of the 1st and 2nd meetings has been going very well.

### Observation of students

#### The results of observing student learning activities

Aspects of learning activities which include student enthusiasm, student and teacher interaction, interaction between students, and student activities in implementing volleyball learning there is an increase from cycle I the average value is 2.84 (good category) with details of 21.88% category Good, 75% enough and 3.12% less category increased in the second cycle to 3.2 (good category) with details 43.75% good category, 53.12% enough category and 2.13% less category. Thus the increase in student learning activities from cycle I to cycle 2 only reached 0.36%.

Cycle II aspects of learning activities through the self-assessment questionnaire can be seen that as many as 5 students or 15.62% of students are included in the category of sufficient learning activities, as many as 25 students (78.12% of students) are included in the category of good learning activities. and 2 students or 6.25% of students are included in the category of very high learning activities. Based on the average score of 67% of students stated that their learning activities in participating in volleyball lessons consisted of enthusiasm, teacher and student interactions, interactions between students, group cooperation and activities in participating in volleyball lessons in the very good category.

#### Student Knowledge Test Results

According to the results of the true-false test carried out on the knowledge or cognitive aspect in the second cycle of volleyball learning with sponge ball media, there was an increase with an average value of 87 including good category (B) and students who completed as many as 81.25% (26 students ) while 18.75% have not been completed (6 students).

#### Student Skills Test Results

Based on the results of the observation of the skill test of bottom passing, top passing and bottom service in volleyball through sponge ball media in the second cycle, it was concluded that there was a better improvement. The ability of students to process and produce volleyball skills in cycle II has increased the average score of students in cycle I by 76 (68.75% students Completed) increased to 82 (84.38% students Completed) in cycle II, although However, these results have not succeeded in achieving the classical criteria to be achieved, namely 85% of students reach the KKM, therefore it is continued in cycle III.

#### Cycle II Reflection

After the end of the second cycle meeting, the results of PJOK learning through the discovery learning model with sponge ball media showed that the teacher was trying to improve activities and learning outcomes in their learning. Reflection activities for cycle II are:

- 1) The results of classroom observations on teachers showed that all indicators of teacher activities observed in carrying out the desired process appeared so that it could be concluded that teacher activities in learning were very good. For this reason, teacher activities in the teaching and learning process need to be maintained.
- 2) Student learning activities have been successful with 53.12% or 17 students in the good category and 43.75% or 14 students in the very good category. Meanwhile, from the results of filling out the questionnaire, students stated that their learning activities were in the good category with the average score of 67%.
- 3) In the cognitive aspect, it is close to classical completeness with the results of the complete student scores reaching 81.25% (26 students).
- 4) In the psychomotor aspect, it is close to classical completeness with an average student score of 82 (84.38% of Completed students).
- 5) There has been an increase in students' abilities, in the aspect of skills, but some students still have difficulty in applying basic techniques in matches, therefore it is necessary to carry out cycle III to prove whether the modification of the sponge ball can improve learning activities and volleyball learning outcomes for class VIIA students at SMP Negeri 1 Moyudan can achieve the classical completeness criteria of 85%.

# Increased Activities and Learning Outcomes of Volleyball through Sponge Ball Modification for Junior High School Students

## Cycle III

This action research is focused on the activities of teachers and students in the way of discovery learning with a sponge ball, so that the results of field observations are presented in a qualitative way. The results of observations of researchers and collaborators on the way of learning are obtained as follows:

### Observation of the teacher

According to observations made by collaborators on teachers in conducting learning with the discovery learning model in the third cycle of meetings 1 and 2, it shows that the results of classroom observations of teachers in the third cycle of the first meeting obtained a score of 25 including the very good category and maintained at the second meeting with a score of 25 including very good category too. So it can be concluded that the learning activities carried out by the teacher in the third cycle of the first and second meetings have been going very well.

### Observation of Students

#### The results of observing student learning activities

Based on observations by collaborators, aspects of student enthusiastic learning activities, student and teacher interactions, interactions between students, and student activities to carry out volleyball learning activities in learning activities showed an increase. In the second cycle, the average was 3.2 which was included in the Good category (B). After going through cycle III there was an increase to an average of 3.4 students and included in the Very Good (A) category. Furthermore, the results of the learning activity questionnaire filled out through student self-assessment in cycle III, aspects of learning activities through the self-assessment questionnaire can be seen that as many as 3 students or 9.38% of students fall into the category of sufficient learning activities, as many as 23 students or 71.87% students fall into the category of sufficient learning activities and 6 students or 18, 75% of students fall into the category of very high learning activities. Based on the average score of 74% of students stated that their learning activities in participating in volleyball lessons consisting of enthusiasm, teacher and student interactions, interactions between students, group collaboration and activities in participating in volleyball lessons were in good categories.

#### Student Knowledge Test Results

Based on the results of the true-false test carried out on the knowledge or cognitive aspects in the third cycle of volleyball learning with sponge ball media, it can be said that there was a significant increase with an average score of 94 included in the very good category (A) and students who completed 100% (32 students) while those who do not meet the KKM are 0% (0 students). Based on the average value and completeness of the calcical has been met, the cycle is stopped in this third cycle.

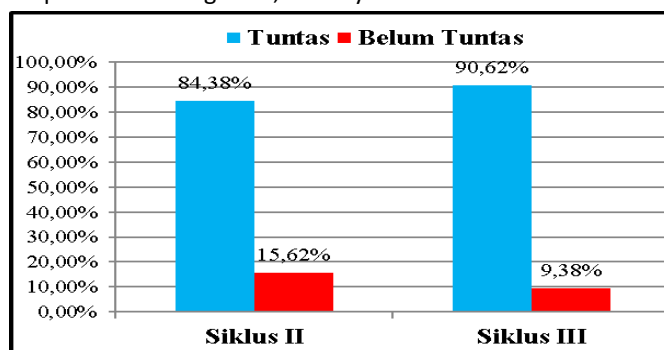
#### Student Skills Test Results

Based on the results of the observation of the skills test for bottom passing, top passing and bottom service in volleyball, the results are shown as follows:

**Table 2. Data on the Results of Psychomotor Aspects in Cycle II and Cycle III**

Information	Cycle II	Cycle III
The number of students	32	32
Average	82	87
Complete	84.38% (27 students)	90.62% (29 students)
Not Completed	15.62% (5 students)	9.38% (3 students)

According to table 2, if presented in the form of a diagram of the results of the third cycle, the results of the assessment of the psychomotor aspects of volleyball are presented in Figure 2, namely.



**Figure 2. Bar Diagram of Psychomotor Aspect Learning Outcomes Phase II and Cycle III**

## Increased Activities and Learning Outcomes of Volleyball through Sponge Ball Modification for Junior High School Students

In cycle III, volleyball learning through sponge ball media has increased. In this case, it can be observed that the progress of the teacher's activities from the initial meeting to the second there is a good development of the teaching procedures. The ability or activity of students in carrying out processes and products of volleyball skills in cycle III has increased the average score of students in cycle II by 82 (84.38% students Completed) increased to 87 (90.62% or 29 students Completed) in cycle III, has succeeded in achieving the classical criteria to be achieved, namely 85% of students reach the KKM. During the learning process in cycle III, there were no shortages that affected learning activities and outcomes, so the research was ended in cycle III because it met the classical completeness criteria of more than 85% of what had been expected.

### Reflection Cycle III

After 2 meetings in cycle III ended, the observers and collaborators discussed the results of implementing actions. In reviewing and assessing the results of PJOK learning with the main module of volleyball learning with a discovery learning model with modified sponge ball media during cycle III as follows:

- 1) The results of classroom observations on teachers obtained the results of all indicators of teacher activities observed in carrying out the desired process so that it can be concluded that teacher activities in learning are very good. Therefore, teacher activities in the learning process need to be maintained.
- 2) Student learning activities have been successful with 37.5% or 12 students in the good category and 62.5% or 14 students in the very good category. Meanwhile, from the results of filling out the questionnaire students stated that their learning activities were in the good category with an average value of 74%.
- 3) In the cognitive aspect, it has fulfilled classical completeness with the results of students' complete scores reaching an average of 94 or 100% (32 students).
- 4) In the psychomotor aspect, it is close to classical completeness with an average student score of 87 (90.62% or 29 students Complete).
- 5) In the third cycle the difficulties in the aspects of students' skills in using basic techniques in volleyball matches have been resolved

From the reflection, it can be concluded that the modification of the sponge ball can improve learning activities and the volleyball learning outcomes of class VIIA students at SMP Negeri 1 Moyudan can achieve the classical completeness criteria of 85%.

### DISCUSSION

Based on the results of reflection and analysis of information for each cycle, the results of action research prove that the results in cycle III have shown a significant increase compared to cycles I and II. In cycle III, the goal of learning the volleyball game has been successful, students have reached above 85% of the Minimum Completeness Criteria. Thus, the action of the learning process on learning activities and learning outcomes through the discovery learning model using a sponge ball given to class VIIA students of SMPN 1 Moyudan, can be said to be successful.

**Classical completeness.** Regarding the activities and student learning outcomes in volleyball material, data on the development of activities and learning outcomes of class VIIA students is obtained

Aspect	Pre action	Cycle I	Cycle II	Cycle III
Cognitive	37.5% (12 students)	71.9% (23 students)	81.25% (26 students)	100% (32 students)
Activity Study	12.5% (4 students)	21.88% (7 students)	96.87% (29 students)	100% (32 students)
Psychomotor	40.6% (13 students)	68.75% (22 students)	84.38% (27 students)	90.62% (29 student)

After trying to evaluate the category actions that have been carried out for 3 cycles, it can be reported aspects of the research that can achieve the desired goals and other aspects that are considered to be less fulfilling the objectives. Actions that have proven the results match the objectives can be used as references for the next learning method. On the other hand, actions that are less successful are expected to be analytical material for changes and improvements.

This research makes learning activities as an object of research along with learning outcomes in volleyball lessons at the VII grade junior high school level. The advantage of this research is using the discovery learning model which is a learning model that is rarely used by PJOK teachers. Then from the assessment on the psychomotor aspect which usually only focuses on the

## **Increased Activities and Learning Outcomes of Volleyball through Sponge Ball Modification for Junior High School Students**

movement process, this study uses a combination of process and product assessment or movement attitude and volleyball practice achievement.

### **Volleyball learning with modified sponge balls increases learning activities**

Volleyball game learning activities by modifying sponge balls to improve learning activities. This can be seen from the average pre-action development of 1.99 included in the Enough category, then in the first cycle there was an average increase of 2.84 including in the Good category, in the second cycle it increased again to an average of 3.2 including in the Good category and in the third cycle it increased again to 3,4 and was included in the Very Good category. Based on the increase that occurred in learning activities, student enthusiasm, student and teacher interactions, interactions between students, and student activities in carrying out volleyball lessons increased with the modification of the sponge ball.

Modification of learning media is an effort made by teachers to create and display new, unique and interesting things (Hambali, 2013: 21) and aims to realize Developmentally Appropriate Practice (DAP). The essence of modification is to analyze and develop learning materials sequentially in the form of good learning activities, making it easier for students in the learning process. The modification of the ball media that will be used for volleyball learning is a plastic ball coated with a sponge, the ball weighs 100 grams and has a diameter of 65.5 cm and has a colorful shape. The difference between standard volleyball and sponge ball is that standard volleyball is made of leather, the weight of the ball is between 260 - 280 g (Fallis, 2013: 9),

Furthermore, the modification of the sponge ball to increase learning activities can be seen with a lighter ball, students are not burdened and find it difficult in the complex volleyball learning process. because the ball feels light and easy to play so students when learning volleyball their hands will not feel pain anymore, even children will feel happy or excited to participate in these learning activities (Showab & Djawa, 2019: 307). Sports activities in learning as a means of increasing social values are reflected in learning activities (Suryobroto, 2004: 48). Furthermore, Liu, Karp, & Davis (2010) stated that physical education develops personal and social responsibility and social behavior.

### **Volleyball learning with modified sponge balls improves learning outcomes**

Volleyball learning with modified sponge ball improves learning outcomes. This can be seen from the pre-action development in the cognitive aspect of 37.5% or (12 students completed), then for the first cycle there was an increase of 71.9% or (23 students completed), for the second cycle it increased to 81, 25% or (26 students completed) and for the third cycle there was an increase of 100% or (32 students completed). Then from the Psychomotor Aspect also shows development, starting from the pre-action stage on the psychomotor aspect 40.6% or (13 students completed), then in the first cycle there was an increase of 68.75% or (22 students completed), in the second cycle it increased again as much as 84.38% or (27 students completed) and for the third cycle an increase of 90.62% or (29 students completed).

Sodikin & Yono (2020: 27), said that modification of learning media in the form of sponge balls or foam-coated balls can be used for learning the specific motions of volleyball, because these balls have lighter criteria than volleyball, made of plastic balls whose concept is similar to that of volleyball. the original so that it is easier and more convenient to use in learning PJOK student skills. Research by Arianto & Hidayat, (2014: 49) and Gumilang & Ramadan, (2019: 56) obtained the results that the application of modified sponge ball media improved training results on volleyball material and the improvement was more significant with sponge ball media compared to original volleyball (Hudah & Rais, 2020: 100).

### **The volleyball learning process through the discovery learning model with modified sponge balls increases learning activities and learning outcomes**

Class VII A volleyball learning through discovery learning models with modified sponge balls increases student learning activities and student learning outcomes carried out in a syntax of 6 stages of stimulation, problem identification, data/information collection, information/data processing, result verification, and generalization. This is based on the results of cycle III explaining that students have reached the classical completeness criteria of 85% of students who achieved the minimum completeness criteria of 75.

Modifications with sponge balls supported by discovery learning models can increase learning activities, this can be observed from the learning process or steps that motivate students to be active and increase interactions both with teachers or with other students in the learning process such as daring to ask questions and answer questions . Furthermore, the modification of the sponge ball to increase learning activities can be seen with a lighter ball, students are not burdened and find it difficult in the complex volleyball learning process. because the ball feels light and easy to play so students when learning volleyball their hands will not feel pain anymore, even children will feel happy or excited to take part in these learning activities (Showab & Djawa, 2019: 307). Sports activities in learning as a means of increasing social values are reflected in learning activities (Suryobroto, 2004: 8). Furthermore, Liu, Karp, & Davis (2010) stated that physical education develops personal and social responsibility and social behavior.



## Increased Activities and Learning Outcomes of Volleyball through Sponge Ball Modification for Junior High School Students

Sujarwo, Suharjana, Rachman, Ardha (2021: 29) in their research and development stated that the development of volleyball learning models effectively improves student character such as discipline, cooperation, and hard work. The increase in student enthusiasm is seen in the use of sponge balls that make it easier for students to learn the specific motion of volleyball, student and teacher interaction can be seen in the learning syntax designed by the teacher, there is question and answer and discussion, interaction between students can be seen from the process of students planning, studying volleyball specific movements individually. and groups. These results prove that the discovery learning model with a modified sponge ball has a positive role in improving students' practice activities in volleyball learning.

### CONCLUSIONS

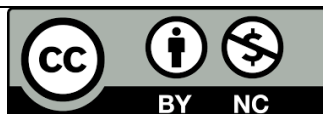
Based on the analysis of information and reviews, it can be concluded that the modified sponge ball method can increase the activity and learning outcomes of volleyball for class VIIA students of SMPN 1 Moyudan with the final result of classical completeness criteria of more than 85% having reached the Minimum Completeness Criteria.

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## Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes



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**ABSTRACT:** This study aims to improve learning activity and learning outcomes through a problem-based learning (PBL) learning model approach. This research is a Classroom Action Research (CAR) which was carried out in three cycles. The research subjects were students of class VIID SMP Negeri 2 Mlati totaling 32 students. The research instruments, namely: observation guidelines, learning activity observation sheets, observation sheets for assessing the process and results of volleyball. Indicators of success, namely active learning and learning outcomes of at least 85% of the total students completed (KKM 75). The data analysis technique used in this research is descriptive qualitative and quantitative. The results showed that the PBL learning model could effectively improve learning activity and volleyball learning outcomes. This is indicated by the increasing data after going through the third cycle, including the cognitive aspect of 100% or 32 students completed, the active learning aspect of 93.75% 30 students completed and the psychomotor aspect 87.50% or 28 students completed. Based on the results of the study, it can be concluded that there is classical completeness with a problem-based learning model.

**KEYWORDS:** Volleyball, Learning Activity, Learning Outcomes

### INTRODUCTION

PJOK is an integral part of the 2013 curriculum that must be given to students in schools. The learning model on the basis of learning should be carried out in an interactive, inspiring, fun, challenging way, motivating teaching participants to be actively involved, and providing sufficient space for productivity, and independence similar to the ability, attention, and physical and intellectual progress of teaching participants (Permendikbud, 2016). Fisetete & Wuest (2018) explains that PJOK is a learning method that uses physical activity as a tool to help people gain skills, freshness, insight, and actions that contribute to maximum progress.

According to preliminary research data carried out on 32 samples of class VIID students at SMP Negeri 2 Mlati, it was found that the student's learning activity was on average 67.5 or 46.88% (15 students) completed and as many as 53.12% (17 students) had not. The results of this initial study also show that learning is focused on the teacher, teaching participants only do what the teacher tells them to do, and have not learned the skills and insights they have. The level of activeness of class VIID students is still low, this has an impact on low learning outcomes. This fact can be seen in the results of the assessment, there are still many students who get scores below the KKM are 75. The results of the daily cognitive test scores for class VIID are above the KKM as many as 20 students (62.50%), scores below the KKM are 12 (37.5%). while those who get psychomotor daily test scores above the KKM are 19 students (59.38%), scores below the KKM are 13 (40.62%).

Efforts can be made by teachers so that targets in a learning process can be obtained by providing the use of learning activity models that are able to stimulate and generate learning activity and are able to improve student learning outcomes. Fisetete & Wuest, (2018: 337) explain that an effective teacher is a teacher who uses a variety of pedagogical approaches, skills and strategies to ensure that their students are appropriately engaged in learning activities. (Sgrò et al, 2020) mention that the selection of models and the use of teaching strategies based on games and sports features support the development of motivation involving tasks.

(Retscher, 2022). states that to overcome difficulties the teacher can simplify the exercise or reduce the speed or demand for precision. Several studies state that the PBL learning model is for improving cognitive, affective and psychomotor aspects (Schöllhorn, 2022); (Kusumatuty et al, 2018). The PBL learning model is a design about the details of how the interaction activities between teaching participants, teachers, modules, and the preparation of learning areas so that there is a way of

## “Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes”

learning that creates changes towards better progress (Suherman et al, 2015). This PBL learning model was chosen because it was considered suitable and in accordance with the volleyball material. (Astuti et al, 2022), found that the use of the PBL model was able to improve the learning outcomes of passing down volleyball in volleyball. Muhajir (2017: 53), explaining problem-based learning has advantages, namely: (1) active learners because learning is centered on the learners themselves; (2) students are able to improve their communication and social interaction skills; (3) students are encouraged to learn better and are able to master problem solving skills. (Nurenberg et al, 2022: 33) stated that the emphasis on student-centered PBL learning is that there is hope for students to take an active part in planning, organizing, and implementing their own learning within a group framework. Based on these problems, to find out for sure whether the PBL model can increase the activity and learning outcomes of students, it is necessary to study it more deeply with the CAR entitled "Application of the PBL Model for Improving Volleyball Activity and Learning Outcomes"

### METHODS

This study uses the type of CAR research, the CAR design is in the form of a spiral. Kurt Lewin in Arikunto (2019: 42) states that each cycle has 4 steps, namely planning, action, observation, and reflection. This research was conducted on students of class VII D at SMP Negeri 2 Mlati. With the place of research, namely; (1) The researcher is a PJOK teacher at SMP Negeri 2 Mlati; (2) SMP Negeri 2 Mlati already has PJOK educators with an S1 (Strata 1) certificate so that they can carry out learning effectively. The CAR was carried out in three cycles and each cycle consisted of two meetings in semester 2 of the 2020 Academic Year. The sample of this study was class VII D students at SMP Negeri 2 Mlati as many as 32 people with details of 18 boys and 14 girls determined by random sampling. The instruments used in this study were a self-assessment questionnaire on student activities, a written test for assessing the knowledge aspect and a volleyball performance test for the process and product skills aspect. The lesson plans, teacher and student observation sheets, knowledge and skill assessment instruments were validated or expert judgment first by two experts who were lecturers of PJOK Postgraduate Study Program, Yogyakarta State University. This study uses a descriptive percentage analysis technique with success criteria: (1) Mastery of classical learning outcomes is marked by an increase in the number of students who achieve KKM scores at the end of the cycle and (2) Student learning activity is said to increase if during learning activities there is an increase in activeness. learn as many students.

### RESEARCH RESULTS

#### Research result

Action research at SMP Negeri 2 Mlati was conducted on class VIID students. Researchers and collaborators carried out observations on PJOK learning activities to increase the activity and learning outcomes of volleyball material through the PBL learning model which was carried out for 3 cycles. In each cycle, 2 meetings are given. The method of observation is tried at each meeting while learning is in progress. After the lesson ended, the researcher conducted a dialogue with colleagues to reflect and plan for the next activity.

#### Pre Action

The initial data assessment was carried out according to the hours of learning activities at school by involving 32 class VIID students. Preliminary data shows that the activeness and learning outcomes of cognitive and psychomotor aspects of fundamental motion material, namely bottom passing, top passing and bottom service are still low. The results of the initial data on the volleyball abilities of class VIID students are presented in table 1.

**Table 1. Pre-Action Data Activity and Learning Outcomes of Class VIID Volleyball**

Information	Pre-Cognitive Action	Pre Action Learning Activity	Pre-Psychomotor Action
The number of students	32	32	32
Average	77	67.5	78
Complete	62.5% (20 students)	46.88% (15 students)	59.38% (19 students)
Not Completed	37.5% (12 students)	53.12% (17 students)	40.62% (13 students)

From these data, it shows that the activity and learning outcomes of volleyball at the pre-action stage of cognitive aspects are still low, there are 62.5% (20 students completed) and 37.5% (12 students have not completed). Aspects of active learning there are 46.88% (15 students completed) and 53.12% (17 students have not completed). There are 59.38% of psychomotor aspects (19 students completed) and 40.62% (13 students have not completed).

## “Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes”

### Cycle I

#### Observation of Teacher

Observations made by collaborators on teachers in conducting learning with the PBL model are presented in table 2.

**Table 2. Class Observation Results on Teachers in Cycle I**

Aspect	Meeting	
	Number 1	2nd
Total score	20 (80%)	22 (88%)
Rating Category	Well	Very good

From these data, it shows that the results of classroom observations of teachers in the first cycle of the first meeting were in the good category and increased at the second meeting in the very good category.

#### The results of observing student learning activities

Collaborator observations on aspects of activity in participating in learning, asking questions, answering questions, discussions and performance in volleyball learning have increased as follows:

**Table 3. Data Result of Assessment of Activity Aspects of Pre-Action Stage and Cycle I**

Information	Pre Action Activity	Cycle I
The number of students	32	32
Average	67.5	74.5
Complete	46.88% (15 students)	71.88% (23 students)
Not Completed	53.12% (17 students)	28.12% (9 students)

From these data, it is known that the average of the first cycle in the aspect of activity showed an increase to 71.88% or (23 students completed). Furthermore, the results of the learning activity questionnaire filled out through student self-assessment obtained the following results:

**Table 4. Data on the results of self-assessment of the learning activity aspect of Cycle I**

Percentage	Criteria	Cycle I	Percentage
75% - 100%	Very high	0	0
50% - 74.99%	Tall	24	75
25% - 49.99%	Currently	8	25
0% - 24.99%	Low	0	0
Amount		32	100

Based on these data, it is known that the average of the first cycle in the aspect of activity through the self-assessment questionnaire can be seen that as many as 25% (8 students) are in the medium category and 75% (24 students) are in the high category. Based on the average value of 39 or 54% of students stated that their learning activity was in the high category.

#### Student Knowledge Test Results

The results of multiple choice tests conducted on the knowledge or cognitive aspects are as follows.

**Table 5. Data from the Cognitive Aspect Assessment in the Pre-Action Stage and Cycle I**

Information	Pre-Cognitive Action	Cycle I
The number of students	32	32
Average	77	79
Complete	62.5% (20 students)	75% (24 students)
Not Completed	37.5% (12 students)	25% (8 students)

From the data in the first cycle of volleyball learning with the Problem Based Learning model, there was an increase even though it was not maximal. 75% complete students (24 students) while 25% have not completed (8 students)

#### Student Skill Test Results

The results of the observation of skills tests for passing down, passing over and serving under volleyball are shown as follows:

## “Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes”

**Table 6. Data on the Results of the Psychomotor Aspects of the Pre-Action Stage and Cycle I**

Information	Pre-Psychomotor Action	Cycle I
The number of students	32	32
Average	76	77
Complete	59.38% (19 students)	71.88% (23 students)
Not Completed	40.62% (13 students)	28.12% (9 students)

From the data in the first cycle of volleyball learning through the PBL model, it can be said that there is a good improvement. The ability of students to process and produce volleyball skills increased with an average value before being given action 76 or 59.38% of students who completed increasing to 77 or 71.88% of students who completed, even though these results have not succeeded in achieving the classical criteria. to be achieved, which is 85%, so that it continues to cycle II.

### Reflection Cycle I

After the implementation of the 2 meetings of the first cycle, the observer and 2 colleagues discussed the results of implementing the action. Each party conveys his opinion and thoughts as long as the action is given. In reviewing and assessing learning outcomes, it appears that there is an effort by the teacher to improve the process and learning outcomes. There are also reflection results in cycle I, including:

- 1) Collaborator 1's observations on class observations of teachers showed that all indicators of teacher activity observed in carrying out the desired process appeared so that it could be concluded that teacher activities in learning were very good. For this reason, teacher activities in the learning process need to be maintained or improved.
- 2) In the aspect of student activity, it is still not successful because it has only reached an average value of 74.5 or 71.88% (23 students completed). Furthermore, the results of student self-assessment with an average value of 39 or 54% are stated in the high category.
- 3) In the cognitive aspect, it has not yet achieved classical mastery because the results of the completed grades have only reached an average of 79 or 75% (24 students).
- 4) In the psychomotor aspect, classical completeness has not been achieved because the average value is still 77 or 71.88% (23 students completed).

From the results of the reflection, it was concluded that it was necessary to carry out cycle II to prove how the PBL learning model was able to increase the activeness and learning outcomes of volleyball students in class VIID at SMP Negeri 2 Mlati.

### Cycle II

#### Observation of the teacher

According to observations made by collaborators on teachers in conducting learning with the PBL model in the first cycle, it can be seen in table 7.

**Table 7. Class Observation Results on Teachers in Cycle II**

Aspect	Meeting	
	Number 1	2nd
Total score	25 (100%)	25 (100%)
Rating Category	Very good	Very good

From these data it shows that the results of class observations of teachers in the first and second cycles of the second meeting are in the very good category. This shows that the learning method provided by the teacher can run very well.

#### The results of observing student learning activities

Collaborator observations on aspects of activity in participating in learning, asking questions, answering questions, discussions and performance in volleyball learning have increased as follows:

**Table 8. Data on the results of the assessment of the learning activity aspect of Cycle I and Cycle II**

Information	Cycle I	Cycle II
The number of students	32	32
Average	74.5	80
Complete	71.88% (23 students)	81.25% (26 students)
Not Completed	28.12% (9 students)	18.75% (6 students)

## “Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes”

The data shows that in the second cycle there was an increase to 81.25% (26 students completed). Furthermore, the results of the learning activity questionnaire filled out through student self-assessment obtained the following results:

**Table 9. Data on Self-Assessment Results of Cycle II Learning Active Aspects**

Percentage	Criteria	Cycle II	Percentage
75% - 100%	Very high	1	3.13
50% - 74.99%	Tall	29	90.62
25% - 49.99%	Currently	2	6.25
0% - 24.99%	Low	0	0
Amount		32	100

From these data, it can be seen that the average of the second cycle in the aspect of learning activity through the self-assessment questionnaire is known to be 6.25% (2 students) in the medium category, 90.62% (29 students) in the high category and 3.13% (1 student) in the very high category. Based on the average score of 44 or 61%, it was stated that the learning activities involved in learning, asking questions, answering questions, discussing and performing in volleyball learning were in the high category.

### Student Knowledge Test Results

The results of multiple-choice tests conducted on the knowledge or cognitive aspects, namely.

**Table 10. Data from the Cognitive Aspect Assessment Phase I and Cycle II**

Information	Cycle I	Cycle II
Number of Students	32	32
Average	79	85
Complete	75% (24 students)	84.37% (27 students)
Not Completed	25% (8 students)	15.63% (5 students)

From the data in the second cycle of volleyball learning with the PBL model there was an increase of 84.37% (27 students completed) while 15.63% (5 students had not completed).

### Student Skills Test Results

The results of the observation of skills tests for passing down, passing over and serving under volleyball are shown.

**Table 11. Data on the Result of Psychomotor Aspects of Cycle I and II**

Information	Cycle I	Cycle II
Number of Students	32	32
Average	77	83
Complete	71.88% (23 students)	81.25% (26 students)
Not Completed	28.12% (9 students)	18.75% (6 students)

From the data in the second cycle of volleyball learning through the PBL learning model there was a good improvement. The ability of students to process and produce volleyball skills has increased the average value before being given action 77 (71.88% of Completed students) increased to 83 (81.25% of Completed students) in the second cycle, although these results have not been successful achieve the classical criteria to be achieved, which is 85% so that it continues to cycle III

### Cycle II Reflection

After completing the implementation of 2 meetings of cycle II, the observer and 2 colleagues discussed the results of implementing the action. Each party conveys his opinion and thoughts as long as the action is given. In reviewing and assessing the learning outcomes of volleyball material with the PBL learning model during the second cycle, it appears the teacher's efforts to improve the learning process and results. The results of the reflection in the second cycle are:

- 1) Collaborator 1's observations on class observations of teachers showed that all indicators of teacher activity observed in carrying out the desired process appeared so that it could be concluded that teacher activities in learning were very good, so learning needed to be maintained, especially in evaluation and problem solving.
- 2) In the aspect of learning activity, students have shown an increase with an average score of 80 or 81.25% (26 students completed). Furthermore, the results of student self-assessment with an average value of 44 or 61% in the high category. In order to maximize the number of balls in the group, it becomes 1 ball for 1 student.

## “Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes”

- 3) In the cognitive aspect, it is close to classical completeness with the results of the complete student scores reaching 81.25% (26 students).
- 4) In the psychomotor aspect, it is close to classical completeness with an average student score of 85 or 84.37% (27 students).

From the results of the reflection, it was concluded that it was necessary to carry out cycle III to prove whether the PBL model was able to increase the activeness and learning outcomes of volleyball students in class VIID at SMP Negeri 2 Mlati could achieve the classical completeness criteria of 85%.

### Cycle III

#### Observation of Teacher

Observations made by collaborators on teachers who carry out learning with the PBL model in cycle III can be seen in table 12.

**Table 12. Class Observation Results on Teachers in Cycle III**

Aspect	Meeting	
	Number 1	2nd
Total score	25 (100%)	25 (100%)
Rating Category	Very good	Very good

From these data, it shows that the results of classroom observations of teachers in cycle III of the first and second meetings are in the very good category. This means that the learning carried out by the teacher in cycle III has been going very well.

#### Results of Observation of Student Learning Activities

Collaborator observations on aspects of activeness in participating in learning, asking questions, answering questions, discussions and performance in volleyball learning have increased, namely:

**Table 13. Data on the Results of the Assessment of Learning Activity Aspects in Cycle II and Cycle III**

Information	Cycle II	Cycle III
The number of students	32	32
Average	80	86
Complete	81.25% (26 students)	93.75% (30 students)
Not Completed	18.75% (6 students)	6.25% (2 students)

From the data, it is known that the average cycle III in the aspect of learning activity shows an increase of 93.75% (30 students complete). Furthermore, the results of the learning activity questionnaire filled out through student self-assessment obtained the following results:

**Table 14. Data on the Results of Cycle III Learning Activity Assessment**

Percentage	Criteria	Cycle III	Percentage
75% - 100%	Very high	4	12.5
50% - 74.99%	Tall	27	84.37
25% - 49.99%	Currently	1	3.13
0% - 24.99%	Low	0	0
Amount		32	100

From these data, it is known that the average of the third cycle in the aspect of activity through the self-assessment questionnaire is 3.13% (1 student) in the medium category, 84.37% (27 students) in the high category and 12.5% (4 students) in the very high category. Based on the average score of 48 or 67%, it is stated that the active learning of students in participating in learning, asking questions, answering questions, discussions and performance in volleyball learning is in the high category.

#### Student Knowledge Test Results

The results of the knowledge or cognitive assessment using the multiple choice question technique are as follows.

**Table 15. Data on Cognitive Aspect Assessment Phase II and Cycle III**

Information	Cycle II	Cycle III
The number of students	32	32
Average	85	90
Complete	84.37% (27 students)	100% (32 students)
Not Completed	15.63% (5 students)	0% (0 students)



## “Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes”

From the data in the third cycle of volleyball learning with the PBL model, it can be said that there was a maximum increase with 100% of students who completed (32 students) while 0% of those who had not completed (0 students). Based on the average value and completeness of the calcical has been met, the cycle is stopped in cycle III.

### Student Skills Test Results

Based on the results of the observation of the skill test for passing down, passing over and serving under volleyball, the following results are shown:

**Table 16. Data on the Results of the Psychomotor Aspects of Cycle II and Cycle III Penilaian**

Information	Cycle II	Cycle III
The number of students	32	32
Average	83	88
Complete	81.25% (26 students)	87.50% (28 students)
Not Completed	18.75% (6 students)	12.5% (4 students)

From the data from the third cycle of volleyball learning through the PBL model, it showed a good improvement. The ability of students to carry out processes and products of volleyball skills has increased with an average score of 88 (87.5% of students completed). During the learning process there are no shortages that affect the activity and learning outcomes. According to the results of the reflection in cycle III, the research was ended because it had met the classical completeness criteria of more than 85% specified.

### Reflection Cycle III

After the end of the implementation of the 2 meetings of cycle III, the researcher and 2 colleagues discussed the results of implementing the action. Each party conveys his opinion and thoughts as long as the action is given. In reviewing and assessing the learning outcomes of volleyball material using the PBL model, it appears the teacher's efforts to improve the process and learning outcomes. The results of the reflection in cycle III are:

- 1) Collaborator 1's observations on class observations of teachers showed that all indicators of teacher activity observed in carrying out the desired process appeared so that it could be concluded that teacher activities in learning were very good. For this reason, teacher activities in the teaching and learning process need to be maintained.
- 2) In the aspect of learning activity, students have succeeded in achieving an average score of 86 or 93.75% (30 students completed). Furthermore, based on the results of the student self-assessment, it was stated that the average score was 48 or 67% in the high category
- 3) In the cognitive aspect, it has fulfilled the classical completion with the average score reaching 90 or 100% (32 students completed).
- 4) In the psychomotor aspect, classical completeness has been achieved with an average score of 88 or 87.5% (28 students completed).

From the reflection results, it is concluded that learning using the PBL model can increase learning activity and volleyball learning outcomes for class VIID students at SMP Negeri 2 Mlati and can achieve the classical completeness criteria of 85%.

## DISCUSSION

Based on the results of reflection and analysis of information in each cycle, the results of the action study prove that the results in cycle III have shown a significant increase compared to cycles I and II. In cycle III, the goal of learning volleyball games has been successful, it can be seen that in general students have achieved above 85% of the Minimum Completeness Criteria. Thus the action of the learning process on activity and learning outcomes through the PBL learning method given to class VIID students of SMP Negeri 2 Mlati, can be said to be successful.

Classical completeness about the activity and learning outcomes of students on volleyball material are described as follows:

**Table 17. Activity Development Data and Learning Outcomes of Class VIID Students**

Aspect	Pre Action	Cycle I	Cycle II	Cycle III
Cognitive	62.5% (20 students)	75% (24 students)	84.37% (27 students)	100% (32 students)
Learning Activity	46.88% (15 students)	71.88% (23 students)	81.25% (26 students)	93.75% (30 students)
Psychomotor	59.38% (19 students)	71.88% (23 students)	81.25% (26 students)	87.50% (28 students)

## “Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes”

From the table data, the data on the development of student activity and learning outcomes can be presented in the following figure:



Image 1..Data on the Development of Learning Activities and Learning Outcomes of Class VIID Students

After trying to assess the category actions that have been carried out throughout 3 cycles, it can be informed about aspects of the research that can achieve the desired goals and other aspects that are considered less fulfilling expectations. Actions that have proven results match expectations can be used as reference material for the next learning method. On the other hand, actions that are less successful are expected to be used as material for analysis for changes and improvements.

### The PBL model has an impact on increasing volleyball learning activities in class VIID

Volleyball learning through the PBL model increases learning activity. This can be seen from the average pre-action development of 67 or 15 students completed, then in the first cycle there was an increase in results with an average of 74 or 23 students completed, for the second cycle there was an increase again to an average of 80 or 26 students completed and for the third cycle, it increased again to 86 or 30 students completed. Based on the increase that occurred in participating in learning, asking questions, answering questions, in discussions and performance in implementing volleyball learning increased with the PBL learning model.

The learning model with PBL is a learning model that is carried out in a student-centred manner or referred to as student-centered and the teacher acts as a facilitator who provides opportunities for students to solve problems using critical thinking strategies individually or in groups. This learning model has advantages that will make students able to arrange problem solving steps individually or in groups. These results are in line with Kawuri's research, (2019: 105) that the application of the PBL learning model has a significant influence on the learning activity of students, this is reflected in the syntax of the PBL learning model which encourages students to be more active in the learning process and outcomes.

Furthermore (Jayul et al, 2020) stated that the material in physical education develops personal and social responsibility and social behavior. Another opinion from Anderson & Glover (2017: 85) in their book states that the increase in student character in learning is caused by planting and developing through the learning process carried out by the teacher. Planting and developing active student involvement in the learning process (Pahliwandari, 2016: 154). Furthermore, by developing their character, they will realize there are opportunities to learn and develop. These results prove that the PBL model has a positive role in increasing student learning activity in volleyball lessons. Students seem to understand the concept better, are active.

### The PBL model has an impact on improving volleyball learning outcomes for class VIID students

Volleyball learning through the PBL model improves learning outcomes. This can be seen from the pre-action development in the cognitive aspect of 62.5% or (20 students completed), then in the first cycle there was an increase to 75% or (24 students completed), in the second cycle it increased again to 84.37% or (27 students completed) and in the third cycle increased again to 100% or (32 students completed). Then from the Psychomotor Aspect also showed development, starting from the pre-action stage on the psychomotor aspect 59.38% or (19 students completed), then in the first cycle there was an increase to 71.88% or (23 students completed), in the second cycle it increased again as much as 81.25% or (26 students completed) and in the third cycle increased again to 87.50% or (28 students completed).

The PBL learning model is very appropriate to be applied in supporting learning targets in schools. This is because it will support the thinking ability of students individually and in groups in doing the assignments from the teacher. The Problem Based Learning learning model can be applied in volleyball learning activities for class VIID students at SMP Negeri 2 Mlati Sleman. Djaeng, (2020) Problem-based learning is a form of learning that uses problems as a focus to improve problem-solving skills, modules, and self-regulation.(Djaeng, 2020). (Bean et al, 2021). explains that the PBL method has advantages including: students master the given design because they create the design themselves, Connect students actively in solving problems and demand

## **“Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes”**

greater student thinking and thinking skills, insight is embedded in schemata. owned by students, as a result learning is more meaningful, students can enjoy the results of learning activities, because the problems that are solved are directly related to real life.

This can increase students' encouragement and interest in the material they are studying. The conditioning of students in group learning is related to the learner and their friends, as a result, the achievement of students' practice of mastery can be expected. The PBL model is believed to be able to develop students' creative skills, either individually or in groups, because almost every stage requires student activity.

Problem-based learning syntax can stimulate students' understanding of how to find problem-related information and improve their thinking skills (Nurlaily et al, 2019). States that PBL in improving students' perceptions of learning because it allows them to encourage knowledge transfer (Wicaksono et al, 2019). PBL is effective compared to other pedagogical approaches because it facilitates students' critical thinking and problem solving skills since students are able to apply theory into practice. (Zhou et al, 2013) concluded that task-based learning improves students' analytical skills and the ability to personalize learning. Students are able to evaluate and conclude the content learned while making reasonable conclusions.

The results of this study are in line with (Mustaji et al, 2022). which states that student learning outcomes are higher using the PBL learning model compared to the demonstration model. Furthermore, Sukarini, (2020: 271) conveyed the results of his research that the PBL model effectively improves learning outcomes for physical education, sports and health. Research (Kusumatuty, et al, 2018) and Qomariyah, (2019: 217) show that the application of problem-based learning effectively improves student learning outcomes in the experimental class compared to the control class using conventional learning models. Problem-based learning models are relevant to everyday life. and problem solving skills of students and build their motivation, so that this model effectively improves student learning outcomes and motivation (Argaw et al, 2016). Aidoo, Boateng, Kissi, Ofori (2016: 103) added that the problem-based learning model effectively improves critical thinking skills in accordance with the objectives of the 2013 curriculum. students get an increase in health by carrying out physical activity.

The results of this study provide a positive picture of an increase in classical mastery of more than 85% in class VIID students at SMP Negeri 2 Mlati. The application of the learning model is able to increase the activity and learning outcomes of volleyball. According to Laforce, (2017: 4), the application of the PBL model will be observed in 3 ways, namely (1). The teacher uses a problem-solving-based learning model as a strategy in the daily learning process, (2). Students complete a series of tasks to produce a final product, and (3). Students complete the task rooted in the problem to be solved. Ediger & Lee, (2017: 108) added that the PBL process will improve student learning outcomes with more active learning, so that it has a positive impact on teachers and students getting satisfaction with the learning process and results.

### **The application of the PBL Model in the learning process to improve learning activity and volleyball learning outcomes for class VIID students**

The application of the PBL model was chosen as a solution in this PTK because it has advantages that lead to solving problems faced in class VIID volleyball learning, namely student-centered learning, developing control, developing problem solving, developing social skills, integrating theory and practice. The application in the learning process in this CAR is in accordance with the PBL model syntax which consists of 5 stages of the learning process including: problem orientation stage, learning organization stage, individual or group tracking stage, development stage and presentation of problem solving results, as well as analysis and assessment stages. how to handle problems.

Kawuri, (2019: 105) explains that the application of the PBL learning model has a significant influence on the learning activities of students, this is reflected in the syntax of the PBL learning model which encourages students to be more active in the learning process and outcomes. Sujarwo, Suharjana, Rachman, Ardha, (2021: 29) in their research and development stated that the development of volleyball learning models effectively improves student character such as discipline, cooperation, and hard work.

## **CONCLUSIONS**

The conclusion in this study is that learning using the PBL learning model can increase the activity and learning outcomes of volleyball in class VIID students of SMPN 2 Mlati with the final result of classical completeness criteria of more than 85% having reached the Minimum Completeness Criteria (1)PBL learning model is able to increase the learning activity of students, by the average pre-action development was 67 or 46.88% (15 students completed), then in the first cycle there was an average increase of 74 or 71.88% (23 students completed), in the second cycle it increased again to an average of 80 or 81.25% (26 students completed) and in the third cycle increased again to 86 or 93.75% (30 students completed) (2) Learning activities using the PBL model can improve student learning outcomes with pre-action development on cognitive aspects an average of 77.5 or

## “Problem-Based Learning: As an Effort to Improve Volleyball Activity & Learning Outcomes”

62.50% (20 students completed), then in the first cycle there was an average increase to 79 or 75% (24 students completed, in the second cycle the average increased again to 85 or 84, 37% (27 students completed) and in the third cycle the average increased again to 90 or 100% (32 students completed), then progress, starting from the pre-action stage on the psychomotor aspect an average of 78 or 59.38% (19 students who completed), then in the first cycle there was an average increase to 77 or 71.88% (23 students completed), in the second cycle increased again by an average of 83 or 81.25% (26 students completed) and in the third cycle the average increased again to 88 or 87.50% (28 students completed) (3) Volleyball learning with the PBL model is implemented in learning with 5 stages and is carried out in 3 cycles to effectively increase student activity and learning outcomes.

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## Awareness and Use of Internet and Online Services among Homemakers in Kollam District, Kerala, India



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**ABSTRACT:** Internet has become the indivisible part of the modern world. For each and everything people depend upon the internet. Irrespective of belonging to any agegroup, it is the main source of information. So the purpose of dependency of internet is diverse. It depends upon the choice of the person who uses it. Homemakers require internet for various purposes. There are countless areas where the application of the internet is important. In the present study we did a survey analysis to understand the awareness and use of internet and online services among the homemakers in Kollam districts, Kerala, India. Asramam, Kavanad, Uliyakovil and Mundakkal ward of Kollam corporation are the areas chosen for conducting the research work. Convenience sampling method was selected for the study. The data collected were processed and analyzed. It was found that most of the times the internet applications helped the homemakers to ease their works.

**KEYWORDS:** Homemakers, online, internet, Flipkart, Facebook, Amazon, BookMyShow, Twitter, debit card, Paytm, Google Pay.

### INTRODUCTION

The use of internet has made numerous things easy and fast. It has not just become a means of looking for information but of social relationships and communications with other people, for business or commercial purpose, or for interacting with old friends (Ciboh, 2015). Digital inclusion offers a variety of benefits for societies, such as access to information, communication, learning and business opportunities etc (Choudhury, 2004) and Hasan, Md. (2008). Technology alone may help homemakers in composing all the day to day events in their life (Divatia A. and Patel M. 2017). This is possible only with the help of online platforms and applications. For a homemaker these platforms can help bring all their requirements at a single click to the doorstep. Choice and convenience of consumers has increased with advent of online stores like Myntra, Flipkart, Snapdeal, Jabong, Amazon etc. crowding the web space (Hynes and Rommes., 2006). More and more offline stores and services are rapidly getting into the online space. With the introduction of smart phones, 3G broadband internet services, more and more consumers are switching to online shopping for routine as well as fashion needs (Agarwal, *et al.*, 2014). Anybody, who have little or no entrepreneurial experience start a business from the confines of their homes using social media platforms like WhatsApp and Instagram, or ecommerce platforms at minimum cost. Koufaris (2002) states that online customer behaviour is both similar and different from the traditional customer behaviour. Internet as the main source to communicate with people around the world, helps to do their works easier. Home makers utilize internet platforms for online payment, purchasing of goods, sending of messages, for finding new information, submitting applications, helping children in doing their home works and in attending online classes and exams. Thus the knowledge of internet and online services are required for home makers to do their house hold works easy and fast. The Internet has been identified as a very promising channel for supporting services, as it is well suited for communication and information exchange, which are key components of nearly all supporting services (Jahan. R (1994)).

Firms have developed various forms of online support, often complementing, sometimes substituting or extending their existing services. Customers expect similar quality levels from these electronically offered supporting services as from their traditional counterparts. Still, many online services do not seem to be designed in a way that appeals to customers. Nor does their design maximize their benefits. Although some research exists on consumer evaluations of e-services, there is a general lack of research with respect to the impact of technology on various customer responses, such as perceived service quality, value, satisfaction and loyalty. A better understanding of how customers evaluate online support and develop behavioral intentions as a result of these evaluations will help companies to improve their online support offering and maximize customer

## Awareness and Use of Internet and Online Services among Homemakers in Kollam District, Kerala, India

value(Kabeer.N(2005). In this present study we intended to study the factors that motivated the homemakers to use internet and online services, to identify the purpose for which internet and online services are used by the homemakers and to evaluate the benefits gained by the use of internet and online services by the homemakers.

### MATERIALS AND METHODS

The present study is an attempt to evaluate the information regarding the use and awareness of internet and online service among homemakers in Kollam districts of Kerala, India. Survey method was used for the study. Asramam, Kavanad, Uliyakovil and Mundakkal ward of Kollam corporation were selected. Hundred samples (25 homemakers from each ward) were selected using convenience sampling procedure. Interview method was used for collecting data. The selected respondents were visited personally by the interviewer. After establishing the rapport, the purpose for the visit was explained. After that the data was collected and recorded in the schedule by asking the questions as given in the schedule. The data collected has to be processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the research plan. The data collected were coded and two-way tables were used with percentage for generalizing the details.

### RESULT

The data pertaining to the present study have been analysed and capsulated in tabular forms and presented under appropriate heads. From the sample studies, it is clear that, 78% of the respondents belong to the nuclear family and 20% of the respondents belong to the joint family. The age of respondents range from 21 years to 55 with a mean age of 25. Majority (49%) of the respondents belong to the age group 21-30, 30% belong to the age group 41-50, 15% belong to the age group 31-40, and the remaining 6% of the respondents are above fifty one years. (Figure.1).

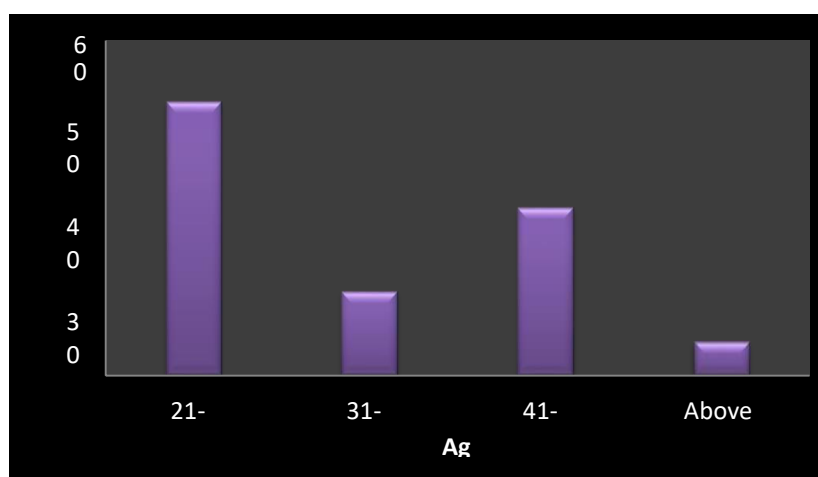


Figure 1. Diagrammatic representation of respondents based on age.

Majority (44%) of the respondents live in coastal area, 31% live in rural area and 25% of them live in town area. Majority (35%) of the respondents are graduates, 27% of them are qualified up to SSLC, 16% of them are postgraduates and only 9% of them have qualification above postgraduation. Majority (52%) of the respondents were unemployed. 8% of them were Govt. Employees, 11% of them were working in private sector, 7% of them were self-employed/ doing business and professionals respectively and 5% of them were employed on daily wages.

Table 1. Monthly Income of the Family.

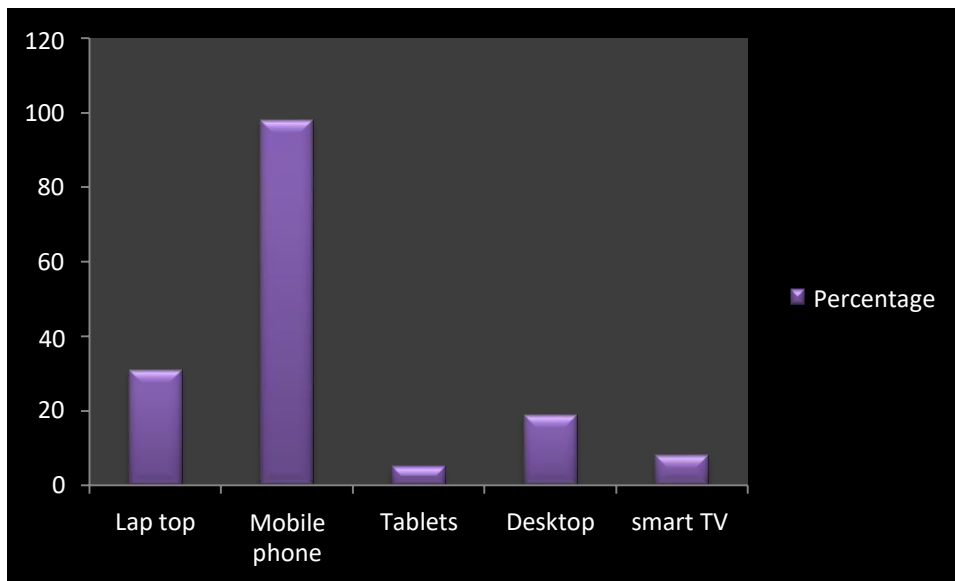
Monthly	Percentage* (N=100)
Less than 10000	28%
10001- 30000	39%
30001 – 60000	18%
Above 60000	15%

\*Multiple responses

Table.6. shows that the monthly family income ranges from Rs 9000 to 125000. 28% of the respondents have a family income of less than Rs 10000. 39% of them fell between Rs 10001 and Rs 30000/- per month. 18% of the respondents are in a monthly

**Awareness and Use of Internet and Online Services among Homemakers in Kollam District, Kerala, India**

income bracket of Rs 30001 and Rs 60000. Respondents with a monthly family income above 61000 is 15 % (Table.1).



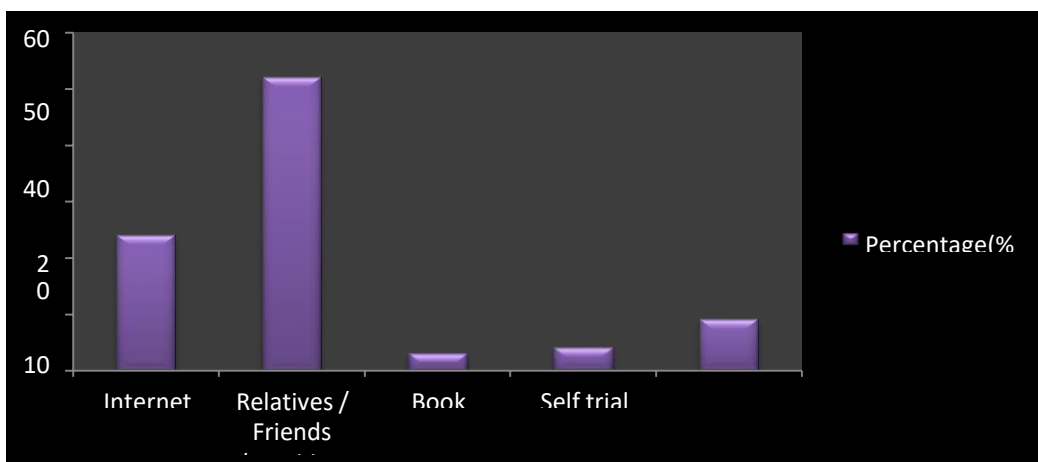
**Figure.2. Device possessed for using internet and online service by the respondents.**

It is clear from the above figure that some of the respondents possess more than one device for using internet and online services. Majority (98%) of the respondents possess mobile phones for using internet and online services. 31% of them possess lap top. Desktop is owned by 19% respondents. 8% of the respondents own smart TV and five percent of them possess Tablet.

**Table 2. Confidence in using internet and Online Services by the Respondents.**

Confidence in using online service	Percentage* (N=100)
Extremely confident	21%
Moderately confident	34%
Less confident	27%
Not at all confident	18%

Table 2 shows that majority (34%) of the respondents are moderately confident in using internet. Twenty seven percent of them have less confidence in using internet. Twenty one percent of the respondents are extremely confident and 18% percent of them are not at all confident in using internet and online services.



**Figure.3. Sources from where the Respondents learned to use internet and online services.**

Figure.3. reveals that majority (52%) of the respondents learned to use internet and online services from their relatives / friends / neighbours. Twenty four percent of the respondents learned to use internet and online services from internet itself. Nine



## Awareness and Use of Internet and Online Services among Homemakers in Kollam District, Kerala, India

percent of them learned from WhatsApp and 4% of them learned by themselves. Three percent learned from books.

**Table.3. Purpose for which internet is used.**

Purpose	Percentage*(N=100)
To browse and download study materials	42%
To clear doubt	69%
To send mail	37%
To chat with friends	11%
To track location /orders	26%
Job hunting	3%
Shopping	72%
Payment of bills	47%
Net banking	18%
Watch movies and listen to music	59%
To do project and presentation	2%
To attend online classes	46%
For group discussion	6%
To make video calls	37%
To conduct meeting	3%
Business	2%

\*Multiple responses

Table .3 reveals the purpose for which internet is used by the respondents. Majority (72%) of them used internet for shopping. 69% of the respondents used internet to clear doubt. 59% of them used internet to watch movies and listen to music . 47% of them used internet for payment of bills. 46% of them used internetto attend online classes. 42% used the internet services to browse and download study materials. 37% of the respondents used internet to make video call and to send mail respectively.26% percent of them used internet to track location/orders, Internet was used fornet banking by 18% respondents. 11% respondents used internet to chat with friends. 6 % of the respondents used internet for group discussion . 3% of the respondents used internet for job hunting and to conduct meetings respectively.2% of the respondents used internet for business and to prepareprojects andpresentations.

**Table.4.Benefits derived from the use of internet and online services.**

Benefit derived from online services	Percentage*(N=100)
Time saving	83%
Made many tasks easy	89%
Easy sharing of images videos and messages	92%
Cost savings	21%
Stress relief	58%
Less paper work	78%
Less dependence on others	60%
Reduce travel	79%
Manage business/ transaction from anywhere in the world at any time.	42%
Global access , 24hrs a day , 7 days in a week	99%

Multiple responses\*

Table.4.reveals the benefit derived from the use of internet and online services. Global assess, 24hrs a day and seven days in a week was the major benefit experienced by 99% of the respondents. 93 % percent of the respondents say that the use of internet and online services saved lot of time. Ease of sharing messages, images and videos were the benefits reported by 92% respondents.

## Awareness and Use of Internet and Online Services among Homemakers in Kollam District, Kerala, India

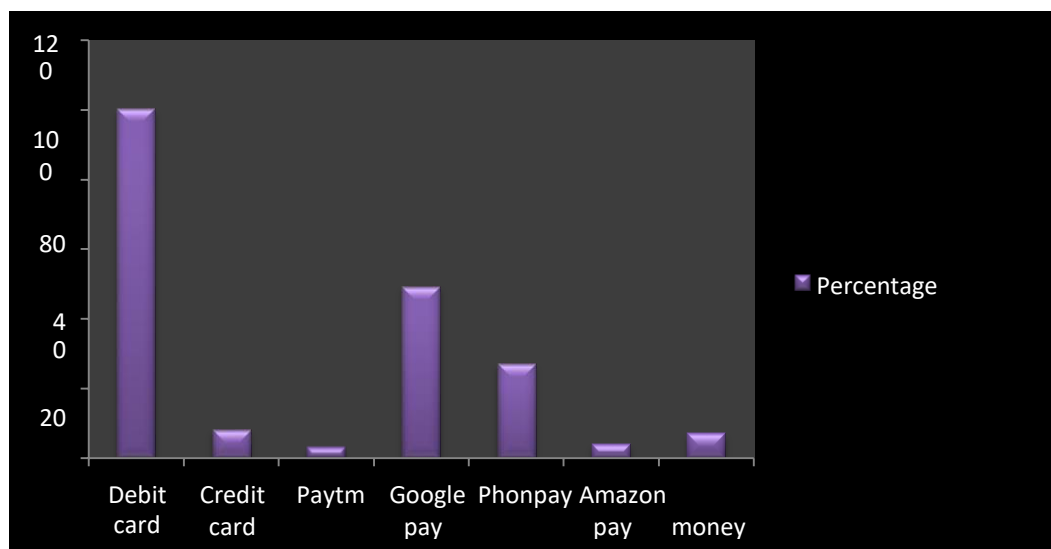
89% of the respondents opine that using internet and online services made many tasks easy. Reduced travel was the benefit reported by 79% respondents. Less paper work was reported by 78% respondents. Less dependence on others was the benefit delineated by 60% respondents. Stress relief was reported by 58% respondents. Ability to manage business/ transactions from anywhere in the world at any time was the benefit stated by 42% respondents. Cost saving was the benefit reported by 21% respondents on using internet and online services.

**Table.5.Type of electronic banking services used by the Respondents.**

Type of electronic banking services used	Percentage (N=100)*
Fund transfer	11%
Withdrawal of money from ATM	57%
Regular checking of bank statement	18%
request any card or cheque book service	8%
Mobile banking	9%
Internet banking	8%
Shopping	72%
Investing/ depositing / depositing money.	7%

Multiple responses\*

Table.5.reveals the electronic banking services used by the respondents. All the 100 respondents drew money from ATM. Shopping was done by 72% respondents.22 % of them made bill payments. 18 % of them used electronic banking for regular checking of bank statement. Fund transfer was done by 11% respondents.Mobile banking was done by 9% respondents. Electronic banking was used to request for any card or cheque book service and for net banking by 8% respondents respectively. 7% of the respondents used electronic banking for investing.



**Figure.4.payment method used.**

Figure.4.reveals the payment methods used by the respondents. All the respondents in the study used Debit cards to make payments. Google Pay was used by around one half (49%) of the respondents. PhonePe was used by around one fourth (27%) of the respondents. Credit card was used by 8% respondents. Seven percent of the respondents used Airtel money and Paytm respectively and AmazonPay was used by 6% respondents.

## Awareness and Use of Internet and Online Services among Homemakers in Kollam District, Kerala, India

**Table.6.Factors that promoted the use of online shopping.**

Factor that promoted use of onlineshopping	Percentage *(N=72)
Convenience	94.4%
Availability of variety of products	97.22%
Compare price	93.05%
Ease to send gift	62.5%
Save time	93.05%
Can shop anytime from any place	100%
Check review of products	62.5%
Reduced frequent visit to shops in search of items and associated problems	70.83%
No need for physical money	97.22%

\*Multiple responses\*

Table.6.reveals the factors that promoted the use of online shopping. Ability to shop from any place at any time was the major factor that promoted all the respondents to do online shopping. Convenience was the factor reported by 94.4 % Availability of variety of products and no need for physical money were the factors that promoted the use of online services by 97.22% respondents respectively. Save time and ability to compare price were the factors reported by 93.05% respondents . Reduced frequent visit to shops in search of items and associated problems were the factors reported by 51% respondents. Check review of products and ease of sending gifts were the factors reported by 45% respondents.

**Table.7.Type of commodities purchased through online shopping**

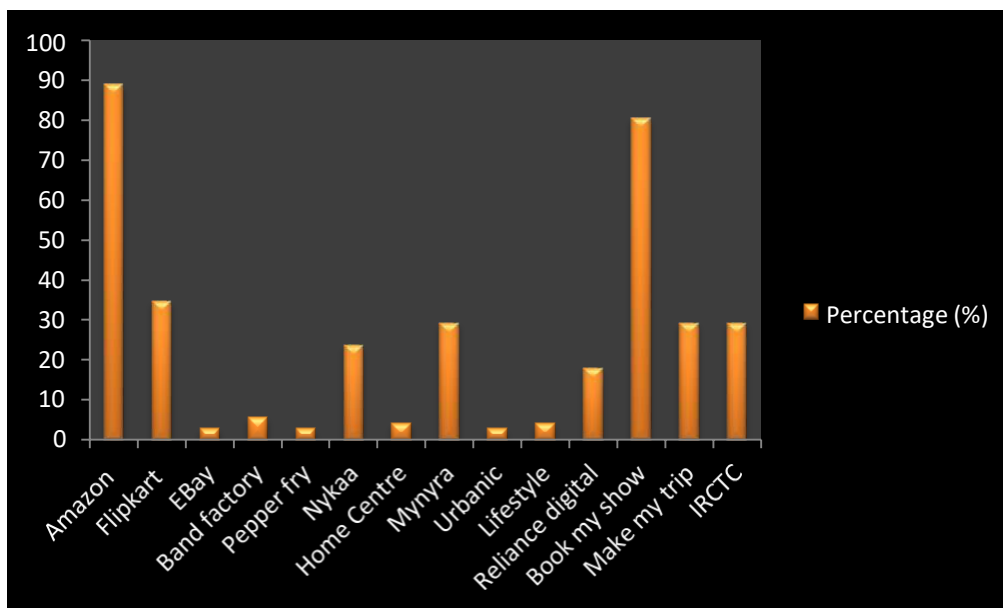
Type of commodities purchased through online shopping	Percentage *(N=72)
All household items	79.16%
Dress materials	63.88%
Cosmetic items	33.33%
Food	94.44%
Medicine	5.55%
Tickets	54.16%
Jewelry	26.38%
Foot wares	43.05%
Fitness/ sports items	15.27%
Spare parts	22.22%
Electronic accessories	29.16%
Books	12.5%
Garden tools	11.11%
Plants	8.33%

Multiple responses\*

Table.7.reveals the type of commodities purchased by the respondents through online shopping. Food was the item purchased through online by majority (94.44%)of the respondents. Online purchase of household items was done by 79.16% respondents. Dress materials were purchased by 63.88% respondents. Ticket booking was done by 54.16% respondents. Foot wares were purchased by 43.05% respondents. Cosmetic items were purchased by 33.33% respondents . Electronic accessories were purchased by 29.16% respondents. Jewelry was purchased online by 26,38% respondents. Spare parts were purchased by 22.22% respondents. Fitness and sports items were purchased by 15.27% respondents. Garden tools and plants were purchased by 11.11% and 8.33% respondents respectively. Books were

**Awareness and Use of Internet and Online Services among Homemakers in Kollam District, Kerala, India**

purchased by 12.5% respondents and 5.55% respondents purchased medicines online.



**Figure.5. Website used for shopping.**

Figure.5. reveals the websites used for shopping by the respondents. Amazon was the website used by majority (88.88%) of the respondents for shopping. Book My Show was used by 80.55% respondents. One fourth (34.72%) of the respondents used Flipkart for shopping online. Myntra, Make My Trip, IRCTC were used by 29.16% respondents respectively. Nykaa was used by 23.61% respondents. 18.35% respondents shopped using the website Reliance digital. Brand factory and Home center was used by 4.16% respondents respectively. Lifestyle was used for shopping by 4.16% respondents. eBay, Pepper fry and Urbanic were used for shopping by 2.77% respondents.

**Table.8. Satisfaction gained from the use of products purchased online.**

Satisfaction	Percentage* (N=100)
Extremely	51.38%
Moderately	37.5%
Slightly	9.72%
Not at all	1.38%

Table.8. reveals the satisfaction gained from the use of products purchased online. Majority (51.38%) of the respondents were extremely satisfied with the products purchase online. 37.5% of them were moderately satisfied. Less than ten percent (9.72%) of them were slightly satisfied and only 1.38% of them were not at all satisfied by the products purchased online.

**DISCUSSION**

In the present study, we checked the awareness and use of internet services among the home makers in Kollam and Alappuzha districts of Kerala, Kollam. In the samples collected, majority of them were graduates and unemployed. Income of the family was not a concern for searching and using the internet. 98% of the people used the mobile phone for using internet services. The purpose of searching was different and unique. Benefits derived from internet were also different such as saving time, making the tasks easy, for using social media etc. Most of them used the internet banking for shopping. Food items are the most frequently searched commodity. Amazon and Book My Show are the mostly used sites. There are countless needs for which the home makers use internet on a daily basis. According to Rajasekhar *et.al.*, 2015 with increasing literacy rates and a growing purchase power, the urban homemaker in India is a crucial target for government, ecommerce and e-marketers of products and services, among others. There are some basic household responsibilities like cooking, childcare, cleaning, washing of clothes and utensils, grocery shopping, family budgeting that every family needs to perform, which can be fulfilled with the help of internet (Chauhan.L., 2021).

## Awareness and Use of Internet and Online Services among Homemakers in Kollam District, Kerala, India

According to Divatia A. and Patel M (2017) in present times, house wives are way ahead in using internet services as compared to college students and working women. Indian housewives are evidently making their existence felt on the social media. Gandhiya.P(2016) states that with the changing socio-cultural scenario and increasing spread of Internet and mobiles, housewives have started using various social media through their mobile phones or computers at home. In a work by Choudhury.N(2009), he reveals how women participate in the decision-making process associated with Internet adoption. Nysveen *et.al.*,2005 conducted a study, its results suggest that social norms and intrinsic motives such as enjoyment are important determinants of intention to use among female users, whereas extrinsic motives such as usefulness and – somewhat surprisingly – expressiveness are key drivers among men. Women are marginalised by their own anxieties, roles and beliefs rooted in traditional norms as well as by illiteracy and economic circumstances. The media too are responsible for skewing women's self-perceptions which hinder their use of the Internet (Johnson.V.,2010). Social factors, such as the role of parents and social communities, were found to influence women to develop and maintain interests in ICT that were reflected in their professional and personal lives.

### CONCLUSION

Internet is one of the basic requirements of today's digital world. Akin to all other people, home makers are also learning to use new technologies. Internet is used by homemakers through computer, laptop, Smartphone. The homemakers of Kollam district have basic qualification from class X to higher education than post graduation. The knowledge of internet is obtained through many sources like relatives / friends / neighbors, internet itself, WhatsApp and from books. Information related to new products that arrive in market is obtained through internet. It is noted that many home makers use internet for many purposes like learning new things , shopping, paying bills , checking messages, watching movies and listening to music, finding recipes etc. Watching programs using internet and social media usage are some of the other utilities of internet service used by homemakers. Sharing of images, videos and messages are also the advantages of internet. Homemakers developed a strong sense of confidence to utilize internet in an appropriate way. The further recommendation for this study is to analyse the major websites, online services, mobile applications that are used by homemakers to do business and the difficulties faced by them on using these and to help internet providers and device manufacturers to design women friendly mobile applications enhancing the safety of women at an affordable price.

### ACKNOWLEDGEMENT

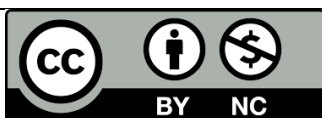
The authors thank the Head of Institution of Sree Narayana College for Women, Kollam and Head of the Department of Zoology and Head of the Department of Home science ,Sree Narayana College for Women, Kollam for providing facilities for carry out the work.

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## Possible Solutions to Challenges of Including Learners with Special Educational Needs in Mainstream Classrooms



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### INTRODUCTION AND BACKGROUND

As a major strategy towards the achievement of basic education for all, Lesotho introduced free and compulsory primary education, whereby many children were sent to school. The mountain kingdom of Lesotho implemented the Free and Compulsory Primary Education Policy in the year 2000 (McConkey&Mariga, 2011:18). The policy's main objectives are:

*[t]o make basic education accessible to all learners; to make education equitable in order to eliminate inequalities; to guarantee that every Mosotho child completes the primary education and ensure that education is affordable to Basotho. (McConkey&Mariga, 2011:18).*

By implementing compulsory education, even learners with special educational needs were seen in high numbers in schools. This has brought a challenge to learners with special educational needs to learn in the same classrooms with other learners without special educational needs. This paper aims to explore the possible solutions to challenges of including learners with special educational needs in Lesotho mainstream classrooms and The paper is guided by the question: what are the possible solutions to the challenges of including learners with special educational needs in Lesotho mainstream classrooms?

### CRITICAL PEDAGOGY AS A CONCEPTUAL FRAMEWORK

This intellectual piece adopted Critical Pedagogy as a conceptual framing, to provide a philosophical stance that guides the conceptualization of constructs under discussions. Myriads of diverse gist of Critical Pedagogy have been theorized by various scholars, and all seems to amplify and trouble the notion of oppression as an operational element that calls for empowerment for transformation to be realized (see: Moreeng& Twala, 2014:495; Wink, 2005:1; and Kincheloe, 2005:157). However, in this intellectual piece, I align with definition of McKernan (2013:425) who defines Critical Pedagogy as a movement that involves relationships of learning and teaching whereby learners gain critical consciousness and social awareness; as a result, they take suitable measures against oppression is adopted. I track down the evolution of critical pedagogy (CP) as it traces its origin from the tradition of critical theory of the Frankfurt School and influenced heavily by the work of Brazilian scholar Paulo Freire. He is the most celebrated critical educator, who is generally considered to be the germinal philosopher of critical pedagogy(McLaren, 2000:1).Critical Pedagogy was first described by Paulo Freire and further sophisticated by the likes of Henry Giroux and other scholars as a praxis-oriented educational movement, guided by passion and principle to enables learners to advance consciousness of emancipation, recognize tendencies of authoritarianism and connect knowledge of empowerment and find an intellectual space of taking a constructive action (McLaren, 2015:120).

Critical pedagogy as a conceptual framework automatically became an appropriate choice which is suitable for this intellectual piece as it recognizes lived experiences and social realities in which learners live. Thus meaningI considered the experiences and social realities of the participants in this study. According to Aliakbari and Faraji (2011:80), critical pedagogy's main concern is about transformation and empowerment to change the social stations of oppressive power that cause people to be oppressed. As the author of this piece I hold the view that people should be treated equally, with no one seen on the periphery and others holding the center stage. The choice of this conceptual framing assisted in defusing the dominant discourse which regard "other(s)" as superior above others.

In this study, all research participants were regarded equal and hence were referred to as co-researchers. Equality forms the base in this study and find prominence in order to trouble discourses of oppressive practices towards others. Important as well, was the view that all people should be free. It is clear, therefore, that critical pedagogy was therefore an automatic choice in this study.

## Possible Solutions to Challenges of Including Learners with Special Educational Needs in Mainstream Classrooms

This intellectual piece amplifies the notion of emancipation to enable participants to communicate freely and partake with clear consciousness. Co-researchers were highly treasured and treated with respect, and they became highly committed to share their lived experiences with unconditional honesty. Freire's concept of praxis (Giroux, 1997:101) and the emancipatory nature of critical pedagogy assisted this study in encouraging active participation.

### REVIEW OF RELATED LITERATURE

For preparing teachers to accept and ensure participation of learners with special educational needs, Carrollet al. (2003:65) highlight that in Australia, revisions to teacher education programmes were advocated. Meanwhile, Browder, Wakeman, Spooner, Ahlegrim-Delzell and Algozzine (2006:394) state that in the United States, staff development seminars and workshops towards social models of disabilities were provided to school staff members in order to provide the necessary skills to practising teachers. According to Burlo (2010:207), in the United States, teachers undertake a two-year evening part-time course in inclusive education and attend training sessions discussing issues on inclusive education, setting instructional objectives, collaborative teaching, individual educational programmes and the implementation of peer preparation programmes. Also, a major commitment of school authorities and universities was to redesign teacher preparation programmes, with emphasis on psychology (Browder et al., 2006:394).

It is reported that in New South Wales, the need for their teacher training curriculum to include at least one compulsory course on special education has already been endorsed (Forlin, 2006). In the South African context, the South African Ministry of Basic Education emphasises that pre-service tuition in inclusive education should be prioritised (Motshekga, 2010b) and tuition should shift the focus from individual deficits to the environmental, structural and attitudinal barriers within society and institutions. Moreover, Selesho (2012:540) states that all the provinces conducted campaigns of awareness to educate communities about inclusive education.

Furthermore, educational institutes in South Africa began to prepare teachers to include a diverse range of learner needs in one inclusive system (Engelbrecht & Oswald and Swart (2003:300). In the same way, Oswald and Swart (2011:389) stipulate that modern teacher education in South Africa trains teachers how to accommodate diverse learners in mainstream classrooms. As a result, the attitudes and beliefs of teachers about children with disabilities have positively changed. Also, the specialists support the diversity in schools and the rainbow nation is seen in schools (Oswald & Swart, 2011:389).

According to Walton and Nel (2012:24) The South African Department of Education suggested that teachers should be re-orientated to new pedagogies through comprehensive tuition programmes. There is also notable evidence of teacher enrolment in workshops and short courses offered by various non-governmental organisations, and university-level courses offered for in-service teacher apprentices (Walton & Nel, 2012:24). However, Donohue and Bornman (2014:43) report that the tuition programmes that educated teachers on how to accommodate and teach learners with special educational needs were usually only a week or two long and, of course, that was too short. Stofile further (2008:109) announces that the programmes also focus on developing certain skills, whereas teachers often need far more comprehensive training programmes.

In trying to solve the issue of teachers' training, Lesotho introduced the Special Education Unit in the Ministry of Education and Training (MoET) in 1991 (Khoaeane, 2012:12); the Special Education Unit staff was to train teachers on developing positive teacher attitudes towards learners with special educational needs. In 1996, the Lesotho College of Education introduced Special Education in its curriculum, but lacked human resources to promote the programme, as there were no formally prepared lectures with extensive Special Education (Johnstone & Chapman, 2013:139).

Fortunately, in 2009, both the Lesotho College of Education and the National University of Lesotho started the special education programmes – a degree for the latter and a diploma for the former (Mosia, 2014:293). It is important to realise that in-service workshops, of which their effectiveness had been criticised as making little difference, were the main approach (Dickinson & Brady, 2006:84). Introduced also, was attitude training and basic disability awareness (Mariga & Phachaka, 1993:8).

In trying to come up with a solution to a curriculum that does not meet the needs of all learners, several attempts were made. In Lesotho, in the year 2009, the Ministry of Education and Training developed and published the Curriculum and Assessment Policy, aiming at:

- Determining the nature and direction of the national curriculum and its objectives;
- monitoring quality, relevance and efficiency of basic and secondary education;
- aligning the assessment methods to what is taught so that the necessary link between what is taught, learnt and assessed is established;
- addressing the emerging issues pertaining to new demands; and
- practices and life changes of the modern global world. (MoET, 2009:iv)



## Possible Solutions to Challenges of Including Learners with Special Educational Needs in Mainstream Classrooms

The framework aims to cater even for learners with special educational needs, as it highlights relevance and addresses emerging issues pertaining to new demands. According to Raselimo and Mahao (2015:2), in Lesotho, different curriculum reforms have been put into place with minimal success. The aim was to achieve the goals of education for the development of the nation. The latest education reform that is currently used in Lesotho, is the integrated curriculum, which aims at moving away from the subject- and examination-oriented curriculum to a new dispensation where the curriculum is organised into learning areas that reflect real-life challenges (MoET,2009:vii). The integrated curriculum aims at equipping each learner with the necessary competencies to address life challenges. The overall goal is —to ensure access, quality, equity and relevance in the sector of education (Mariga& Phachaka,1993:1).

According to Walton (2011:341), in South Africa, there is no longer a separate curriculum for learners with special educational needs, but rather, all learners follow the same curriculum, with adaptations where necessary. According to Sharma, Loreman and Forlin (2012:15), in Australia, the infusion approach has been established, whereby the curriculum has been modified for students with special educational needs.

In order to respond to the challenge of pedagogic approaches in inclusive schools, more learner-centred methods, including cooperative learning, were implemented in order to help learners with special educational needs develop social skills and circumvent the issue of rote learning, teacher-learner ratio and negative attitudes of learners without special educational needs (Gillies, 2007:7). According to Tileston (2004:40), learners with special educational needs should be mixed with learners without special educational needs; both learners with and without disabilities benefit from cooperative learning.

According to Allan (2003:175), in Australia, teachers are allowed to prepare and share, to develop appropriate methods and materials for lessons, and to network and exchange information. Similarly, it was recommended in Scotland that the system of assessing learners with special educational needs be reviewed and probably discontinued because of its inefficiency, iniquity and failure to meet the needs of the learners. Sharing the same sentiments, the South African Ministry of Basic Education put more emphasis on pre-service tuition in inclusive education; it needs to be prioritised and training should address the pedagogies that have been shaped by conservative philosophies and past practices of segregated special education (Naicker, 2005).

It is also highlighted by Walton (2011:241) that, in South Africa, the Education White Paper 6 envisaged the retention of special schools that would serve the needs of learners with moderate to severe support needs and also serve as resource centres for neighbourhood schools. In that way, the White Paper could foresee that about 500 ordinary primary schools would, over a period of 20 years, be converted into —full service schools, which would be equipped, through staff training, building adaptations, and collaboration, with a variety of support services to meet the diverse educational needs of learners in a community (DoE, 2001:22). Furthermore, courses were redesigned to incorporate more learner-centred methods, including cooperative teaching and learning (Frederickson, Warren& Turner, 2005:198). Nind (2006:118) also postulates that courses incorporated a number of innovative practices to help novice teachers improve their teaching techniques and attitudes towards disabilities. According to Majumdar, McAlister, Eurich, Padwal and Marrie (2006:999), pedagogical practices that are more learner-centred help learners develop social skills and circumvent the issue of rote learning, teacher-learner ratio and negative attitudes of learners about the inclusion of learners with special educational needs.

Implementing active learning whereby teachers and learners are actively involved in their learning and engaged in promoting social change within the education system (Bonner, 2010:178) helps learners with special educational needs enjoy learning. According to Bonner, 2010:178 in South Africa, pedagogy that is used in schools has improved in ways that respond positively to learner diversity. Furthermore, many technology devices were made available to be used by different people with different disabilities and are providing many learners with special educational needs with opportunities to be educated together with their peers without disabilities (Hasselbring& Glaser, 2000:105).

On the other hand, the Lesotho Ministry of Education developed and published a brief policy statement on special education in 1989. The policy statement set seven goals for the education of learners with special educational needs as follows: the integration of learners with special educational needs into the regular school system was to be encouraged; resource centres were to be established in order to assess the needs of such children and to prepare them for integration; learners with special educational needs were to receive a complete primary education and some vocational training; a team of specialist travelling teachers was to assist classroom teachers in their work with learners with special educational needs; and the Ministry of Education and Training would support the rights of learners with special educational needs with regard to access to services in general, and teacher training was to include an introduction to special educational needs.

Reasonable as these goals are, the statement is silent about the relationship between the schools and resource centres. In addition, in 2009 the ministry published the Curriculum and Assessment Policy Framework, which calls for a radical approach to

## **Possible Solutions to Challenges of Including Learners with Special Educational Needs in Mainstream Classrooms**

teaching aimed at a pedagogy shift towards more methods that develop creativity, independence and survival skills of learners. Also, learners should assume greater responsibility for their own learning (MoET, 2009:viii).

According to Hornby and Witte (2010:774), the role of parents in improving educational outcomes for all learners, including those with special educational needs, has been recently recognised by the New Zealand government through publication of the Schooling Strategy (Peters, Johnstone & Ferguson, 2005:149), in which improving parental involvement is one of the priority areas. In South African schools, parents play a significant role in the management of the school, particularly the administration of school fees, by electing and serving on governing bodies.

Despite the implementation of free and compulsory primary education in Lesotho, the Free Compulsory Primary Education Policy is silent about the role of parents in the school, except permitting them to participate in the feeding scheme (Morojele, 2012:38). In 2010, the Lesotho Ministry of Education and Training (MoET) developed and published the Education Act, 2010, which allows parents to be involved in the education of their children (Education Act, 2010:section 4(a)). The act emphasises that a parent should be involved in the development of the disciplinary policies of the school, should cause the learner to receive full-time education that is appropriate for his or her ability, aptitude and age, and is expected to provide the learner with the full opportunity and guidance to complete primary education (Education Act of 2010 Section 4(3) (a) to (d)).

To stimulate more active parental involvement, Sheldon and Epstein (2005:195) propose different levels of parental involvement in the education of their children. Epstein (1986:278) established four forms of parental involvement: the first level of parental involvement is basic obligations; the second level is school-to-home communications; in the third level, parents are involved at school; while in the fourth level, parents are involved in educational activities at home. Later, Epstein (1992:194) expanded and defined six levels for parental involvement in schools: the first level is helping parents with child-rearing skills; the second level is communication between the school and the parent; the third level is involving parents in school-volunteering opportunities; the fourth level highlights involving parents in home-based learning; while the fifth level illustrates how parents can be involved in school decision-making; and the last level is involving them in school-community teamwork.

Various practices were implemented across the world in order to improve the learning environment for successful inclusion. According to Datta (2015:237), in Australia, learners with special educational needs participate in all areas of school life. Australian government education departments established internal support systems, which enable them to help teachers and learners, rather than expecting assistance to be provided in the form of additional staff, resources or services (Westwood & Graham, 2003:4).

Apart from that, each school setting has been made to become more self-sufficient in terms of support provided for both teachers and learners (Westwood & Graham, 2009:4). School-based special education teachers, support teachers and state-wide visiting teacher services for learners with vision and hearing special educational needs are employed. Also, peer tutoring, school service officers and paraprofessionals, who perform the role of classroom aides, working under the supervision of the teacher, are some of the internal support systems developed by individual schools (Westwood & Graham, 2009:11).

Korea built new mainstream schools which were established to accommodate learners with special educational needs; the government employed special education tutors and placed them in mainstream classrooms to strengthen inclusion and the curriculum was modified and supplemented (Kim, 2013:80). Similarly, Ajuwon (2008:12) highlighted that, in Nigeria, when learners with special educational needs were brought to mainstream schools from special schools, teachers from special schools were allocated to mainstream schools and both general and special education teachers plan together in order to meet the needs, interests and aptitudes of each learner.

According to Stubbs (2008:2015), in South Africa, inclusive schools are characterised by ubuntu, the African philosophy that says, I am because we are, or I am fully human in relationship with others. This emphasises cooperation among people and the sharing of whatever is available. Notably, the schools did not have all the resources they needed to become inclusive; they also did not use a lack of resources as an excuse of not being inclusive; their resource base grew as they gradually became more inclusive.

### **RESEARCH METHODOLOGY AND DESIGN**

This intellectual piece adopted participatory action research (PAR) as a methodological approach, which was a means of operationalizing the critical pedagogy (CP) and critical discourse analysis (CDA) was used in analyzing the data. Included in the study were the school principal, four teachers, three parents, two learners with special educational needs and one learner without special educational needs, all from one school in which the study was conducted. The reason for choosing all co-researchers from one school was to contextualize challenges of learners with special educational needs in the mainstream classrooms. Participatory action research (PAR) can be referred to as an alternative to scientific and traditional social research, as it moves an investigation from a linear cause and effect perspective to a more participatory framework that considers the context of people (Marshall & Rossman, 2006:480). PAR allows the participants to be actively involved in solving their problem.

## Possible Solutions to Challenges of Including Learners with Special Educational Needs in Mainstream Classrooms

Co-researchers become actively involved in the quest for ideas and information to guide their future actions, rather than being passive (Whyte, 1991:21). According to Telford, Koch and Kralik (2006:459), collectively, the researcher and the co-researchers engage in social investigation and take action with the purpose of improving a problem or situation. PAR recognizes the need for people being studied to participate in the design and conduct of all phases of any research that affects them (Vollman, Anderson & McFarlane, 2004:129). Thus, PAR is a process of investigating a problem, using social methods whereby the affected people are involved in posing and solving their problem. In PAR, co-researchers, together with the researcher, actively participate throughout the research process. The definition of Kearney, Wood and Zuber-Skerritt(2013:115) that PAR involves the participants as equal partners in all phases of the research “designing, implementing, acting and evaluation” will be used in this study.

PAR was a methodological approach of choice because it enables the stakeholders to take ownership of the process of transforming their own social reality (Cargo & Mercer, 2008:327) and share their experiences with regard to inclusion of learners with special educational needs in the mainstream classrooms. In PAR, the researcher is free to include people who face and are affected by the problem at hand.

The researcher acknowledges that the alliance of individuals with varied knowledge, skills and expertise advances the sharing of knowledge development. Stakeholders in education help advance a more compelling and a clearer agenda for social research by incorporating ethical concerns and projects for social transformation into educational research and practice (Kompridis, 2006:390). PAR is suited for research with side-lined individuals (MacDonald, 2012:40). However, in this study, the focus was on learners with special educational needs who are regarded as a side-lined group. PAR acknowledges people with special needs; hence it was regarded a suitable methodological approach to conduct this study of challenges of learners with special educational needs in Lesotho mainstream classrooms. PAR, as a methodological approach, was followed because it recognizes the voices of oppressed and marginalized people (Mahlomaholo, 2009:225). It commits the researcher to work with members of communities that have been oppressed and exploited in an effort to bring about social change (Nkoane, 2012:100).

### PRESENTATION OF DATA AND DISCUSSIONS

Data were presented under the following main intellectual elements: collaborative teaching; curriculum adaptations; learner-centered approaches and parents as active members of the school community. These constructs form the foundation of solving the challenges of including learners with special educational needs in the mainstream classrooms.

Collaborative teaching as a solution towards teacher tuition Collaborative teaching, which is commonly called team teaching or cooperative teaching includes two or more teachers working as a team and educating learners in a classroom (Villa, Thousand & Nevin, 2008:5). In collaborative teaching, teachers share responsibility in planning, teaching and evaluation. It is not one teacher teaching, followed by another one teaching a different subject, or one teacher teaching while the other is marking (Villa et al., 2008:6). According to Friend and Cook (1992:14), collaborative teaching in inclusive classrooms includes interaction with colleagues, paraprofessional, parents and others, where all members are equal. Collaborative teaching and implementation of peer education programmes were found to be solutions towards the challenge of teacher tuition and pedagogical practices. The best practice was seen to be placing special education teachers in regular classrooms to work collaboratively with general teachers in order to strengthen inclusion.

During our discussions, the co-researchers suggested that teachers, both special and general teachers, should work cooperatively, to solve the challenge of teacher tuition:

**Mr Kokolia** made the following suggestion: I suggest that special educators and general teachers work together so that they can exchange ideas on how to help learners with special educational needs in an inclusive setting.

**Mrs Lebusa** held the view: I think not only teachers should be involved in the learning process, I suggest that even the community members or parents should be used as resource persons in classes.

**Ms Tsebo** added: Teachers can sit and do their lesson plans together after school.

**Mrs Tau** emphasised: Teachers can also read and search for best ways of including learners with special educational needs. I mean, even common sense tells you that a teacher can write with bigger letters for learners who can partially see.

The excerpts of Mr Kokolia and Ms Tsebo suggest that teachers work together. The idea raised by Ms Tsebo that teachers can sit and do their lesson plans together after school is understood to mean that all teachers should stay after school and do their lesson plans together, rather than doing them individually. It can be portrayed from this response that Ms Tsebo might be aware that teachers do not plan their work together. Mr Kokolia's term special educators is understood to mean teachers trained in special education and general teachers is understood to mean teachers who are not trained as special teachers.

In this school, it is normal to refer to some teachers as special teachers and others as general teachers. The phrase “teachers work together”, in this context, is understood to mean collaborative teaching. The phrase “so that they can exchange ideas on how to help learners with special educational needs in an inclusive setting” is understood to mean that both special and general teachers

## Possible Solutions to Challenges of Including Learners with Special Educational Needs in Mainstream Classrooms

can help each other on how best learners with special educational needs can be included in mainstream classrooms. Similarly, Mrs Lebusa's reference calls for collaborative teaching. He aspires for all stakeholders to be included in the teaching of learners. The phrase "not only teachers should be involved in the learning process" is understood to mean that people other than teachers should be involved in the process of learning. The statement, "I suggest that even the community members or parents should be used as resource persons" is understood to mean that parents and the community members should also be used in the teaching and learning process as resource persons. It is normal in this school that teachers work individually. Each teacher plans, implements and assesses the learners alone; hence members of the research team suggested collaborative teaching. They might be aware that the individualised working of teachers does not help in an inclusive setting and that no man is an island.

Another solution that was brought forth was curriculum adaptations as a solution towards curriculum as a challenge. Curriculum adaptations, according to Makoelle (2016:28), are permissible changes in the curriculum that allow learners equal opportunity to access the curriculum. The curriculum can be adapted differently: how instruction is delivered; how the learner responds; the time allocated for the completion of the task; the level of difficulty; the level of support; the number of items to be learnt; the degree of participation; and materials and instruction in order to meet the needs of learners (Okumbe&Tsheko, 2010:6). This means that a learner with special educational needs actively participate in all activities with other learners in the classroom, but with different objectives. For example, a learner may express their thoughts through drawing, rather than in writing. Using the same curriculum for all learners, with adaptations where necessary for learners with special educational needs, was indicated as the solution towards curriculum as a challenge.

In the same manner, during our discussions, members held the opinion that the same curriculum should be adapted in order to best suit each learner.

**Mr Pule** stated: The issue of curriculum is simple because as long as the teacher knows the needs of the learners and the content to teach, then curriculum can be adapted to meet each learner.

**Mr Andreas** held the view: Teachers should design the class work according to the abilities of each learner.

**Mrs Ntsonyana** also believed: If teachers can be patient and design the work according to the needs of learners, then even learners with special educational needs can enjoy learning.

The references of Mr Pule and Mrs Ntsonyana emphasise the needs of the learners. In this context, learners' needs are understood to mean the strengths and weaknesses of learners, while Mr Andreas talks about the abilities of the learners, where abilities of each learner is understood to mean what learners are capable of doing. The phrase "curriculum can be adapted" is understood to mean that curriculum can be modified to suit all the learners.

Mr Pule's assertion that teachers should adapt the curriculum to meet each learner's needs, shows that he might be aware that, in this school, teachers do not make adaptations to the curriculum; as a result, the needs of other learners are not met. It is normal in this context that the curriculum is presented as it is, without any alterations made to it. Similarly, the phrase "teachers should design the class work according to the abilities of each learner" demonstrates that Mr Andreas might also be aware that class work is not designed according to the abilities of the learners. Therefore, when class work is not designed with reference to the abilities of each learner, some of the learners might be oppressed or excluded. In the same manner, the assertion of Mrs Ntsonyana that if teachers can be patient and design the work according to the needs of learners, then even learners with special education can enjoy learning, denotes that she might be aware that teachers are not patient. This declaration may also indicate that Mrs Ntsonyana might be aware that learners with special educational needs do not enjoy learning. The fact that learners might not enjoy learning is depicted from the phrase "even learners with special educational needs can enjoy learning".

When teachers have developed critical consciousness about learners with special educational needs, they are inclined to treat them equally, both with and without special educational needs. They are able to alter the curriculum in such a way that it meets the needs of different learners. Above all, they treat each learner with care and respect. It therefore says when teachers are involved in the development of curriculum, they can feel respected.

Learner-centred approach to learning is also seen as solution towards pedagogical practices. Learner-centred approaches to teaching encompass methods that focus on learners, rather than on teachers (Cornelius-White, 2007:120). In order to overcome the challenge of pedagogic approaches in inclusive schools, more learner-centred methods are stressed. In the same way, during our meetings, pedagogical approaches that are more learner-centred, including cooperative teaching-learning and peer tutoring, were suggested as solutions towards pedagogical approaches:

According to **Mr Pule**: Time has changed, teaching is no more teacher-centred, and therefore teachers should stop acting as if they are the only ones who know. For example: when I first taught, I told my learners that I did not come to teach them, but we are going to teach each other.

## Possible Solutions to Challenges of Including Learners with Special Educational Needs in Mainstream Classrooms

**Mrs Moyo** also suggested: Teachers can be innovative and come up with other ways of meeting the needs of all learners, not only those with special educational needs. Teachers should use different approaches so that all learners fit in the mainstream classrooms.

**Ms Nthabeleng** added: This issue of pedagogical approaches takes us back to the fact that we should know the needs and abilities of the learners. When teachers know the needs of all the learners, then he or she can use teaching and learning approaches that meet their needs.

Mr Pule's excerpt "[t]ime has changed, teaching is no more teacher-centred" is understood to mean that he is aware of methods other than teacher-centred methods that may be used to teach. "[T]eachers should stop acting as if they are the only ones who know" is understood to mean that Mr Pule is aware that teachers are using teacher-centred methods, whereby they are the only active members in the learning process. The phrase "should stop" sounds authoritative, as Mr Pule is one of the special teachers in the school. It sounds as if this teacher is dictating to other teachers what to do. It is normal in this school that the special educators are the ones who know best about inclusion. The example that Mr Pule gave, "I told my learners that I did not come to teach them, but we are going to teach each other", depicts that this teacher might be aware of learner-centred methods that were not used in the school.

Teacher-centred methods treat learners as passive participants in the learning process. Moreover, the citation by Mrs Moyo, the principal, that "teachers can be innovative" is understood to mean that teachers can come up with new ways to avoid teacher-centred methods. Mrs Moyo, as the overseer of the school, might be aware that teachers in this school are not innovative and are still oppressing learners, using traditional teacher-centred methods. The saying "meeting the needs of all learners, not only those with special educational needs" gives an idea that most of the time, when talking about inclusive education, people think of learners with special educational needs only. The emphasis on "not only those with special needs" confirms that teachers might concentrate on learners with special educational needs only and, as a result, exclude learners without special educational needs.

In corroboration with what Mrs Moyo said, Ms Nthabeleng postulated that if teachers knew the needs of all learners, they could use methods that meet their needs. This response suggests that different methods will be used; as a result there will be a shift from teacher-centred to learner-centred methods. This response shows that Ms Nthabeleng too might be aware that, in this school, the needs of the learners are not considered when choosing the methods of teaching; as a result, the needs of other learners are not met. When learners with special educational needs are treated in a humane way, they are allowed to actively participate in learning.

Parents as active members of the school community are seen as possible solution to the challenges of including learners with special educational needs in the mainstream classrooms. In many countries, the challenge of parental involvement was solved by allowing parents to be actively involved in schools. The significant role parents play in most South African schools, is in the management of the school, where they serve on governing bodies. The team members thought it was of utmost importance for parents to take a more active role than just serve in the management of the school:

**Ms Tsebo:** I suggest that the school should educate parents on how to cooperate with teachers for the success of their children.

**Mrs Ntsonyana:** I suggest that we form a teacher-parent association so that teachers and parents can work collaboratively for the benefit of the learners.

**Ms Lebo,** on the other hand, suggested: During parent's meetings or open days parents should always be reminded that learners differ, therefore even their performance differs.

**Mrs Ntsonyana:** I suggest that there should be a school policy that clearly states how parents should be involved in the education of their children.

**Mrs Moyo** put forward: Parents should sign every home work given to their children as a proof that the child was guided to do the homework. The suggestion of Ms Tsebo that the school should educate parents on how to cooperate with teachers is understood to mean that the school should train parents to collaborate with teachers in the education of their children. This is further strengthened by Mrs Ntsonyana's suggestion that "teachers and parents can work collaboratively for the benefit of their children". Ms Tsebo might have made her assertion because she might be aware that parents do not cooperate well with the teachers. The phrase "for the benefit of the learners" reveals that Ms Tsebo might be aware that learners are affected by parents who do not cooperate with teachers.

The act of parents who do not work collaboratively with teachers negatively affects the academic performance of their children. In corroboration with Ms Tsebo's assertion, Mrs Ntsonyana's excerpt that there should be a teacher-parent association so that teachers and parents can work collaboratively for the benefit of the learners is understood to mean that learners benefit when teachers and parents work collaboratively. Mrs Ntsonyana might have seen that learners in schools where there are teacher-parent associations benefit from the collaboration of parents and teachers. In addition to these references, Ms Lebo's citation that "there should be a school policy that clearly states how parents should be involved in the education of their children" is

## Possible Solutions to Challenges of Including Learners with Special Educational Needs in Mainstream Classrooms

understood to mean that there should be a blue print of what and what not is expected of parents in this school. This statement indicates that there might be no document in this school with regard to how parents should be involved.

### CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study, the recommendation with regard to teacher tuition is that the initial teacher tuition institutions should prepare all teachers for inclusive education. The case of separate teacher programmes, where some teachers are prepared for special education and others are prepared for general education only, should be revisited. Important also is the recommendation that student teachers should be allowed to interact with special educational needs during their tuition. They should be exposed not only to theory, but also to practical ways of putting inclusion into practice. For teacher apprentices who are doing their work-integrated learning (WIL), it is therefore recommended that teachers in the general and special streams should work collaboratively with them. This could be realised through an exchange of ideas on how best learners with special educational needs can be included in mainstream classrooms. In-service programmes and workshops are also recommended for teachers in order to improve their skills and knowledge on inclusive 143 education. Similarly, the study recommends that teachers should work with other teachers from different places to build collaborative networking.

It is recommended also that teachers, as the implementers of the curriculum, be the developers of the curriculum. The curriculum should be decentralised so that it can respond to the real-life needs of the learners, as emphasised in the Curriculum and Assessment Policy (MoET, 2009:9) that education programmes should include cultural activities and values compatible with learners' development. All learners should be presented with the same curriculum, with some adaptations for learners with special educational needs where necessary. It is also recommended that other modes of assessments should be used, apart from the paper-pen assessments that are usually used. The study recommendations are informed by the Curriculum and Assessment Policy, Lesotho (MoET, 2009:vii), which discourages a one-size-fits-all assessment strategy.

Based on the findings of the study, the study recommends that learners should contribute to the decisions about curriculum. According to Kincheloe (2005:328), the learners' knowledge, experiences and realities of the context where learning takes place, should be considered when framing the curriculum. It is also recommended that real materials should be used in the learning process (Aliakbari & Faraji, 2011:80). Following this, the study recommends that curriculum should be flexible, leaving space for adaptations based on the needs and interests of the learners.

Parental involvement is highly recommended as it was found important. Schools where parents and the entire community are allowed to fully participate in the education system are another condition necessary for inclusive education. It is recommended that schools should take the initiative of educating parents about inclusion, so that they are seen as inclusive parents. It is also recommended that the community be actively involved in the education of learners. Communication among the stakeholders is very important. According to Degener (2001:55), creating a dialogic environment where all stakeholders have an equal right to speak and question, empowers them. An environment where parents and the community are tolerated, is recommended. In final consideration, it is crucial to recommend that the school form a stakeholders' committee, so that both the school and the society work interdependently and interconnected towards inclusive environment. The stakeholders' committee can also constantly follow up whether the school is leading to full inclusion. In the same way, programmes like teacher-parent associations are recommended (Will, 1986:415).

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## Newly Discovered Works of Ali Safi Kashifi Hirawi: “Sharh-i Masnavi”, “Ghazal-i Ali Safi”, “Tuhfatu-l-Hani”



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**ABSTRACT:** This article is dedicated to the works of Fakhriddin Ali Safi Hirawi ibn Husayn Waz Kashifi (d. 939 / 1532-1533), a representative of the Herat Scientific and Literary School. The study analyzes significant issues in the field of textual and literary sources, such as the scientific and literary heritage of Fakhriddin Ali Safi Kashifi Hirawi, the number of works he wrote and the separation of them from Ali Safi's pen, as well as clarifying the authorship of the works of father and son Kashifi.

The article also includes new works of the author from the Tashkent manuscripts – “Sharh-i Masnaviy-i ma’naviy” (“On the spiritual commentary of Masnaviy-”), “Tuhfa-i Honiy” (“Gift to Honiy”), “Ghazal-i Ali Safiy”. (“Ghazal of Ali Safi”). These works are manuscripts of works of Ali Safi Hirawi Kashifi, which are still unknown to science, and the article provides the first scientific information about these works and their manuscripts.

These findings show that the number of Fakhriddin Ali Safi's works is not limited to five or six, that the artist has a “Devon”, and that Ali Safi followed in the footsteps of his father, Mawlana Husayn Waz Kashifi.

**KEYWORDS:** Manuscripts, sources, “Sharh-i Masnavi” – “Lubb-i lubob”, “Kitab-i Ma’navi fi intihob-i al-Masnavi”, “Tuhfa-i Khaniy” (“Gift to Khaniy”), “Ghazal-i Ali Safiy”, “Devon” (Collection of Gazelles), faith, ethics, mysticism, gnosis.

### INTRODUCTION

Mawlana Fakhriddin Ali Safi Kashifi Hirawi (d. 939 / 1532-1533), described as a mature *manoqibnavis*, “the narrator of the Naqshbandi-Ahroriyya leech of the Khojagon sect” [1. 353], is truly one of the rare creative writers of his time.

The work of Fakhriddin Ali Safi Kashifi Hirawi is significant in that it covers various fields of secular and religious sciences. Ali Safi's works, in particular, his work “Rashahot aynu-l-hayat” (Then in the form of “Rashahot”) (“Drops of the spring of life”) reflect the ideas of educating a person with high qualities through the scientific heritage of our ancestors, promoting healthy thinking and pure morals through the foundations of our religion.

Ali Safi mentioned his name in the introduction to all his works as follows: Known by the pseudonym “Safiy” - *Ali ibn Husayn Waz Kashifi* [2] (علي بن الحسين الواعظ الكاشفي المشتهر بالصفى) [3].

It is known that the artist's name is “Ali” (علي), and his father's name is “Hussein Waz Kashifi”. (الحسين الواعظ الكاشفي). Ali Safi's proud nickname (quality, title) is “Fakhriddin” (فخرالدين). We see that the manuscripts of some of the works of the artist were originally given the nickname “Safiyuddin” (صفي الدين) [4]. “Safiy” (صفي) is a pseudonym that he himself emphasizes in the preface of all his works, and the Arabic word means “pure, clean and chosen”.

### THE MAIN FINDINGS AND RESULTS

The singular form of this word is “Safiy” (صفي), the plural is “Asfiyo” (أصفياء) [5]. For example, Ali Safi's “Rashahot” at the beginning of his nickname in both forms, that is, at the beginning of the sentence “al-mushtahar bi-s-Safiy” (المشتهر بالصفى) and at the end of the sentence “and sharrafahu bi-kamal-i mutaba'a-at-i asfiyoihi (أصفياه) [6] We see that he used the art of *tajahul-i orifona*, that is, “the one who knows makes himself ignorant.”

Ali Safi's father was Husayn Waz Kashifi. His full name was Mawlana Kamaluddin Husayn ibn Ali Waz Kashifi Sabzavari, so Ali Safi's grandfather's name was “Aliy”. We are accustomed to saying and writing the name “Aliy” (علي) in modern literary

## Newly Discovered Works of Ali Safi Kashifi Hirawi: “Sharh-i Masnavi”, “Ghazal-i Ali Safi”, “Tuhfatu-l-Hani”

Uzbek as “Ali” both in speech and in writing. However, “Aliy” is the last letter of the name “y” and it is not correct to say “Ali”. This is typical of the dialect, which is customary in oral speech, but it is not allowed in literary, especially classical Uzbek[7].

It is known that Fakhruddin Ali Safi is the son of Mawlana Husayn Waz Kashifi, a leading representative of the scientific and literary school of Herat.

Alisher Navoi wrote about Mawlana Wazir Kashifi as “zu fununlik” (ذو الفنون), which means “scholar of the time”. Ali Safi was envious of his father’s lifelong creative career. For this reason, first of all, he had a positive scientific and creative competition with his father Mawlana Hussein Waz Kashifi, as well as with his contemporaries - the prolific and talented teachers of the Herat Scientific and Literary School Abdurahmon Jami and Alisher Navoi.

It is narrated that the poet was given the nickname “Safiy” (الصفى) by his teacher Mawlana Abdurahman Jami[8]. In fact, Fakhruddin Ali chose the nickname “Ziya (Uddin)” (ضياء) and when he told Abdurahman Jami about it, Jami responded as follows: “Give your nickname “Ziya” ضياء to my son (Yusuf - B.U.) - we will call him Ziyauddin Yusuf and give yourself the nickname “Safiy”.

In our opinion, Mawlana Jami chose this nickname from among the blessed names attributed to the Prophet Muhammad (peace and blessings of Allaah be upon him) in the intention and hope of “... and be blessed with him” (---و يتبرك به) [9]. This is because in Daloi-l-khayrat (Signs of Goodness) there are 203 “Asmou-l-husno” (اسماء محمد صلى الله عليه وسلم) of the Prophet Muhammad (peace and blessings of Allaah be upon him). that is, they are given beautiful names, and the 31st of these blessed names is “Safiy” (صَفِيّ) [10], which means “pure, clean.”

From this day on, Fakhruddin Ali began to give his works a nickname “Safiy’ (الصفى) (signature - B.U.), and the artist became known by this nickname [11].

We see only this pseudonym in all the poems of the artist - ghazals, epics, poems, pamphlets, manoqib and tazkira. Even in many of the rubai poems in “Rashahot”, one of Ali Safi’s largest works, this pseudonym is used.

The place where Ali Safi lived and worked, and where her dead and buried husband was also Herat, received the ratio “*al-Hirawi*” (الهروي). We preferred to mention the creator as ‘Kashifi Hirawi’ so that he could be easily distinguished from his father.

In some foreign descriptions, for example, in the “TÜRKIYE YAZMA ESERLARI TOPLU KATALOGU” (“Collection of Turkish Manuscripts”), Ali Safi mistakenly mentions “*al-Bayhaqi*” (البيهقي), “*al-Wali*” (الولي) [13].

Ali Safiy is a prolific creator. The following works have so far been recognized as belonging to the writings of Ali Safi: “Rashahot aynu-l-hayat” (“Drops from the spring of life”), “Latayifu-t-tawaiif” (“Wonderful words of grace”), “Anisu-l-arifin” (“Companion of the wise”), “Hirzu-l-amon min fitani-l-zamon” (“Measures of Survival to Get Rid of the Conspiracies of the Age”), “Farasnomia-i Safiy” (“Safiy’s Epic on the Horse”), “Odobu-l-ashob” (“Book of Etiquette of the Brotherhood or Etiquette for the Brothers”), “Lavoihu-l-Qamar” (“Views of the Moon”), “Manzuma-i Mahmud-u Ayoz” (“Poetic Epic of Mahmud and Ayaz” ), “Asror-i Qasimiy”[14].

According to the Tajik researcher A. Saidmukarram, Ali Safi has the following works: “Mahmud and Ayaz”, “Rashahot ayn al-hayat”, “Latayif at-tawaiif”, “Anis al-Arifin”, “Hirz al-amon min fitan az –zaman”, “Asror-i Qasimiy”.

In his research, A. Saidmukarram listed only these six works of Ali Safi [15].

In the main fund of the Academy of Sciences of the Republic of Uzbekistan there is a manuscript “Asror-i Qasimiy” (“Secrets of Qasimi”). We got acquainted with this work and it turned out that this work did not belong to Ali Safi, but to the father of the artist, Mawlana Husayn Waz Kashifi.

Tajik scientist M. In his research, Nematov provided information about another work of Ali Safiy, ie “Lugat-i Ali Safiy” (“Dictionary of Ali Safiy”) [16].

Unfortunately, in the fund of the Academy of Sciences of the Republic of Uzbekistan, and in general in the Tashkent manuscripts, there are no manuscripts and lithographs, as well as a modern edition of this work, ie “Lugat-i Ali Safiy”. According to the catalog of Oriental Manuscripts of the Academy of Sciences of Tajikistan, this work - the manuscript “Lugat-i Aliy Safiy” is stored in the Fund of Oriental Manuscripts of the Academy of Sciences of Tajikistan and may be an original copy of the author. Since we have the signature of Ali Safi in our personal archive, we hope that in the future we will study this work carefully and clarify this issue.

Recently, we were able to identify two new manuscripts and a ghazal of Ali Safi Kashifi Hirawi that have been hitherto unknown. True, these findings are small-volume works. However, it is important for us that these new findings are still unknown to science and have not been studied at all in the field of source studies and textual studies. One of these manuscripts is the author’s “Sharh-i Masnavi” (Commentary on the Masnavi).

The full title of this work is Lubb-i lubob-i Masnavi (لب لباب مثنوى). Tajik researcher A. Saidmukarram said that the work was based on information provided by the Iranian scholar S. Nasifi, namely, the Tehran edition published by the scholar under the name “Lubb-i lubob”, and that “Lubb-i lubob” was the work of Hussein Waz Kashifi [17].

## Newly Discovered Works of Ali Safi Kashifi Hirawi: “Sharh-i Masnavi”, “Ghazal-i Ali Safi”, “Tuhfatu-l-Hani”

However, in the records of the main fund of the Institute of Oriental Studies of the Academy of Sciences of the Republic of Uzbekistan, another work was attributed to Hussein Waz Kashifi – “Kitab-i Ma'naviy fiy intixob-i al-Masnaviy” ( کتاب المعنوی فی ) (انتخاب المثنوی). Based on these records in the card index, both works belong to the pen of Mawlana Hussein Waz Kashifi.

We got acquainted with about ten manuscripts of “Lubb-i lubob-i Masnaviy” ( لب لباب مثنوی ) available in the fund of the Institute of Oriental Studies of the Academy of Sciences of the Republic of Uzbekistan. As a result, it became clear that a large part of this work actually belonged to the pen of Mawlana Husayn Waz Kashifi, but the last part of the work was written by the scholar's son Ali Safi Kashifi Hirawi. We assume that the author died without being able to complete this work, which was later completed by his son Ali Safi.

We intend to conduct a more in-depth study in this regard.

The second find in the pen of Ali Safi is the manuscript of the work “Tuhfa-i Honiy” (“Gift to Honiy”), the only manuscript copy of which is kept in the manuscript fund of the Institute of Oriental Studies of the Academy of Sciences of the Republic of Uzbekistan H. Suleymanov № Q.2621 / XI inv[18].

In the preface of the work, there is a clear statement that the author is “Ali ibn Muhsin (Husayn - B.U.) al-Waz al-Kashifi al-mushtahar bi-s-Safiy” (علي بن محسن الواعظ الكاشفي المشتهر بالصفى).

“Tuhfatu-l-Hani” together with “Asror-i Qasimi” was written on a piece of paper in a simple Nasta'liq letter in 1253/1837. According to the manuscript, the secretary of the manuscript is *al-Raji Muhammad Bukhari Hijri* (الراجي محمد بخاري). The work consists of a total of 18 pages (109a-127b). The size of the manuscript was 25x16cm.

The work begins after “Basmala” as follows:

الحمد لوليه و الصلوة و السلام على نبيه و صحبه اما بعد جنين كويد فقير بى بضاعت و حقير خالى از استطاعت علي ابن محسن الواعظ الكاشفي المشتهر  
---[19. 109]بالصفى أیده الله باللطف الخفى كه ---

(Translation: Praise be to Allaah, the True Lord of Praise. May blessings and peace be upon His Prophet Muhammad and his Companions. Then: Ali ibn Muhsin al-Waiz al-Kashifi, known as Safi, who was weak, and whose righteous deeds were few, may Allaah use him with His secret grace! - say,...)

According to the author's introduction in the introduction to the work, Mawlana Muhsin (Husayn - B.U.) preacher Kashifi hijr. In 910/1504 he finished writing his work “Asror-i Qasimiy” (اسرار قاسمى). An autographed copy of this work was in the hands of his son Ali Safi without being copied in white. After the death of his father, he wrote a new work as a continuation of the work and named it “Tuhfatu-l-Hani”.

“Tuhfatu-l-Hani” consists of 20 chapters. In each chapter, the author talked about different things, their properties, benefits and harms, healing properties, how to make ointments from them and how to use them.

The work concludes with these sentences:

تمام شد رسالهء تحفة الخاني باذن الملك الوهاب ، كاتبه الراجي محمد بخاري هجرى والله اعلم بالصواب [19.126]

(Translation: “Tuhfatu-l-Hani” ended with the permission of al-Malik (King), al-Wahhab (Allah, Who bestows many blessings on His servants). Secretary: ar-Raji Muhammad Bukhari is Hijri. Allah knows best! )

We are currently working on a scholarly commentary on the text and translation of “Tuhfa-i Hani”.

Recently, while researching a collection of bayaz based on the poems of Herat poets, he came across a ghazal by Ali Safi [20. 118]. №1023 inv. A ghazal of the poet under the title “Ghazal-i Mawlana Fakhruddin Ali mutakhallas ba-Safiy” (غزل مولانا فخر ) (الدين علي متلخص بصفي) is given in the margins of pages 140a-140b of “Majmu'a-i bayoz” (“Collection of bayoz (s)”) kept under the number it begins with the following verses:

*Iloho, dar diyor-i mehnatam hashmat panohe deh,*

*Zi dardu dog'-i ishqam toj-u taxt podishohe deh!..*

(Synopsis: O God, grant me glorious peace in my land of life,

Give a crown and a sultanate to my love, which is stained from my heart! ..)

The ghazal ends with the following verses:

*Safiy-ro zer-i bor-i minnat-i mol hama mafkan,*

*Zi-mushkin tarra-i ba-hubb-i siyohshor xatm-i shohiy deh!*

(Synopsis: O God! Do not leave Safi crushed under the burden of grief, have mercy on him, In honor of your mushkin (difficult) love, give the Royal Label!)

This gazelle consists of a total of eight bytes. In our opinion, it is taken from Ali Safi's “Devon”.

This poem is written in the style of prayer. is very meaningful. There are also hints of mystical symbolism in the ghazal. This ghazal proves that Ali Safi was indeed a talented poet. After all, Alisher Navoi in his work “Majlis an-nafois” acknowledged the poetic talent of Ali Safi and gave an example of a ghazal matla, ie the first verse of the author:

## Newly Discovered Works of Ali Safi Kashifi Hirawi: “Sharh-i Masnavi”, “Ghazal-i Ali Safi”, “Tuhfatu-l-Hani”

مولانا صفي – بسر مولانا حسين واعظ است و بغایت جوانی درویش وش و دردمند و فانی صفت است و دو بار بجهت شرف خواجه عبید الله از هرات بدار الفتح سمرقند رفت، کوبند که نجا بشرف قبول ممتاز و سعادت ارشاد و تلقین سر افراز کشته بخراسان آمد، و طبعش خوبست، این مطلع ازوست: بال لب لعل و خط غالیه کون آمده یی عجب اراسته از خانه برون آمده یی

(Translation: “Mawlana Safi is the son of Mawlana Husayn Waz (Kashifi - B.U.). And he is a very dervish and fanatical, dardmandsheva young man. Tab'-i khubdur, this Matla is for him: «Bo lab-i la'l va xatt-i g'oliya kavv omadaye, Ajab orasta az xona berun omadaye»)[21].

According to “Rashahot”, Ali Safi conquered the following continent in honor of Mawlana Abdurahman Jami:

**Continent.** *Du kavkab-i sharaf az burj-i Sa'd millat-u din,  
Tulu' kard-u bar omad basoni durri sadaf.  
Az-on yake ba-ziyo gasht bayt-i orif-i Jom,  
Az-in haziz va bol-i Safiy shud avj-i sharaf.*

(Synopsis: The two stars of honor shone from the happiness sign of the nation and religion, as if from the pearl of Dur.

One of them was the light of the house of Jam Arif,

From this portion, Safi's wing reached the pinnacle of honor)[22].

From these verses it is clear that the poet was satisfied with his destiny and proud of his success.

Here is a comment: did Ali Safi not compose “Devon” from his poems?! After all, if all the ghazals, poems, rubais, continents, and individuals of the artist are combined, it will be a perfect “Devon”!

Indeed, in our weak opinion and conjecture, it is impossible for a poet who has written so many poems not to compose Devon, that is, not to have Devon.

Unfortunately, Ali Safi's “Devon” is still missing. An important task for Gal is to find that rare Devon of the artist.

## CONCLUSION

Fakhruddin Ali Safi Kashifi Hirawi, known in his time as a mature representative of the Herat scientific and literary school, is a creator who has left a rich scientific and literary heritage. Unfortunately, at the beginning of the last century, there was a misunderstanding of manuscripts. That is why so many manuscripts have been buried and burned, as a result of which the rare written heritage of our ancestors for a thousand years has disappeared. Fakhruddin Ali Safi's works are written in a unique style, with high literary skill, in the form of hundreds of manuscripts, and the fact that these copies have survived to the present day is one of the great blessings of God. One of the important tasks of our source studies is to convey the works of Fakhruddin Ali Safi Kashifi Hirawi to our people, who are thirsty for knowledge and enlightenment, by deeply studying the works that reflect the religious, moral, mystical and mystical views.

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## Prospects and Challenges for Women Entrepreneurs in India



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**ABSTRACT:** In 2020, India ranked 63rd out of 190 nations in Doing Business. With a ranking of 63rd, India has raised 79 places in the five years between 2014 and 2019. In 2018, the startup ecosystem grew at a rate of 15% year over year, while the number of incubators and accelerators expanded by 11%. (World et al., 2021) Significantly, the number of women entrepreneurs stood at 14 percent, up from 10 percent and 11 percent in the previous two years. Over the course of the year, startups in the country were able to create an estimated 40,000 new positions, bringing the overall number of jobs in the start-up ecosystem to 1.6-1.7 lakh. The purpose of this research is to investigate the challenges that women entrepreneurs in India encounter. (Delhi, n.d.) For this purpose, the paper considers the opinions of women entrepreneurs and the Government Schemes supporting them along with the importance of Women Entrepreneurship for Empowerment. Objectives of the study: The objective of the present study is to analyze the challenges and schemes promoting women's entrepreneurship in India. Methodology: For analyzing the objective, the present study has fully relied on secondary data which was collected from census reports, records, and journals. Results: This paper concludes that even though the educational and economical struggles are there, the tribal women entrepreneurs are emerging in recent decades with the economical supportive schemes of the Government and they are raising their society too.

**KEYWORDS:** Women, Education, Entrepreneurship, Census, Literacy rates, India.

### INTRODUCTION

The "Startup India" campaign of the Government of India recognizes entrepreneurship as an increasingly important strategy to fuel productivity growth and wealth creation in India. The study focuses on the hurdles that women entrepreneur's face, as well as their influence on their health, socioeconomic security, and family wellness outcomes, offering a comprehensive assessment of women entrepreneurs and the ecosystem in which they thrive. "Women in India are leading a cultural revolution developing their enterprises, paving the path for future aspiring women entrepreneurs," stated Vidya Shah, Executive Chairperson of the EdelGive Foundation (Feed et al., n.d.). Their contribution to the country's economic growth, job creation, and industrialization is important." Indian women have bucked centuries of custom to carve out a place in the economic world. Their corporate employment has given them with financial stability as well as the opportunity to demonstrate their leadership skills. However, entrepreneurship propelled her forward and gave her the confidence to set an example for the rest of the globe. There are currently about 8.05 million women entrepreneurs in India. It accounts for roughly 14% of the Indian corporate sector. (Feed et al., n.d.)

On paper, things appear to be forward-thinking and optimistic. But, in truth, these figures only tell part of the tale. Unfortunately, women-owned businesses remain in the minority and suffer greater challenges than their male counterparts. Continue reading to learn about some of the most common issues experienced by women entrepreneurs in India, as well as solutions to these issues.

### REVIEW OF LITERATURE

Entrepreneurship is critical to any economy's long-term viability. When successful, entrepreneurial initiatives aid in the advancement of a society's technological, economic, and socio-cultural environment. By opening up new markets and services, they create new employment prospects and riches. In stagnant economies, new goods and more efficient manufacturing

## Prospects and Challenges for Women Entrepreneurs in India

techniques promote productivity and competition, contributing to growth and improved quality of life. It also adds to increased economic independence and agency for individual female entrepreneurs (Halabisky 2017). (Feed et al., n.d.)

Women's entrepreneurship has been considered an important instrument in achieving equity in the form of a better quality of life for women in the developing world. Empowerment associated with female entrepreneurship changes a woman's position in the family unit, her community, and society, not only through financial independence but through her acquisition of a position in the national workforce traditionally left to men in developing and underdeveloped regions (Shah 2013).

Women have been pushed, rather than drawn, toward entrepreneurship out of a desire to support their children or family, most often when a male guardian has been unable to provide the same, according to historical data. Younger women are now willingly opting to start their own businesses, with 58 percent of female entrepreneurs in India being between the ages of 20 and 30 at the time of 'starting up.' Successful female entrepreneurs have made a substantial contribution to the creation of jobs, socioeconomic development, and female empowerment. However, their impact in India has been hampered by underlying facilitators and impediments. (Carrington, 2006)

Women entrepreneurs have been recognised for their major contributions to socioeconomic growth in their countries over the last two decades. In both rural and urban India, women are still restricted to the micro-enterprise sector. Over time, it has been obvious that the role and contribution of female entrepreneurs in India has been stifled by a plethora of socio-cultural institutions still in existence, as well as community perceptions of women leaders and female-led businesses.

The majority of the 13.76 percent of female entrepreneurs recorded in India are small business owners rather than true entrepreneurs. In underdeveloped locations with a lack of physical and human resources as well as a favourable industrial environment, entrepreneurial intentions, interests, and activities suffer greatly. As a result, people go from being innovators to mimics, bringing in pre-existing goods or processes to new areas. Burger-Helmchen (Burger-Helmchen, 2012). Entrepreneurial enterprises, on the other hand, can accelerate economic development in underdeveloped areas. Rural entrepreneurship, which was dominated by women at the time, can drastically improve the standard of living in impoverished areas when promoted by government action.

### BACKGROUND OF THE STUDY

According to the Economic Survey 2020-21, which was introduced in Parliament on Friday, the government had recognized 41,061 startups as of December 23, 2020. More than 39,000 firms have reported 4,70,000 positions, according to the poll, which did not provide any specifics. India presently has the world's third-largest startup ecosystem, with 38 unicorns (companies valued at \$1 billion or more) (Feed et al., n.d.).

Despite the economic downturn, the country produced roughly 12 unicorns in 2020. India boasts the world's third-largest startup environment, with annual growth of 12-15 percent predicted year over year. In 2018, India has over 50,000 startups, with around 8,900-9300 of these being technology-driven. In 2019, alone, 1300 new tech firms were founded, meaning that 2-3 new tech startups are founded every day (Indian Startup Ecosystem, 2021).

Many studies have been conducted on the subject of self-employment and small business ownership from various perspectives, but studies on women's entrepreneurship have received less attention.

### SIGNIFICANCE OF THE STUDY

The increased presence of women as entrepreneurs has resulted in a shift in the demographics of business and the country's economic prosperity. Women-owned businesses are playing an increasingly important role in society, encouraging others and creating more job possibilities around the country. A total of 8.05 million businesses were held by women entrepreneurs (13.76 percent). These businesses employed 13.45 million people (10.24 percent), with 83.19 percent of those employed being self-employed. About 88.8% of the workers were employed in businesses with fewer than ten employees. The total number of Self Help Groups (SHGs) was 0.19 million, with 89 percent of all women Own Account Establishments. Agricultural operations accounted for 34.3 percent of the enterprises run by women entrepreneurs, with livestock accounting for 31.6 percent of those. Manufacturing and retail trade were the most common non-agricultural enterprises owned by women entrepreneurs, accounting for 29.8% and 17.8% of all non-agricultural activities, respectively. Tamil Nadu (13.51 percent) has the highest percentage of women-owned businesses, followed by Kerala (11.35 percent), Andhra Pradesh (10.56 percent), West Bengal (10.33 percent), and Maharashtra (10.33 percent) (8.25 percent). The average number of employees per establishment owned by women was determined to be 1.67 (All India Report of Sixth Economic Census, 2016).

## Prospects and Challenges for Women Entrepreneurs in India

Women entrepreneurs must expand sustainably to foster balanced growth in the country, and Startup India is committed to expanding the women entrepreneurship ecosystem through policies and initiatives, as well as the creation of enabling networks.

### OBJECTIVES OF THE STUDY

- i. To understand the pattern and trend of Women Employment and Entrepreneurship in India
- ii. To analyze the challenges faced by the Women Entrepreneurs in India
- iii. To study the factors and the Government Schemes for Women Entrepreneurship in India

### METHODOLOGY

This is a conceptual paper based on descriptive research design and the study focuses on extensive study of secondary data collected from the Government Reports, various books, national and international journals, and publications from various websites which focused on various aspects of women entrepreneurship published reports of census surveys, newspapers, journals, websites, etc.

### TRENDS AND PATTERNS OF WOMEN'S EMPLOYMENT AND ENTREPRENEURSHIP

India has recorded one of the lowest women's workforce participation rates (WPR) in the world, and the recently released Periodic Labour Force Survey (PLFS) 2018–19 indicates a further decline. Women's WPR was 32 percent at the all-India level during 2011–12, according to the last available quinquennial Employment and Unemployment Survey (EUS) of the National Sample Survey (NSS), while it was 25 percent in 2018–19, according to the PLFS. It further states that between 2011–12 and 2018–19, the WPR decreased for both sexes in rural and urban areas, with rural women workers experiencing the greatest reduction (by ten percentage points).

However, from 2011–12 onwards, there have been attempts to explain it in terms of a shift toward more women doing unpaid homework, which includes cooking, cleaning, washing, shopping, and caring for the elderly and children (Chakraborty 2019b). Surprisingly, women's domestic and allied activity decreased during the same time period (2011–12 to 2018–19), which might be a good indicator if infrastructural facilities such as expanded access to drinking water and fuel, which women spend a lot of time on, improve. However, because of the subsequent change to only domestic activities, it's possible that investigators misclassified it. Or it could be the effect of more education, as evidenced by the rise in women's open unemployment (Chandrasekhar and Ghosh 2020).

The low and continuous decline in women's WPR in India over the period 2011–12 to 2018- 19 was accompanied by a significant change in the status of employed persons. The proportion of self-employed women and those in casual labor declined in the working-age group (15– 59 years), leading to a rise in the proportion of regular wage/salaried workers. However, the increase in regular employment for women would be a positive change if women's WPR had also increased, but in the absence of any such increase in WPR, there has been barely any increase in the absolute numbers of women employed in regular salaried jobs between 2011–12 and 2018–19. Additionally, a closer look at the classification of self-employed shows that the own-account workers and employers best capture entrepreneurial activities, and over the years, the proportion of male entrepreneurs was much more than women entrepreneurs.

Table 1 demonstrates that the percentage of women who own their own businesses increased by only 2 percentage points from 2011–12 to 2018–19. However, listing them as directors or working proprietors may give the wrong impression about the true nature of their work, as the majority of them work in outsourced manufacturing (primarily food processing, textile, and garment manufacturing) and family-owned retail (such as local grocery stores) (Chakraborty, The distressing situation of women entrepreneurs in India, 2019). In contrast, the share of unpaid family assistance was continuously higher for women throughout all years, but it fell for both men and women during the same time period (2011–12 to 2018–19).

**Table 1: Status of Women's Employment in India from 2011–12 to 2018-19**

Status of Employment	2011–12		2018–19	
	Men	Women	Men	Women
Self-employed	48.7	55.6	49.3	52.9
Own-accountworker and Employer	37.3	19.6	41.3	22.2
Unpaid familyhelper	11.5	36	8.1	30.8



## Prospects and Challenges for Women Entrepreneurs in India

Regular wage/ salaried employee	21.2	13.4	26.1	22.9
Casual labour	30.3	31	24.6	24.2
Total	100	100	100	100

**Source:** Computed from NSS 68th round and PLFS (2018–19) unit-level data on Employment and Unemployment. Note: Age Group 15–59 years and usual status of employment are considered.

Table 2 demonstrates that the majority of women entrepreneurs (95%) run businesses with less than six employees. The percentage of males who own businesses is roughly 70%. This suggests that women entrepreneurs usually run tiny businesses that are primarily informal. The next section delves into the specific characteristics of these Indian women-owned businesses.

**Table 2: The percentage distribution of workers engaged in various types of businesses**

Number of workers	Percentage of Men Proprietors		Percentage of Women Proprietors	
	2011-2012	2018-2019	2011-2012	2018-2019
Less than 6 workers	71	72.5	95	95
6 and above and less than 10	12.7	13.2	2.1	1.9
10 and above and less than 20	6.4	5.1	0.8	0.7
20 and above	6.8	5	0.9	0.7
Not known	3.1	4.2	1.2	1.7
Total	100	100	100	100

**Source:** Computed from 68th round and PLFS (2018–19) unit-level data on Employment and Unemployment.

**Table 3: The features of women-owned enterprises were explored during the 5th and 6th Economic Censuses**

Type of Establishments	5th Economic Census (2005)	6th Economic Census (2013)
Total proprietary establishments (in million)	37.34	52.29
Women-owned proprietary establishments (in million)	3.54	8.05
Total number of people employed in private businesses (in million)	77.92	103.06
Workers engaged in women-owned proprietary establishments (in million)	6.05	13.45
Women's proprietary establishments with premises (in percentage)	86.8	61.5
Women's proprietary establishments without premises (in percentage)	13.2	38.5
Women's proprietary establishments without hired workers (in percentage)	77.1	83.2
Women's proprietary establishments with at least one hired worker (in percentage)	22.9	16.8
Women's proprietary establishments in agricultural activities (in percentage)	15.7	34.3
Women's proprietary establishments in non-agricultural activities (in percentage)	84.3	65.7
Women's proprietary establishments: Rural (in percentage)	74.1	65.12
Women's proprietary establishments: Urban (in percentage)	25.9	34.88

**Source:** Calculated from unit level data of the 5th and 6th Economic Census. (*All India Report of Sixth Economic Census, 2016*)

The aggregate number of businesses increased by 42 percent from 41.25 million in 2005 to 58.5 million in 2013, according to the most recent Sixth Economic Census (2013). It was also discovered that the majority of these establishments were privately

## Prospects and Challenges for Women Entrepreneurs in India

owned, with own-account enterprises (OAEs) outnumbering companies employing hired labor. Furthermore, compared to establishments with hired personnel, OAEs developed at a faster pace (56%) from 2005 to 2013 (15 percent).

But gender-disaggregated data provided a disquieting picture about women's entrepreneurship opportunities. There were around 131.29 million people employed in these 58.5 million establishments, with 98.25 million males (75%) and only 33.04 million women (25%) making up the majority. In 2013, just 15% of all proprietary establishments were run by women, according to Table 3.

Between the Fifth and Sixth Economic Censuses, women-owned private enterprises more than doubled in size, a period of nearly eight years. It also shows that the number of women-owned private enterprises without a physical site climbed dramatically from 13 percent to 39 percent between 2005 and 2013. This demonstrates the operational limits and vulnerabilities that women entrepreneurs face as a result of their lack of a permanent business location. Women-owned businesses without hired staff climbed from 77 percent to 83 percent between 2005 and 2013, whereas businesses with at least one hired worker decreased from 23 percent to 17 percent.

The rise in the number of women-owned businesses with no paid employees and no fixed location reflects not just their limited operating scope, but also the growing informalization of women-owned businesses. It also reveals that non-agricultural activities declined in women-owned businesses over this time period, while agricultural activities increased. The vast majority of women-owned proprietary businesses (more than three-quarters) were engaged in non-agricultural activities, with retail trade and manufacturing accounting for 58 percent of all non-agricultural businesses. The majority of women-owned proprietary enterprises were located in rural areas, however, between 2005 and 2013, women-owned businesses in urban areas increased from 26% to 35%.

### CHALLENGES ENCOUNTERED BY THE WOMEN ENTREPRENEURS IN INDIA:

Every entrepreneur, regardless of gender, finds that starting a business has its challenges, including generating funding, penetrating the market, limited understanding of customers, and a complex regulatory environment. Women entrepreneurs additionally face obstacles to education, societal barriers to mobility, and the burden of household work, childcare and safety concerns, not to mention the lack of personal physical and financial assets, difficulty in getting starting capital from formal institutions, lack of networking knowledge in the male-dominated business world, and direct or indirect biases.

In India, existing social norms still expect women to be solely responsible for the household, with Indian women spending five times as much time as men on housework and caregiving (Singh and Pattanaik 2020)—undeniably unpaid acts of labour. Therefore, women who aspire to go out into the world, juggling work and home, need to be supported not only by their families but also by society as a whole, giving them the respect, encouragement, safe environment and infrastructure to succeed. Most of the female workforce in India does not have access to maternity benefits and childcare facilities due to the informality of the industries they generally work in, and women entrepreneurs even more so. In addition, non-discriminatory and safe work environments are needed to help retain qualified women, especially in the more arduous technology-driven sectors.

In India, the majority of women-owned businesses are single proprietorships, and women's entrepreneurship is growing mostly among self-employed entrepreneurs. Women-owned enterprises employ 13.45 million people, or 10.2 percent of the population, according to the Sixth Economic Census (2013–14). However, an alarming 83.2 percent of households do not have any hired workers, implying that they do not create any income and instead rely on unpaid family assistance. Women-owned businesses employ about 1.67 people on average at this moment. However, firms that employ more people and those that do not are vastly different in terms of their contribution to the economy: more hired labor suggests that ventures are more likely to experience growth, their activities streamlined, and are usually seen to establish better infrastructure.

Besides education, the lack of quality jobs and business opportunities for women also operates as a barrier in India. Even with a visible increase in access to higher education, there was a 9 per cent fall, from 36.8 percent to 33.5 per cent, in the female labour force participation rate (LFPR) amongst women in the age group 35 to 39 between 2011–12 and 2017–18.

The manufacturing sector has been unable to provide formal, wage-earning employment opportunities that suit women, thereby denying them opportunities for technical and vocational skills training or work experience. The small proportion of business-owning women too fail to develop highly productive and revenue-generating businesses due to insufficient market information about prices, inputs and competitors. The non-employment of the female workforce in higher executive positions also does not permit them to be a part of prominent industry networks. This impedes their progress as they miss out on important opportunities to connect with people and eventually get equal access to the market. With regard to access to finance, according

## Prospects and Challenges for Women Entrepreneurs in India

to the Findex Global Database, between 2014 and 2017, India's male to the female gender gap in ownership of active bank accounts shrank from 20 per cent to 6 per cent, due to the government's recently increased efforts to raise account ownerships under the Jan Dhan Yojana. To finance their company needs, most female entrepreneurs must rely on their own savings, loans from family and friends, or microloans.

According to a survey by World Bank Group member IFC, the micro, small, and medium enterprise (MSME) sector alone had a funding deficit of USD 116 billion in 2012, accounting for 73 percent of overall demand. Although ventures such as the '59-minute loan platform,' which allows MSMEs easy access to credit, appear to have aided the rise in the World Bank's 'Women's Financial Inclusion (F/M)' indicator score for India from 58.2 to 69.0 between 2017 and 2019, a significant lack of capital prevents large-scale projects or more innovative, capital-intensive ventures from being launched. As a result, the 58 percent of female entrepreneurs in India who start enterprises between the ages of 20 and 30 must rely heavily on self-financing, which necessitates substantial savings, inherited capital assets, or mortgageable physical property.

### FACTORS INFLUENCING THE RISE OF WOMEN ENTREPRENEURSHIP IN INDIA:

#### 1. The rise of online lenders

Lack of funds was one of the most significant obstacles women faced when starting a business. When it came to providing company financing to women, traditional lenders were strict— they required collateral, a guarantor, and a slew of additional requirements.

With the rise of digital lending platforms, getting a business loan for a woman has never been easier. Today, a woman with an entrepreneurial concept does not need to seek financial assistance from her family or traditional banks. She may simply obtain financing from a digital lender and launch her business with no delay.

#### 2. Online selling

Another key aspect that has aided the rapid emergence of female entrepreneurs in the country is this. Products can now be sold from the comfort of one's own home. A woman entrepreneur can quickly deliver things across the county, if not the world, via online purchasing.

All they have to do is create an e-commerce website or join an online marketplace, and they'll have a portal to promote and demonstrate their products. This digital platform has made it simple for women to start a business from the comfort of their own homes and expand as their businesses grow.

#### 3. The accessibility of social media

Marketing was formerly one of the greatest roadblocks for all entrepreneurs, not just women, just a few years ago. Today, thanks to the prevalence of social media platforms such as Instagram, Facebook, and others, it is simple to spread the word about one's items. The company may go far with a social media page and the correct content. In fact, one of the most powerful tools in the arsenal of women entrepreneurs in India is social media.

### OPPORTUNITIES AND SCHEMES FOR WOMEN ENTREPRENEURS IN INDIA

#### i. Women Entrepreneurship Development Platform (WEP)

The Women Entrepreneurship Platform (WEP) is a one-of-a-kind, unified access portal that brings together women from throughout India to create a nurturing ecosystem that allows them to realize their entrepreneurial dreams. WEP accomplishes this through partnering with essential organizations to provide relevant information and services. The platform was first proposed by Shri Amitabh Kant, CEO of NITI Aayog, who unveiled the WEP at the conclusion of the 8th Global Entrepreneurship Summit (GES) in 2017 to help overcome the ecosystem's information imbalance.

As an enabling framework, WEP is built on three pillars: Iccha Shakti, Gyaan Shakti, and Karma Shakti. Iccha Shakti is a goddess who inspires budding entrepreneurs to create their own company. Gyaan Shakti stands for fostering entrepreneurship by offering information and ecosystem support to women entrepreneurs. Karma Shakti denotes offering hands-on assistance to entrepreneurs as they start and grow their firms.

As an aggregator portal, WEP hosts information and services relevant to women entrepreneurs. WEP enables substantial cooperation to provide industry trailblazers with important information, workshops, campaigns, and other learning and growth opportunities. Services are delivered in six key focus areas through partnerships:

- Funding & Financial Assistance
- Community and Networking

## Prospects and Challenges for Women Entrepreneurs in India

- Compliance and Tax Assistance
- Incubation and Acceleration
- Entrepreneurial training and mentoring
- Marketing support

In order to foster peer learning, WEP invites entrepreneurs to share their entrepreneurial adventures, stories, and experiences. All of this is bolstered by the guidance of industry professionals. In partnership with partner organisations, the WEP platform will encourage offline projects and outreach programmes to boost the entrepreneurial spirit among potential women entrepreneurs.

### ii. **Annapurna Scheme:**

This loan is for women in the food catering industry who are just starting out in their small enterprises. The loan enables these women entrepreneurs to use it for capital needs such as purchasing equipment and utensils, establishing trucks, and so on. Women can sell packaged food items and snacks under this programme, which is one of the most typical companies that women entrepreneurs seek out and flourish in because it is something that housewives have been handling their entire lives and are used to. This increases their sales because they now have access to more finance and new products to help them launch their business than they could previously. The scheme has a lending ceiling of Rs. 50,000.(For & Loan, n.d.)

### iii. **Bharatiya Mahila Bank Business Loan:**

This banking system was established to help women and their companies on a broad scale, which is why it exists. Women have dabbled in a variety of industries and are continuously striving for success. This bank was founded with the goal of empowering women economically. This source has a borrowing limit of Rs.20 crores.(For & Loan, n.d.)

### iv. **Mudra Yojana Scheme:**

It is a Government of India project that aims to improve the status of women in India by offering business loans and other support so that they can become financially independent and self-sufficient. They will be handed Mudra cards, which act like credit cards and have a withdrawal limit of 10% of the loan amount, if the loan is approved. This programme offers numerous different sorts of plans according to the type of business, the extent of expansion, and the loan goal. The government's lending limit under this scheme is Rs. 10 lakhs.(For & Loan, n.d.)

### v. **Orient Mahila Vikas Yojana Scheme:**

This programme is for women who own 51 percent of a company's stock individually or collectively as a private concern. This is an excellent chance for these stakeholders to assist in the expansion of their firm and the advancement of their field. This strategy does not require collateral security and offers a 2% interest rate concession. The payback time is flexible up to 7 years, and the maximum loan amount is Rs. 25 lakhs.(For & Loan, n.d.)

### vi. **Dena Shakti Scheme:**

This programme is likewise for women entrepreneurs, but only those who work in agriculture, retail, manufacturing, small businesses, or micro-credit institutions are eligible. The maximum ceiling limitations for women beneficiaries are set by the RBI and are based on the sector in which they are expanding or proposing to launch a business. The maximum loan amount is Rs.20 lakhs.(For & Loan, n.d.)

### vii. **Pradhan Mantri Rozgar Yojana:**

Also known as PMRY, this is one of the best social and financial programmes for women entrepreneurs. The goal of this programme is to create skill-based, self-employment opportunities for women entrepreneurs and smart brains at work who want to be financially independent. This system, which applies to both urban and rural areas, was created after various changes to the cost, eligibility, and subsidy restrictions. The loan subsidy amount is up to 15% of the project cost, with a per-borrower limit of Rs. 12,500. The programme is applicable to all types of businesses in the industries, trade, and service sectors. The loan ceiling for business is Rs. 2 lakh, while the credit limit for service and industry is Rs. 5 lakh.(For & Loan, n.d.)

### viii. **Udyogini Scheme:**

This programme encourages women to be self-sufficient and assists them in self-development by financially empowering them to do so. This initiative supports aspiring female entrepreneurs by providing loans and low interest rates in comparison to the private sector's soaring rates, while also serving as a reliable source of credit. Only individuals with a family income of less than Rs. 40,000 per year are eligible. They encourage loans in the commercial and service sectors in particular, with a ceiling of Rs. 1 lakh.(For & Loan, n.d.)

## Prospects and Challenges for Women Entrepreneurs in India

### ix. Cent Kalyani Scheme:

The initiative is aimed for both new enterprises and those looking to grow and expand; the main distinction is that it is geared toward women entrepreneurs. The system excludes the retail trade, education and training, and self-help groups. On their website, the qualified categories are listed in detail along with the rules. This loan has no collateral requirements and no processing costs. These initiatives for women entrepreneurs allow designated groups of businesswomen to take out loans and expand their businesses. The maximum loan amount under this scheme is Rs. 100 lakh. (For & Loan, n.d.)

### x. Mahila Udyam Nidhi Scheme:

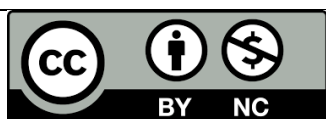
This programme tries to close the equity gap. It encourages MSMEs and small-business ventures in a variety of industries to expand and succeed. This also stimulates the rebuilding of SSI units that have been ruled inoperable but are still salvageable. The debtor is allowed ten years to repay the loan, with a maximum loan amount of Rs. 10 lakhs. (For & Loan, n.d.)

## CONCLUSION

These are the most pressing issues confronting female entrepreneurs around the world. Many amazing women, on the other hand, have overcome these obstacles and carved out a space for themselves in this male-dominated sector. The study suggests that India conduct a meta-analysis to identify their specific needs and design and implement relevant programmes, promote products from women entrepreneurs under a common brand with tax incentives, impart soft-skills training including accounting, HR management, and communication, implement awareness generation and community mobilisation initiatives for moral support, and establish mentorship programmes at the local level based on the key findings. All they need is the appropriate mindset, a clear goal, and the will to overcome every obstacle that stands in their way. The Indian government is likewise fully committed to women's empowerment. The government is doing everything it can to improve women's place in society, from funding to education. Keep up to date on the country's most recent plans for women entrepreneurs and take advantage of them to the best extent possible. With digitalization, liberalisation, the rise of e-commerce, and the rise of social media, a lot has changed in the previous few years. In India today, the vast majority of startups are led by women or have a female co-founder.

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## Knowledge and Practices on Healthcare Waste Management among Healthcare Staff in a Specialized Infectious Disease Hospital in Sri Lanka



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### ABSTRACT

**Introduction:** Hospital waste management is increasingly becoming important in Sri Lanka since mismanagement may lead severe adverse effect to the patients, health care workers (HCW) as well as to the community. The waste management practices of Infectious Disease Hospital is greatly important due to patients with infectious disease being managed in this specialized hospital.

**Objective:** To describe the knowledge and practices on hospital waste management and associated factors among health care workers of the Infectious Diseases Hospital (IDH), Sri Lanka

**Methods:** A hospital based descriptive cross-sectional study in conducted in the Infectious Disease Hospital. All health care workers of IDH coming in contact with patients or their biological materials consisted the study population. A total of 209 hospital staff participated with a response rate of 85%. A self-administered questioner to assess knowledge and practices and a checklist to observe practices were used as study instruments.

**Results:** The overall knowledge of HCW were satisfactory with a mean knowledge score of 84.4). Nursing officers had the highest knowledge score (mean=91.1) and paramedical staff and medical officers had a mean knowledge score of 89.8 and 86.9 respectively. The health care workers who had past training on waste management had a lower knowledge score (79.5) than who did not have past training (84.0). Mean practice score of the total sample was 66.6 which is not satisfactory when compared with the knowledge. Of self-reported practices, the lowest practice score was seen in medical officers. Observable correct practices of sections of the hospital varied with highest score in the ICU (87.5%) and lowest score (33.33%) in the OPD and clinic

**Conclusion:** Knowledge on hospital waste management is satisfactory among the health care workers with certain identified gaps in some categories. Practices of waste management is not satisfactory and needs effective and sustainable interventions. In overall context the knowledge, and practices of nursing officers are higher than the other categories. Continuous monitoring and evaluation leading to result based training are recommended to maintain a effective hospital waste management process.

**KEYWORDS:** Healthcare waste management, Healthcare staff, Infectious Disease Hospital, Knowledge, Practices

### I. INTRODUCTION

Hospital waste or healthcare waste is defined as a total waste stream of the entire hospital setup.<sup>1</sup> Healthcare waste is all the accumulated waste generated in health care establishments, research facilities and laboratories. Hospital waste can be broadly categorized into hazardous and non-hazardous general waste. Non-hazardous waste includes all waste that has not been contaminated with infectious or hazardous substances such as blood, body fluids or chemicals.

In many countries improper management of waste generated in healthcare facilities causes direct harm to the community, to people working in health care facilities and to the environment. In addition, pollution from inadequate treatment of waste can cause indirect health harm to the community. The disposal of certain types of devices should follow specific safety rules. For example, a syringe is a common item that require safe disposal. Waste management options need to be efficient, safe and environmentally friendly to protect people from voluntary and accidental exposure to waste when collecting, handling, storing,

# Knowledge and Practices on Healthcare Waste Management among Healthcare Staff in a Specialized Infectious Disease Hospital in Sri Lanka

transporting treating or disposing of waste. Furthermore, in Sri Lankan context such options need to be cost effective, taking into account the local logistical needs.<sup>2</sup>

Hospital waste management procedures aim at containing infections and reducing public health risk both within and outside the health care facility. This procedure has following measures; Waste minimization and segregation, Waste collection and onsite transportation, Waste storage and Waste treatment.<sup>3</sup>

Waste segregation consists of separating different types of waste based on the type of treatment and disposal practices.<sup>4</sup> It should take place at the point of generation of waste. Different colour coded containers should be used for this purpose. Hazardous waste; should be collected in yellow polyethene bags of minimum 300micron gauge with the international biohazard symbol and placed in yellow bins. Sharps should be placed in specific cardboard or plastic boxes which are puncture proof and leak proof. Sharps boxes should be designed with small opening so that items can be dropped in but no item can be removed. General waste should be placed in black polythene bags minimum 200microns gauge.<sup>5</sup>

A separate central storage facility should be provided for waste storage, Non-hazardous waste which is to be taken away by local government authorities should be stored separately from hazardous waste. The central storage facility should be totally enclosed and sealed from unauthorized access. It should be inaccessible to animals, insects and birds and easy to clean and disinfect. It should have a good water supply, drainage, and ventilation systems. Different types of hazardous hospital waste should be treated appropriately. Infectious waste should preferably be incinerated in a double chamber incinerator. In densely populated areas it can be treated by autoclaving. Blood should be autoclaved before being discarded and alternatively, samples of blood can be kept overnight in a container of concentrated hypochlorite before discarding. Blood bag should be incinerated. When disposing radioactive waste, the radiation protection officer should be responsible. In the process of disposal, the instructions provided by the atomic energy authority regarding storage and disposal should be followed.<sup>6,7,8</sup> According to the available data, 0.36Kg of waste per bed was produced for a single day in Sri Lanka. Annually, 5000metric tons of Infectious waste is produced in the Colombo district.<sup>9</sup>

Institutions dealing with hazardous waste should obtain Scheduled Waste Management License (SWML) from the Central Environmental Authority for the management of waste specified in the Schedule VIII of the National Environmental (Protection and Quality) Regulation Act. No 01 of 2008. Certain hospitals have developed standard treatment and disposal facilities for infectious waste such as double chamber incinerator for autoclaving of infectious waste. The non-contaminated general waste produced in hospitals is managed by the local authority of the area. However, in some hospitals this process is not functioning due to issues in proper waste segregation.

## II. METHODS

Infectious Disease Hospital (IDH) is situated in the Colombo district. The hospital has an isolation ward, HIV management unit, medical wards, pediatric ward, dengue management unit, medical intensive care unit and out patient's department.

An institution based cross sectional descriptive study was carried out. All health care workers who are directly in contact with the patients or their body fluids in patient care consisted the sample and 242 members falling into this eligibility criteria were included in the study. Of them 209 responded with a response rate of 86.3%.

A self-administered questionnaire was used to assess the knowledge and self-reported practices on healthcare waste management. An observational checklist was used to assess the practices of health care workers in managing hospital waste.

## III. RESULTS

Of the eligible staff of 242, 209 responded with a response rate of 86.3%. a majority of health care workers (48.3%, n=101) were minor staff followed by nursing staff (24.9%, n=52).

**Table 1: Distribution of Health Care Workers by staff category**

Staff category	Frequency	Percentage (%)
Medical Officers	36	17.2
Nursing Officers	52	24.9
Paramedical staff	16	7.7
Minor Staff	101	48.3

## Knowledge and Practices on Healthcare Waste Management among Healthcare Staff in a Specialized Infectious Disease Hospital in Sri Lanka

Others	04	1.9
Total	209	100.0

A majority (59.3%, n=124) of the health care workers had not received training on waste management.

**Table 2: Distribution by training on waste management**

Training	Frequency	Percentage (%)
Received	85	40.7
Not received	124	59.3
Total	209	100.0

The mean knowledge score of the total group was 84.4. Highest mean knowledge score (91.1) was obtained by the nursing officers followed by medical officers (86.8).

**Table 3: Distribution of knowledge score by staff category**

Category of staff	Mean knowledge score
Medical Officers	86.8
Nursing Officers	91.1
Paramedical Staff	89.8
Minor staff	74.8
Others	79.5

The mean practice score of the total group was 66.6. The highest mean practice score (72.0) was seen in nursing officers and the lowest mean practice score (61.0) was seen in medical officers.

**Table 4: Distribution of practice score by staff category**

Category of staff	Mean practice score
Medical Officers	61.0
Nursing Officers	72.0
Paramedical Staff	63.0
Minor staff	66.0
Others	71.0

Health care staff with diploma or equivalent education level had the highest practice score (70.0) and the staff members who had an education below ordinary level had the lowest practice score of 57. The highest mean practice score (80.0) was seen in the staff of the dispensary and the lowest mean practice score (57.0) was seen in the staff of OPD.

There was no major difference in the practice score between the staff who have undergone or not undergone a training on waste management.

The highest practice score was in the group with highest knowledge score and vice versa.

**Table 5: Distribution of mean practice score by selected factors**

Factor	Mean practice score
<b>Highest educational level</b>	
Below Ordinary level	57.0
Up to Ordinary level	68.0



## Knowledge and Practices on Healthcare Waste Management among Healthcare Staff in a Specialized Infectious Disease Hospital in Sri Lanka

Up to Advanced level	67.0
Diploma or equivalent	70.0
Degree	60.0
Post graduate qualification	63.0
<b>Period of work in health sector</b>	
Less than 1 year	64.0
1 to 3 year	65.0
>3 to 5 years	69.0
>5 to 10 years	65.0
>10 years	67.0
<b>Training</b>	
Received	66.5
Not Received	66.7
<b>Knowledge score</b>	
Below 50	55.0
50 - 74	64.3
75 and above	68.0

Table 6 shows that except in paramedical staff in all other categories highest knowledge score category had the highest practice score. Highest practice score was seen in “other staff” category followed by nursing officers. The medical officers had the lowest mean practice scores.

**Table 6: Distribution of knowledge score and practice score among staff categories**

Knowledge score	Mean practice score				
	Medical Officers	Nursing Officers	Paramedical Staff	Minor staff	Other staff
75 and above	60.7	72.3	62.0	70.2	75.0
50% - 74%	60.0	71.3	70.0	63.3	75.0
Below 50%	-	-	-	55.0	-

In the practices observed using the checklist showed that the highest correct practices was seen in the ICU (87.5%) followed by wards (85.4%). The lowest practice level (33.3%) was seen in the OPD and the clinic (Table 4.32).

**Table 7: Distribution of observable practice by the sections**

Section	Correct observable practices (%)
ICU	87.5
Wards	85.4
Primary Care Unit	62.5
Laboratory	62.5
Dental unit	57.1
Dispensary	50.0
Physiotherapy unit	50.0
OPD	33.3
Clinic	33.3

## DISCUSSION

Infectious disease hospital is the only designated specialized hospital for the management of infectious diseases in Sri Lanka. Hence the knowledge and practices regarding the hospital waste management is utmost important since any mismanagement may lead to major adverse effects in the institution as well as in the surrounding community of the hospital. There is no previous

## Knowledge and Practices on Healthcare Waste Management among Healthcare Staff in a Specialized Infectious Disease Hospital in Sri Lanka

study carried out to assess knowledge and practices on hospital waste management in the healthcare staff Infectious Disease Hospital. The total staff of the hospital was 262 and 245 were eligible to participate. Of the eligible 245 staff members 209 participated in the study with a response rate of 85.3%. The responded staff categories consisted of 17.2% (n=36) medical officers, 24.2%(n=52) nursing officers, 7.7% (n=16) paramedical staff, 48.3% (n=101) minor staff and others which represent drivers and public health inspector were 1.9% (n=4).

Of the sample 31.1 % (n=65) of health care workers had more than 10 years working experience in health sector and only 5,7% (n=12) had less than 01 years' experience. Although being the infectious disease hospital only 40.7% (n=85) had received training on hospital waste management.

Gaps in knowledge lead to performance discrepancy.<sup>10,11,12</sup> Knowledge of this study population was satisfactory since the mean knowledge score for the hospital waste management at IDH was 84.4 and all categories of staff had a mean score of over 74. Nursing officers had the highest mean knowledge score of 91.1. Minor staff employees had the lowest mean knowledge score of 74.8. The medical officers mean knowledge score (86.9) was lower than nursing officers and the mean knowledge score of paramedical staff (89.77). This may be due to the nursing training paying more emphasis on ward waste management and paramedical staff which includes medical laboratory technicians having to handle infectious during routine duties paying more attention to handling infectious waste.

The mean practice score of the total group was 66.6% and highest mean practice score of 72 was among the nursing officers and the lowest score (61) was in medical officers. This finding is comparable with a which showed that people with high education level such as doctors and consultants had satisfactory knowledge but relatively low percentage of practices.<sup>13</sup> A study done in India on biomedical waste management among the health care personal revealed some practices were lacking in doctors than other health care staff.<sup>14</sup> The above findings is compatible with the present study where practice score of degree and post graduate qualification holders were relatively lower than advance level and diploma or equivalent level. There was no much difference of mean practice score between the periods of employment in health sector.

There is a direct relationship of mean knowledge score with the mean practice score. The knowledge score "75 and above" category had the highest (68) mean practice score.

The study was conducted only in health care workers who are employees of the ministry of health. There was no assessment of workers working in hospital janitorial service and assessing their knowledge and practices would be more informative. The observable practices were assessed unit wise. If done at individual level it would be more informative. Due to time constrains and practical issues this was not done

Study instrument was a common self-administrative questionnaire to all the categories of health care staff. There may have been differences in interpretation among different categories of staff with different level of knowledge. Due to the need of comparison of scores a common study instrument was applied. Steps were taken to make the questioner simple and addressing fundamentals in waste management which should be known by all categories of staff.

### CONCLUSIONS

All the health care workers of IDH had satisfactory level of knowledge on hospital waste management and the knowledge of the healthcare staff had a positive relationship with educational level up to diploma level. Overall self-reported practices on hospital waste management was poor there was no significant level of difference of practices between the period of work in health sector or IDH. Health care workers who had higher knowledge score, had higher waste management practices. An exception was medical officers with higher educational level having the lowest practice score

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ISSN[ONLINE] : 2643-9875    ISSN[PRINT] : 2643-9840

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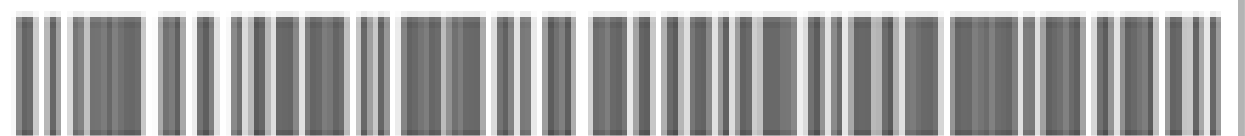
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