THE PANDEMIC
A LEAP OF FAITH

Editorial:
Dr. Diah Karmiyati, M. Si.

Direktorat Program Pascasarjana
Universitas Muhammadiyah Malang

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BILDUNG
Jl. Raya Pleret KM 2
Banguntapan Bantul Yogyakarta 55791
Telpn: +6281227475754 (HP/WA)
Email: bildungpustakautama@gmail.com
Website: www.penerbitbildung.com

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EDITORIAL

The Pandemics: A Leap of Faith

Imagine where we are in 2019. We are still living in best possible way, we gather, we socialize, and we celebrate plenty of things together with our loved one without worry. The 2019 is just two years ago, but it certainly feels like longer than that. Now, we are at the year of 2021. The pandemic has been with us for 17 months now. The countries all over the world loosen and tighten its border as the pandemics evolve into certainty when the vaccinations held. Indeed, the catastrophic of the pandemics didn't just leave us behind, many of us losing our loved one and in grief. Yet we are still hopeful of the future especially when Science nurtured our thinking while God is with all of us at heart.

This book chapter is an example. It is glad to see the spirit, where many scholars are racing to contribute. We see, scholars are continuously work together to contribute to the world. One paper I was taken into is where the researcher conducting research in Islamic economic while balanced it together with a teaching in psychology. Islam, as most of the Indonesian religion, comes at the forefront when facing a pandemic. We seek God for protection, help, and guidance as we must. One of the research papers in this book mentioned that Islamic economy can be contribute well to the economic reset that initiated in World Economic Forum 2020. I do personally believe that.

Whereas other scholar focusses on how pandemic affects agriculture, language, justice and law, technology, and environment. Language, for example, has a tremendous impact on how one face this pandemic. For example, in the UK, the message that the government sent about COVID19 mitigation is very rigid and tangible. Therefore, the citizens are following its instruction carefully. On the contrary, unfortunately in Indonesia we see plenty of changes are made and delivered unclear by the government. As such, the message that means to be delivered to citizens has double meaning.

We cannot also turn a blind eye on the development of online education and learning that thriving during this pandemic, especially in Indonesia. Almost 100% of the Indonesian university conducts the lecture online without a class interaction that we've done for the last few decades. This comes up with challenges, as mentioned by one of the papers in this book chapter that it is hard on students as well as on teacher/lecturer.

Another outstanding topic that is covered in this book chapter that how the terms "healthy" is stretch out into something far greater important in our daily life. The word "health", "well-being", and "healthy behavior" are not taken for granted anymore; we internalize it now even more. For instance, according to Mint, the health start-up companies in shows a significant user increase since the pandemic begun, where online consultation with doctor are rising to 600% compared to 2019. Before the pandemic, health care consultation is mostly face-to-face with the doctor, but once the pandemic hits, online consultation are encouraged. In Indonesia itself, our behavior also changes. When one caught COVID19, if the symptoms is mild, online consultation with telemedicine's apps such as Halodoc, or Alodokter is preferable. Therefore, we have made such strenuous effort to adjust and adapt., and I believe plenty of changes and adjustment that we face will bring us forward.

Imagine being back in 2019. If we knew that pandemic would hit us in the coming years, what will we do? Do we laid back and relax? Or do we create a plan to better face it? Will we be ever ready for the changes?

However, the answer is, I am sure that God is the best planner. We human can only make the best of us while God is the best planner after all. We just need to take the leap of faith.

I hope this scholarly work we all of us done, won't stop here and this is just the beginning of far greater scientific contribution.

Malang,
August 27, 2021

Dr. Diah Karmiyati, MSi

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Abdul Ghofur[1]

Introduction

Islamic Sharia has comprehensive and universal characteristics. The universality is evident in the muamalah field. Besides having a broad and flexible scope, muamalah also does not differentiate between Muslims and non-Muslims. Because, in essence, Islamic law is revealed as *rahmatan li al- 'ālamin*.[1] Economic activities, political activities, cultural activities, and many other activities give numerous colors and influences in Islamic way of living. Islam is always present in the subsystem of life for the sake of optimizing Islam as a life system. In QS. Al-Baqara verse 208, Allah orders every Muslim to totally embody into Islam (kaffah).

Islam places economic activity as an important aspect of gaining happiness (al-falāh). Therefore, economic activities are guided and controlled so that they run according to the teachings of Islam as a whole. Falāh will only be obtained if Islamic teachings are practiced *kaffah*[2] although the meaning of *kaffah* has become a separate topic of discussion. Totally embodying ones selves into Islam means the submission to what is outlined by Allah SWT in various aspects of life.

In the perspective of Sharia, all human actions and activities should be based on motivation to obtain the blessing of Allah, its orientation towards happiness (falāh) here and in the hereafter and its application through the enforcement of Allah's sharia law, including in the economic aspect. The perspective secularism, on the other hand, put the motivation, attitude, orientation, actions and activities in order to obtain the pleasure in life to the extend where even in its implementation is often justifies for any different means but the blessing of Allah SWT.[3, p. 12] Islamic economics appears as a reflection of the Islamic kufah of a Muslim.[4, p. 2] In this context there are several questions that arise; why sharia economy is an option in the global economic constellation; can the sharia economy

1 UIN Walisongo Semarang, abdul_ghofur@walisongo.ac.id

be relied on as a solution to the global and national economic solution; what basis can be used as an argument for the implementation of sharia economics as an alternative offer of solutions to the global economic crisis.

Efforts in Finding Alternative Economic Systems

The idea of a sharia economy, which is often called Islamic economics or Islamic economics, began to get a lot of attention from experts in the middle of the discussion related to socialism and capitalism are on point.[5, pp. 150–193] In such conditions, many Islamic economic scholars put a break out of these two big ideologies. They try to find an economic system that is different from the two in the most Islamic way possible. Islam has its own ideology related to economic matter which is different from the other two.[6, p. 177]

Islamic economics emerged when the modern economy was slow in presenting solutions to contemporary economic problems, if not to say it was unable to present alternative solutions. In addition, Islamic economics appears as a reflection of the Islamic faith of a Muslim. This thought emerges as a demand for a Muslim's belief in Islamic comprehensive. This is because Islam not only teaches how to build a pious personal figure, but also provides references in order to build social piety.[7, p. 36]

In the last 300 years or so, under Western leadership, the world has experienced at least three main economic ideologies, i.e., capitalism, socialism, and the welfare states. The three economic ideologies are considered to be failures because they tend towards secularization based on the premise that religion and morality are irrelevant in overcoming economic problems. In the Western view, economic problems are better resolved by reference to the laws of economic behavior, and not by reference to religious rules and morality.[8, pp. 133–146]

Capitalism relies on the allocation of resources on the pull of the market, while socialism on the power of central planning. Capitalism finds its spirit in a competitive environment, while socialism finds it in a totalitarian system in which the means of production are shared. Islam does not find a suitable place between the two. Socialism is an ideology based on materialism, which ignores the existence of a Creator of nature, and considers the origin of natural events to be derived from objects.[9] Laws and systems are built on reason alone. Socialism views that human happiness is measured materially; meet the physical needs.[10, p. 194] Meanwhile, Welfare States often invites criticism. The desire to guarantee and bear social burdens within a country, under certain conditions, actually burdens the state budget and even hinders the economic growth of a country.

The three ideologies do not pay attention to moral and spiritual values as benchmarks of success and main strength, which in the Islamic economy, moral and spiritual values function as the driving force; the forces that control the economy. On the other hand, the Islamic view of economics is part of the "grand vision" of Islam as a whole: to realize universal ethics. This means, the basis, process and economic motivation in an Islamic society must be based on a pro-ethical position. Islamic ethical values are transformed into a set of axioms which are used as references in formulating consistent economic behavior. This axiom, at least, is summarized in unity, equilibrium, free will and responsibility.[11, p. xii]

Economic power in the capitalist system creates a number of problems in relation to the basic principles of justice in the relationship of ownership, production, consumption and production. The economic system of capitalism has resulted in social disparities between the rich and the poor. The world today has given birth to a small group of conglomerates, but on the other hand it has resulted in billions of people living in poverty. Economic injustice has become a universal problem faced by all contemporary systems.[12, p. 1]

According to Maududi, quoted by Hamidi, the two economic systems: the economic system of capitalism and socialism, were built without a moral-spiritual foundation. Meanwhile, the Islamic economic system as something inherent in Islamic teachings emphasizes the importance of a moral and spiritual foundation by prioritizing justice and brotherhood.[6, p. 179] In Islam, individuals can control and manage property. However, at the same time, they are not the real owners, only trustees. Therefore, they must run and manage their assets in line with the Islamic guidelines that have governed them because in Islam integration between morals and economics is important.

Islamic Economics based on Fiqh Muamalah: Alternative Solutions to the Economic Crisis

Reinhart and Rogoff (2009) in a book entitled This Time Is Different, referred to by Hamidi, examine financial crises that have occurred since the early development of finance, followed by the development of financial markets in the modern era. In addition, a study by the duo-Professor from the University of Maryland and Harvard University using data from 66 countries over eight centuries (from the crisis in the UK in the middle ages to the sub-prime mortgage crisis in the US in 2008) concluded that there was nothing new in the crisis. this crisis, "we have been here before".[6, p. 133]

The solution offered so that the crisis does not recur is the courage to take breakthrough steps, thinking outside the box. In this context, interest rates, as affirmed by Reinhart and Rogoff, are believed to be one of the most important root causes that often cause crises. Therefore, there are instruments that need to be cut and replaced with other instruments that are expected to not pose a threat of economic destabilization. However, changing the interest instrument, for certain circles, is considered absurd. Because, this instrument has become the main building in capitalism. Replacing these instruments is tantamount to tearing down the system and this is no easy challenge. However, if new innovations are not presented in solving this crisis problem, we will be trapped in an endless cycle of 'crisis problems'. Finding alternative solutions to dismantle the old paradigm becomes a necessity. The solution offered is a sharia-based economy.

To replace 'interest' (riba) and the element of speculation (maisir) in supporting the operationalization of Islamic financial institutions, several contracts (akad) were established,[14, p. 2917] whether related to efforts to raise funds or finance such as musyārakah contracts,[14, p. 3876] *mudārabah,*[14, p. 3924] *murābahah, salam, istisna', ijārah* and so on. These contracts are not intended only as a substitute for the "formality" of interest or riba. However, in these contracts, there are high economic values from a macroeconomic perspective. Because there are several reasons why 'riba' must be replaced with these contracts.

All implementation of the akad (transaction) aims to eliminate the number of fraud, disputes, or all kinds of negative impacts arising from the desire to control an item or have its benefits. The purpose of the contract is to give birth to a legal effect. More specifically, the purpose of the contract is a common goal that the parties aim to achieve and want to realize through the making of the contract.[15, pp. 68–69] In Law no. 21 of 2008 concerning Sharia Banking, several contracts were stipulated, both relating to efforts to raise funds or financing, such as the contracts of *mudārabah, musyārakah, murābahah, salam, istisna', ijārah*, and so on.

With this contract, it is hoped that monetary flows will be balanced with the real sector. This is because if the monetary flow and the flow of goods are balanced, the economy will be stable. This will be able to restrain the inflation rate and there will be no economic bubble due to equilibrium. Conversely, the development of money that is not balanced with the quantity of goods will trigger inflation or a large economic bubble will occur. If the bubble bursts, there will be a monetary crisis.

The application of the muamalah fiqh contracts dispels the notion that Islamic banks and other Islamic financial institutions are the same as conventional banks. In terms of financing, Islamic banks do not provide interest-based financing, because it is considered usury. In addition, Islamic banks do not provide financing to industries that are not in accordance with sharia, e.g, shops that selling alcohol, cigarette companies, pig farms, gambling and/or speculative businesses. To avoid sharia violation, Islamic banks and other Islamic financial institutions impose profit sharing contracts (*musyārakah* and *mudārabah*) and sale and purchase contracts (*murābahah, salam, istisna'*) for financing that is different from conventional interest-based credit contracts.

Through *mudārabah* and *musyārakah* contracts, the profit sharing is in accordance with the income generated by the customer. Usually the projection of the customer's business income is carried out first to determine the profit sharing ratio. With a profit sharing system, if the bank's income is large, customers will get a large profit sharing. Conversely, if the bank's income decreases, customers will get a smaller profit sharing. However, customers can continue to monitor the bank's performance every month, because Islamic banks are required to submit monthly financial reports to the public. With this transparency, fund customers can monitor and predict the profit sharing they will receive based on these financial reports. This profit sharing model is actually the earliest theoretical model for Islamic banks. The concept of profit sharing based on loss-profit sharing is widely considered to be the main advantage of Islamic banks compared to conventional banks.[16, p. 8]

Musyārakah or *mudārabah* is a form of contract in Islamic law which is intended as a legal instrument in the business sector to bring together parties who have the same vision and goals to manage joint ventures according to the agreements they agree on.[17] The wisdom of implementing this cooperation agreement is to release or unravel the poverty and hardships of the economic life of people who are in an economically tight position. This cooperation agreement is also a bridge for the birth of humanitarian relations in the field of economic cooperation based on love and affection between the parties involved in the agreement. A *mudarabah* contract occurs when the parties' needs meet in an agreement for economic cooperation.

The philosophical foundation of this cooperation agreement is the birth of a mutualism relationship between the owner of capital and the manager of capital in order to develop joint ventures based on mutual benefits. The principle of *ta'āwun* (helping each other) and needing each other is the foundation for building cooperation agreements in the economic sector and this is one of the pillars in the philosophy of sharia economics. This also applies to similar contracts included in the partnership agreement, such as the *muzaraah*, *mukhabarah*, and *musaqat* contracts. The essence of these contracts is productive cooperation that brings together owners of capital with professionals in the business field. Banks should concentrate more on financing for this cooperation, which is based on business which is the embryo of field absorption.[18]

Profit sharing contracts based on muamalah fiqh such as *mudārabah*, *musyārakah*, of course, require the use of money for the real sector.[19] Because, with these two contracts, the party to whom the money is lent will use it for business purposes, the results of which will be shared with the owner of the capital. These two profit sharing contracts will certainly require honesty and skills and a strong entrepreneurial spirit on the part of the manager. This cooperation agreement will motivate three important things to drive the real sector, namely production, entrepreneurship, and labor. Thus, the pressure point in these contracts is how the monetary sector must be balanced with the real sector. If you rely solely on the monetary sector, there are two possibilities: triggering inflation and economic bubbles which if they explode will cause a crisis.

While financing with a sale and purchase agreement (*murābahah, salam, istisna'*), the bank cannot rechange the installment payment if there is an increase in the interest rate because in the case of a bank sale and purchase contract the selling price is not allowed. Thus, it makes the customer margin payments to the bank relatively fixed until the end of the financing period. If there is a decrease in interest rates, the customer can ask for a margin discount for the payment of the installments. With this buying and selling scheme, customers who have concerns about future interest rate increases can be resolved by using *murābahah* or buying and selling scheme.

Therefore, it can be said that the contracts in muamalah fiqh are based on an underlying transaction, a transaction that requires real goods or sectors to exist. With this contract, it is hoped that monetary flows will be balanced with the real sector. This is because if the flow of monetary and the flow of goods are balanced, the economy will be stable. This will be able to restrain the inflation rate and there will be no economic bubble because there is an equilibrium. Conversely, if money grows out of balance with the quantity of goods, it will trigger inflation or a large economic bubble will occur and if the bubble bursts, there will be a monetary crisis. Thus, the pressure point in the muamalah fiqh contracts is how the monetary sector must be balanced with the real sector. If you rely solely on the monetary sector, there are two possibilities: triggering inflation and the occurrence of economic bubbles which if they explode will cause a crisis.

However, the cooperation contract is based on the *mudārabah* contract. *Musyārakah*, which is the theoretical foundation of contemporary Islamic banking, in practice does not play an important role in the implementation of investment. This is caused by, e.g.: First, the low moral standards in most Muslim societies when managing funds on the basis of profit and loss sharing; Second, it requires continuous vigilance on the part of the bank (shohibul mal) on the use of its funds, thus enabling the bank to add its staff who are experts in the field of strategy and management to evaluate 'business circulation projects' conducted by *mudārib* or *musyārik*; Third, there are problems—technical problem—related to profit and loss sharing, especially regarding the calculation of profit, which requires detailed bookkeeping, even though not all customers have the ability and commitment to this matter.[20, pp. 107–108]

This is where the importance of implementing sharia economics is not only based on formal sharia compliance, but the existence of Islamic financial institutions and other Islamic economic institutions must also be linked to their performance in realizing broader economic and social goals. .[16, p. 9] These economic and social goals are actually rooted in the *maqashid maqāsid syarīah* concept, which is the ultimate goal for all Islamic sharia. The main goal of Islamic law is the benefit of humans and all of nature.

Therefore, the performance of Islamic economic institutions in the perspective of maqāsid syarīah requires an assessment of two aspects at once, namely sharia compliance (sharia compliance) and the ability to understand the needs of the people towards religious preservation (*hifz al-dīn*), guarding the soul (*hifz al-nafs*), guarding honor/descent (*hifz al-'irdh/al-nasl*), guarding the mind (*hifz al-'aql*) and guarding property (*hifs al-māl*). These aspects are interrelated in realizing maqāsid syarīah. Sharia compliance is a necessary condition, while the ability to understand the needs of the people is a sufficient condition to achieve maqāsd syarīah. In other words, Islamic financial and business institutions must meet all the terms and conditions of fiqh muamalah first, then substantially be able to meet the needs of the ummah.

Conclusion

From the above description, several conclusions can be drawn: First, in solving global and national economic problems, it is not enough just to be seen from a purely economic perspective, but it is necessary to emphasize the importance of integration between moral and economic. In this case, Islamic economics is an alternative solution. Second, in order for crises not to be repeated, caused by usury, maisir and gharar, we must have courage to take the breakthrough steps, thinking outside the box. To replace the 'interest' (riba) and the element of speculation (maisir) in supporting the operational system of Islamic financial institutions, several contracts were established, both related to efforts to raise funds or financing, e.g., *musyārakah, mudārabah, murābahah, salam, istisna', ijārah* contracts and so on. Third, the contracts (akad) in *muamalah fiqh* are principally based on underlying transactions, a transaction that requires real goods or sectors to exist. With this contract, it is hoped that monetary flows will be balanced with the real sector. If the flow of monetary and the flow of goods are balanced, the economy will be stable. This will be able to restrain the inflation rate and there will be no economic bubble because there is an equilibrium. Fourth, the performance of Islamic economic institutions requires assessment from two perspectives as well as sharia compliance and the ability to understand the needs of people based on *maqāsid syarīah*.

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Establishment of Food Industry State-Owned Enterprises Holding to Realize Indonesian Food Sovereignty

Agus Darmawan[1]

Introduction

National development is a series of sustainable development efforts that cover all aspects of life, society, nation and state, to carry out the task of realizing national goals as formulated in the Preamble to the 1945 Constitution. The implementation of these efforts is carried out in the context of meeting the needs of the present without reduce the ability of future generations to meet their needs, including in terms of meeting the food needs of all Indonesian people.

In the global market, the food sector faces six main mega trends, which make food security increasingly important for every country to overcome, namely increasing demand and changes in consumer behavior, climate change, increasing focus on food loss reduction, industrial consolidation, utilization of agriculture 4.0 and the impact of COVID-19 pandemic on the agribusiness chain [8].

The sustainability of the national food sector during the current Covid-19 pandemic is influenced by several factors, namely: i) the need for basic commodities will increase due to changes in people's buying habits as a result of COVID-19; ii) increasing limited access to some food commodities due to export bans in various countries and international logistics limitations after COVID-19; iii) the need for additional financial support to farmers/fishermen/breeders to ensure smooth working capital in addition to existing government programs; iv) the importance of maintaining affordability of basic food commodity prices by linking supply and demand and through efficiency along the food value chain; and v) the performance of SOEs in the food industry which continues to decline due to lack of focus and burdened by past financial burdens [13].

[1] University of Muhammadiyah Tangerang, agus.gic@gmail.com

SOEs as an extension of the government's arm in providing the necessities of life in the form of goods and services, expanding employment opportunities and advancing the country's economy has a strategic role in assisting the government in realizing its aspirations. In the food sector, SOEs have not played an optimal role in supporting the sustainability of national food, so that in the future SOEs are expected to become the backbone of the government in the transformation of the national food industry to realize national food sovereignty [1].

Currently, there are several SOEs engaged in the food industry, including: PT Rajawali Nusantara Indonesia, PT Pertani, PT Perikanan Nusantara, PT Garam, PT Berdikari, and PT Shang Hyang Seri. However, these SOEs carry out their own business so that the chain of national food sustainability is not well implemented.

The function of SOEs which is not yet optimal in supporting the sustainability of the national food sector, encourages the author's thoughts to realize the idea of forming a Food Industry SOEs Holding in order to support the government's food security aspirations through increased production and efficiency through value chain integration in various main food commodities run by SOEs.

Methods

The nature of the research in this paper is descriptive which is carried out with a normative juridical approach. The types and sources of data used are secondary data. Data collection is carried out mainly by document study techniques (library research and online research) by taking an inventory of the secondary data needed, both in the form of primary, secondary and tertiary legal materials, then conducting historical searches and synchronization between these legal materials

The purpose of this study is to describe the establishment of a food industry SOEs holding to increase the role of SOEs in supporting the government's aspirations for food security through increased production and efficiency through value chain integration in various national main food commodities.

Discussion

World Food Condition

The world food sector market is currently experiencing problems that need to be addressed by each country to secure food security in each country. Some of these problems include: increased demand and changes in consumer behavior, climate change, increased focus on food loss reduction, industrial consolidation, the use of agriculture 4.0 and the impact of the COVID-19 pandemic on the agribusiness chain [16].

Increased demand for agribusiness products and changes in consumer behavior. The consumption growth of the main commodity groups is predicted to continue to increase, accompanied by changes in consumption behavior that lead to healthier and more natural choices [3].

Climate change has an impact on changing the global landscape of food-producing areas, because climate change changes cropping patterns. Climate change caused by global warming will continue and is projected to reduce agricultural productivity by 16% by 2050 [3].

Increased focus on Food Loss Reduction, where a third of the world's food is lost or wasted along the value chain, 32% is wasted in the production process. Food loss is when food is lost accidentally (decay), mostly at the agricultural and logistics level, waste is when food is fit for human consumption but thrown away, mostly at retail and consumer levels [6].

Industrial consolidation that occurs where global food sector business actors continue to consolidate industry by increasing the size of the agricultural industry and consolidation in the agricultural sector [5]. The use of digital solutions and technology on a large scale will continue to increase and become a critical factor in the food sector or called Agriculture 4.0 [4]. Agribusiness addresses challenges along the value chain through technological developments. The Covid-19 pandemic also has an impact on the agribusiness value chain, so this pandemic condition can be a catalyst for trends in the agricultural industry to encourage change or some acceleration.

National Food Conditions and Trends

National food availability, from BPS data for 2020, it is illustrated that the level of self-sufficiency in 2020 (the ratio between domestic production and consumption levels) is still below 100%. In 2020, the availability of rice, corn and chicken can almost meet domestic consumption needs, or is in the range of 95% - 99%. However, the need for imports for other food supplies is still quite high due to the unfulfilled domestic productivity [6].

With regard to national food quality, Indonesia faces challenges in food diversity, nutritional standards, and protein quality compared to global conditions. Based on the 2019 Global Food Security Index, Indonesia's difference to the highest global average lies in protein quality, which is 36.8% [6]. However, Indonesia is still superior in the availability of micronutrients. Quality challenges are the impact of market dominance of existing players, low margins, multi-layered network of traders, sustainability issues, poor logistics and infrastructure, and the non-optimal presence of SOEs in aquaculture. Food price volatility which is still relatively high due to supply chain inequality in eastern of Indonesia is also a national problem.

Inclusivity is also a challenge due to the fluctuating Farmer Exchange Rate due to high price volatility and the absence of certain margins, low welfare levels for farmers/breeders/fishermen and lack of working capital for farmers/breeders/fishermen. The challenge of inclusivity is the impact of the lack of welfare of food sector actors, infrastructure and resources that have not been optimal, and the enforcement of rules and policy alignment has not been optimal [3].

Strategic Function of SOEs in National Food Sovereignty

In the context of economic development, the main actors (pillars) of the national economy include SOEs, the private sector, and cooperatives. Cooperation between economic pillars must be developed not only on the basis of mutual benefit, but also on the basis of their respective roles as business partners, without forgetting the basic principles and joints of each business entity. State intervention in economic activity is needed to reduce market failures, price rigidities, and the impact of externalities on the natural and social environment. The state is present in economic activities through legal regulations or policies that regulate economic activities and business entities (SOEs) as business actors [10].

SOEs as an extension of the government's arm in providing life necessities in the form of goods and services, expanding employment opportunities and advancing the country's economy has a strategic role in assisting the government in realizing its aspirations [14]. Especially in the food sector, Food SOEs are expected to realize the government's plan to support the transformation of the national food industry.

In accordance with Article 2 paragraph (1) of Law no. 19 of 2003 concerning State-Owned Enterprises as last amended by Law no. 11 of 2020 concerning Job Creation, the purpose and objective of establishing SOEs is to support the national and state economy, pursue profit, provide goods & services for the livelihood of many people and actively participate in providing guidance and assistance to entrepreneurs from economically weak groups, cooperatives, and the community. So, it can be said that SOEs is an Agent of Development, SOEs Food has a role as an extension of the government's arm in supporting the national food industry. To carry out their duties and functions, SOEs in the food sector require support from the relevant Ministries which include (but are not limited to) assignment to assist SOEs of cluster food in running their business and improving their financial capabilities and adjusting regulations/policies that support SOE activities in order to achieve the vision of the Government [10].

SOEs as a government tool in providing life necessities in the form of goods and services, expanding employment opportunities and advancing the country's economy are expected to play a strategic role in assisting the government in realizing its aspirations [2]. Especially in the food sector, Food SOEs are expected to be able to realize the government's plan to create national food security and to carry out this role the Ministry of SOEs has declared five main priorities that must be carried out by Food SOEs, namely: creating economic and social value for Indonesia, creating innovative business models, develop technology leadership, drive investment and develop talent.

Establishment of Food Industry BUMN Holding to Realize National Food Sovereignty

The management of SOEs as part of the management of state finances, based on Law Number 17 of 2003 concerning State Finances, it is regulated that SOEs finances are included in the scope of state finances so that their management and accountability follow the mechanism of management and accountability of state finances. In the state finance regime, SOEs finances are included in the category of separated state assets. The regulation of SOEs as a business entity has its own law that specifically regulates BUMN, namely Law Number 19 of 2003 concerning SOEs. In addition to this law, there are other laws and regulations that apply and bind SOEs.

State control is important so that the welfare of the people and the people at large can enjoy the sources of people's prosperity from the earth, water, and natural wealth. This is a strategic position for improving people's welfare. State control is reflected in Article 1 point 1 of Law Number 19 of 2003 which states that State-Owned Enterprises, hereinafter referred to as BUMN, are business entities whose entire or most of the capital is owned by the State through direct participation originating from separated State assets [9].

The involvement of the State, either directly or indirectly through its entities or legal entities, including SOEs in commercial activities, has been going on for a long time. In general, commercial activities are engaged in various fields, such as mining, electronics, plantations, transportation, irrigation, provision and maintenance of various public facilities and others [7].

The paradigm shift of the public economy (the role of the government in driving the economic movement is very prominent) to the market economy (economic management based on market mechanisms and competition) has become symptomatic throughout the world today [10]. By laying the operating foundation on market and competition mechanisms, it is hoped that it will spur individuals and business entities including BUMN to be creative, innovative and continue to take initiatives on the basis of entrepreneurship and cost efficiency. Better management of SOEs as part of state financial management becomes very strategic to be carried out as a source of funding in the State Revenue and Expenditure Budget (APBN).

SOEs is a business entity whose capital is wholly or most of the capital is owned by the state through direct participation originating from separated state assets. SOEs has special characteristics that other business entities do not have is a business entity "dressed as a government" but has the flexibility and initiative like a private company.

SOEs in developing countries have several weaknesses, including: i) experiencing inefficiency, overstaffing and low productivity; ii) have low quality of goods/services; iii) continuing losses and rising debt; iv) lack of managerial skill or sufficient managerial authority; v) obsolete paractice or products and little marketing capability; vi) underutilized and underperforming assets [16].

In many developing countries, they still hold the principle that the state should retain control over strategic SOEs, such as the defense industry sector, food industry, or even the banking sector [4]. This type of SOEs is usually given monopoly rights to protect its position. The importance of the state controlling the strategic sector through its SOEs is due to the view that the state is the locomotive for economic growth, especially through physical development

SOEs play a crucial role in the end-to-end ecosystem of the Indonesian economy. SOEs as part of the government will continue to support government programs as well as become part of the development agency. In addition, SOEs will strive to make a positive contribution to economic development and national infrastructure. Other contributions are realized in the form of taxes, dividends and various Non-Tax State Revenues (PNBP) which are directly transferred to the state.

The very strategic role of SOEs makes the management of SOEs need to be carried out optimally through restructuring policies in the context of restructuring SOEs. In the global context, the restructuring of SOEs through the privatization of SOEs has been carried out in many countries, including one in China.

Learning from China, where about 86% of the approximately 87,000 SOEs that have been restructured, nearly 70% have been privatized, either partially or fully, about 10% have been liquidated, and about 20% have been merged. The privatization policy developed in China is that the Chinese government retains ownership of large SOEs and relinquishes ownership of small SOEs. For large SOEs, only partial privatization was carried out in order to invite strategic investors and foster a new, more competitive culture, while for small SOEs the government released the majority of shares to the public through the sale of shares (IPO) in the capital market, so that the development of the capital market industry increased rapidly in China (Cao and Qian, 1999).

Observing the global trend where the role of SOEs continues to increase in the economy and the current condition of Indonesian SOEs, steps to improve SOEs in Indonesia to create sustainable added value for the nation is a priority that needs to be done [15]. In the implementation of SOE business, where the top 25 SOEs generate total sales, 25 SOEs generate total sales of 90% of the total 118 SOEs. Whereas the level of administrative difficulty in carrying out corporate actions is relatively the same between SOEs with large or small sizes. The guidance and monitoring of 118 SOEs also creates a span of control that is too broad, which raises questions about its effectiveness. Efforts to do the rightsizing of SOEs are a must. The establishment of a SOEs holding company is one of the alternatives in the rightsizing process.

The establishment of SOEs holding is also an effort by the government to increase the value creation of SOEs [15]. In the context of the establishment of the Food Industry SOEs Holding, where companies from various business lines are combined and a holding company is formed that oversees these companies. This concept is known as the Corporate Parenting Strategy, where there is one company that becomes the parent company and there are several companies that have various main businesses that become subsidiaries.

Currently, there are several SOEs engaged in the food industry, including: PT Rajawali Nusantara Indonesia, PT Pertani, PT Perikanan Nusantara, PT Garam, PT Berdikari, and PT Shang Hyang Seri. However, these SOEs carry out their own business so that the national food sustainability chain is not well implemented [12].

Pangsa pasar dari produksi BUMN Industri Pangan terhadap produksi nasional masih belum optimal ditunjukkan dengan market share beberapa komoditas produksi klaster pangan terhadap produksi nasional yang masih belum optimal. Pangsa pasar produksi beras sebesar 66 ribu ton masih kurang dari 1% terhadap produksi nasional, sedangkan pangsa pasar produsen utama, dalam hal ini PT Buyung Poetra Sembada dengan produknya beras cap Topi Koki, adalah sebesar 6%. Begitu pula dengan pangsa pasar benih yang sebesar 8%, masih jauh berada di bawah produsen utama, dalam hal ini BISI, yang mempunyai pangsa pasar sebesar 50%.

The market share of the Food Industry SOEs production to national production is still not optimal, as indicated by the market share of several food cluster production commodities to national production which is still not optimal. The market share of rice production of 66 thousand tons is still less than 1% of the national production, while the market share of the main producers, in this case PT Buyung Poetra Sembada with its Cap Koki rice product, is 6%. Likewise, the seed market share of 8% is still far below the main producers, in this case BISI, which has a market share of 50%.

The inclusiveness and welfare of farmers, ranchers and fishermen are still not optimal. The number of farmers partnering sugar mills PT RNI Group, PT SHS and PT Pertani is 40,388 farmers, or 0.12% of the 36.5 million farmers nationwide. The number of Berdikari partner farmers is 1,050 independent farmers, or 0.008% of the 13 million independent farmers. The number of partner fishermen of PT Perinus and PT Perindo is 3,508 partner fishermen, or 0.24% of the 1.46 million national fishermen

The productivity of several main commodities, such as rice, sugar cane, sugar and salt, is still below the benchmark. The rice productivity of SOEs Industry Food is 5.7 tons/ha while China's production is 6.9 tons/ha. Sugarcane productivity is 73 tons/ha while China's production is 76 tons/ha. The sugar yield of Food SOEs is 7% while Thailand's yield is 7.3%. Salt productivity is 0.45 million tons/year while Australia's productivity is 4 million tons/year

The restructuring of SOEs engaged in the food industry through the idea of forming a Food Industry BUMN Holding needs to be done immediately to foster a strong synergy in creating food sustainability due to several factors, including: the need for basic commodities will increase due to changes in buying habits.) the community as a result of COVID-19, increasing limited access to several food commodities due to export bans in various countries and international logistics limitations after COVID-19, the need for additional financial support to farmers/fishermen/breeders to ensure smooth working capital in addition to existing government programs, The importance of maintaining the affordability of basic food commodity prices by linking supply and demand (supply & demand) and through efficiency along the food value chain, the performance of SOEs in food clusters continues to decline due to lack of focus and burden by past financial burden.

The establishment of this Food Industry SOEs Holding is expected to create the independence of the national food industry, the availability of products in all corners of Indonesia, the acceleration of innovation to produce quality products, the affordability of products for all levels of Indonesian society, the increase of business scale in the SOEs of the food industry, and the strengthening of ecosystems in the food sector.

The concept of SOEs Holding Food Industry is carried out through a scheme that this holding will be engaged in food commodities, namely: rice, corn, sugar, salt, chicken, beef, fish and other food products. In the value chain, increased production is carried out through increasing the role of mentoring and offtake capacity with a model of cooperation with farmers, ranchers and fishermen [5].

The Food Industry SOEs Holding will also develop retail products such as cooking oil, eggs, tea, wheat flour, mineral water, soy sauce and others. Furthermore, several SOEs engaged in trading and logistics (eg PT Perusahaan Perdagangan Indonesia) will be included in the Food Industry SOEs Holding to become consolidators and aggregators in the trading and logistics business to reduce logistics costs for food commodities. Furthermore, the holding process must also be able to realize its big goals, namely: food security, inclusiveness and becoming a world-class company that is in line with the national development vision to realize food sovereignty.

Conclusion

The establishment of SOEs Holding the Food Industry is expected to create independence for the national food industry, availability of products in all corners of Indonesia, acceleration of innovation to produce quality products, affordability of products for all levels of Indonesian society, increasing business scale in the SOEs food industry, and strengthening the ecosystem in the food industry sector in order to realize the vision of national development to realize national food sovereignty.

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Pumakkal Bioremediator Of Organic Fertilizer

Agus Sutanto[1], Hening Widowati[2], Achyani[3], Nedi Hendri[4], Fenny Thresia[5]

Introduction

The third World's Biggest Pineapple Idustry is PT Great Giant pinneaple (PT GGP) Located in Lampung Indonesia. PT Great Giant pinneaple (PT GGP) was established since 1979 and be the first plantation in Indonesia that develop intensive research in cultivating Pineapple Plant. The plantation has area about 32.200 Ha with the main cultivation of Pineapple with *Smooth cayane* varieties. Currently, plantation able to produce more than 500,000 tonnes of pineapple / year. With the high amount of production, PT Great Giant Pineapple also produce wastewater of 5,000 m^3/ day with characteristic of high acidity and organic matter. High acidity is caused by the production of pineapple, as we know that pineappe has sour taste, so its possible that the waste that produced has high acidity.

The waste of PT. Giant Great Pineapple if form solid, liquid, and gas waste. The waste could be came from pineapple ski, pineapple eye, and pineapple heart. Also, when the process of washing, could be the cause of waste. The solid waste usualy recyle in the form of fertilizer for the pineapple plant, and for the feed of the cow that bred there. The process of recycling the waste becoma animal feed, is one of the way to tackling the waste. Beside pineapple plant, PT Great Giant Pineaple also developing livestock as an effort to sustainable the production. But, the liquid waste with the high amount, processed by relocated waste in the lagoon pound in 2-3 days after that it will flows to the irrigatin. Meanwhile this pineapple waste contains of usefull contents such as glucose, fructose, sucrose, and another nutrient.

[1] Universitas Muhammadiyah Metro
[2] Universitas Muhammadiyah Metro
[3] Universitas Muhammadiyah Metro
[4] Universitas Muhammadiyah Metro
[5] Universitas Muhammadiyah Metro

The waste that flows to irrigation, still has the high amount organic matter and high acidity. And it can affect the the aquatic ecosystem, such the cause of the death of fishes, and another animals and microbe in irrigation, also can cause blooming algae. There is a biological activity that found in the liquid waste. There are some microbe live in there, although in acidic condition. The microbe that live there, adapt to acidic environtment, and help the degredation of pineapple liquid waste. Microorganism such as microbe, in agriculture can increase the availability of soil nutrients and plant absorbsion and fertilize the soil [1]. So, when it is used properly, it will have a positive impact for the environment. Research on the use of microbes in liquid waste has been done a lot, and produces optimal results. One of them is a study conducted by [2] which found that the longer the operating time, the greater the decrease in COD concentration and the greater the concentration of Degra Simba for treating waste, the greater the decrease in COD concentration.

The research was take a place in the lagoon pound of PT Giant Great Pineapple to identificate the contain of liquid waste in there. The results shown that the bacterial isolation from the waste storage pond obtained 15 indigenic bacteria. Identification of four potential bioremediator bacteria are: *a. Bacillus cereus, b. Acinetobacter baumanni, c. Bacillus subtilis, d. Pseudomonas pseudomallei, the four* consortia were arranged in order to obtain the best formula as a parser called Pumakkal (the originator means in Lampung language). Pumakkal's ability to decompose organic matter is applied to pineapple liquid waste and coffee pulp waste. The results of the decomposition of liquid and solid organic waste produce Liquid Fertilizer and compost according to the standards of the Republic of Indonesia's Minister of Agriculture No. 261 / KPTS / SR.310 / M.4 / 2019 concerning Minimum Technical Requirements for Organic Fertilizers.

The fermented compost with Pumakkal in the form of coffee husk organic fertilizer and Pumakkal starter applied to red spinach (*Amaranthus tricolor* L) resulted in higher growth and weight than the control. The formulation with some mixture of indigen bacterial of Pineapple Liquid Waste shown the best result of the research. The application of liquid organic fertilizer as a result of Pumakkal bioremediation on pineapple plants resulted in higher pineapple weight and increased levels of vitamin C compared to controls. The Pumakkal bioremeditor formula is able to decompose liquid and solid organic materials into liquid organic fertilizer and compost according to the Ministry of Agriculture's standards. Application of liquid fertilizer and compost to fruit and vegetables results in over-control production.

Discussion

One of the big companies in Lampung which is engaged in agriculture with production of Pineapple and its processing is PT. Great Giant Pineapple (PT GGP) which is located in Terbanggi Besar District, Central Lampung Regency. The total plantation area currently reaches ± 32,000 ha (gross) with harvests of > 500,000 tonnes of pineapple / year . The results of the harvest in the form of pineapples and their processed products then exported to almost 63 countries and 5 continents in the world [3]. Not only producing pineapple and processed products that can be consumed, PT GGP also produces *concentrate* which is actually part of waste management in the form of *Pineapple Juice Concentrate* / PJC) and from fruit peels (processed into *Clarified Pineapple Concentrate* / CPC) . Both of these preparations still have a selling value for export, so that they can increase company profits [4]. From the processing of pineapple fruit, whether it produces canned fruit or its by-products, the company produces solid, liquid and gas waste, each of which has different characteristics. Liquid waste, for example, comes from the process of stripping, washing, separating, and producing pineapple concentrate which has a high acid content and organic matter [5].

Pineapple Liquid Waste (LCN) is influenced by the physical, chemical and biological characteristics of the waste itself. Physical properties are influenced by the presence of floating, suspended and settling solids, while chemically it is influenced by the presence of organic and inorganic materials, as well as the microorganisms found inside, are characteristic of their biological properties. The management of pineapple liquid waste is carried out in the form of shelter in the lagoon pool and left for 2-3 days before finally flowing to irrigation. However, this process is considered inefficient because it requires a long time and the high content of organic matter and acidity levels can affect the aquatic ecosystem.

Pineapple Liquid Waste contains ± 87% water, 10.54% carbohydrates, 1.7% crude fiber, 0.7% protein, 0.5% ash and 0.02% fat. The presence of this organic material provides an opportunity for organic decomposing indigenic bacteria to be more dominant. Microbes that degrade organic matter exist more in environmental conditions that contain lots of organic substances [6]. The dominant characteristic of LCN is high acidity. The degree of acidity while ressearch done was 3.44 of pH with a range of 1.92-5.86 and at the research location the three dominant organic acids were citric acid 157 mg / l (preliminary test 400 mg / l), malic acid 88.9 mg / l and succinic acid 66.21 mg / l. Because of it'ss acidic, the bacteria that grow are adapted to an acidic environment, one of which is the extremophile bacteria . These bacteria are known to has potential which is widely used in biotechnology and bioprocess technology [7].

There were 4 most potential LCN isolates indigen bacteria based on their ability to live at acidic pH and hydrolytic ability. Morphological and cytological characteristics showed the similarity of isolates, namely bacillary and motile forms. Whereas the difference between each bacterium has different morphological and cytological properties. The identification of bacteria is followed by physiological characteristics to determine the species of bacteria. There were species of *Bacillus cereus , Acinetobacter baumanni , Bacillus subtilis , and Pseudomonas pseudomallei .* Conditions that are too acidic, allowing pathogenic bacteria to be stunted. The degree of acidity (pH) can affect enzyme activity. Acidic condition can cause enzyme activity may be reduced or even become inactive. Based on the *Hemogglutinase Inhibitation Assay* test [8] and they were included in hazard group II, the results shown that the four species were not pathogenic, thus the selection of the four bacterial species fulfill the safety for environment.

The selection of Indigen LCN bacterial species is based on its ability to neutralize pH, reduce BOD, COD, and TSS. So that the selected species *Bacillus cereus* , *Acinetobacter baumanni* , *Bacillus subtilis* and *Pseudomonas pseudomallei* . The inoculums of these four species were taken to determine their biodegradability, which is known that the four species have good organic acid degradation ability and the ability to raise pH.

The application of Pumakkal in making coffee husk compost can improve soil structure and increase the productivity of soil. Coffee husk are chosen as the main material for making organic fertilizers because they contain nutrients such as nitrogen, phosphorus and calcium. The Utilization of coffee plant products is its beans that are exported or processed as raw material for domestic production [9]. However, the waste in the form of the husk is just thrown away. Lampung Province is the best producer of coffee in Indonesia with abundant harvests. The abundance of crops is also directly related to the coffee husk waste that is produced. To reduce coffee husk waste, a breakthrough was made in the form of processing coffee husk waste into coffee husk organic fertilizer.

The process of coffee husk waste is carried out using bioremediation techniques, so that the end result is in the form of organic fertilizer which can be used as a source of plant nutrition and reduce the use of chemical fertilizers [10]. Bioremediation techniques that used is by utilizing microbial consortia such as Pumakkal. Pumakkal consist of good bacteria from Liquid pineapple waste (LCN) that have ability to recovery the waste [11]. The result shows that the nitrogent content of this compost was higher than another organic fertilizer compost [12].

The results of the research shown that the application of coffee husk organic fertilizer influence the growth and productivity of red amaranth (*Amaranthus tricolor* L) observed with the two aspects, i.e plant height and fresh weight. Treatment given are P0, P1, P2, P3, and P4. The optimal results shown at P3 treatment by using 50% coffee skin + 12.5% leaf + 25% goat manure + 12.5% husk charcoal, got average height measurement of 14.45 cm. The application of organic coffee husk fertilizer with variations of P3 affects the growth of spinach the most optimally, because of the cooperation between N, P, and K nutrients which can affect plant growth.

Nitrogen has an important role in stimulating stem growth which will stimulate plant height growth. Nitrogen helps in the photosynthesis process, and the results of photosynthesis will be translocated to all parts of the plant body. But nitrogen can't work alone, nitrogen needs help from potassium to fulfill one of the basic material needs of photosynthesis, namely carbon dioxide. Potassium has the ability to absorb carbon dioxide in the natural surroundings. Potassium works to increase the absorption of carbon dioxide, move sugars to the formation of starch and protein, helps open and close the stomata mechanism. The combination of nutrient elements such as N, P, and K in plants will optimize the photosynthesis process, which in turn will increase growth in the form of an increase in plant height. In addition, if the photosynthate is optimal, it will affect the wet weight of the plant. In the research that has been carried out, the highest wet weight yield of red spinach is 0.0146 kg.

Pumakkal application in liquid fertilizer from pineapple liquid waste (LCN KA / 5 bacteria) on pineapple plants , the best fruit weight is with an average of 812.9grm, in the second treatment (LCN KB / 10 bacteria) pineapple plants produced at flowering speed, fruit height and fruit circumference the best with an average of 138.1 (days), 13.96cm and 33.54cm, in the third treatment (LCN KC / 15 bacteria) pineapple plants produced at the best vitamin C levels were -average 30,8582mg / 100gr.

The use of Pumakkal affected pineapple plant production and the best vitamin C levels in each treatment with the same fertilization dose, namely 1L LCN / 4L water. From the research data that has been obtained, it shows that pineapple plants that have a good level of production are one of the desires of pineapple farmers in general. Pineapple plants usually only use chemical fertilizers, or fruit stimulants for example, but in this study pineapple plants were fertilized using LCN (Pineapple Liquid Waste) which is known to be quite good for increasing pineapple production and its vitamins and can be applied to other plants. The results of this study indicate that LCN (Pineapple Liquid Waste) fertilizer greatly affects the production of pineapple plants and their vitamin levels.

This LCN (Pineapple Liquid Waste) fertilizer is an organic fertilizer derived from pineapple liquid waste. As is well known, organic fertilizers are fertilizers that come from organic materials such as plants, animals, and humans. Fertilizer made from fermented pineapple liquid waste using indigenized bacteria (decomposing bacteria) because LCN with high organic matter content cannot be naturally decomposed by bacteria in waters or rivers, due to the high volume and content of waste, as well as the number and types of bacteria. inadequate in these waters, therefore the quality of the LCN must meet the quality standards for its emissions. The use of these indigenized bacteria also aims to lower the pH in the LCN (Pineapple Liquid Waste). Nutrient content in pineapple liquid waste is C, N, P, K, Ca, Mg, Na, Fe, Zn, Mn, S [13].

The bioremediator formula in making liquid fertilizers and compost is able to produce fertilizers that meet the criteria of the Republic of Indonesia's Agriculture Ministerial Decree No. 261 / KPTS / SR.310 / M.4 / 2019 concerning Minimum Technical Requirements for Organic Fertilizers, and feasible to be applied to pineapple and red spinach plants.

Conclusion

Pineapple liquid waste has four potential bioremediator bacteria ; *a. Bacillus cereus, b. Acinetobacter baumanni, c. Bacillus subtilis, d. Pseudomonas pseudomallei, the four* consortia were arranged in order to obtain the best formula as a parser called Pumakkal (the originator of the Lampung language). The Pumakkal formula produces liquid fertilizer and compost according to the criteria for the Minister of Agriculture of the Republic of Indonesia No. 261 / KPTS / SR.310 / M.4 / 2019 and feasible to be applied to pineapple and red spinach plants.

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Muslim-Buddhist Relations In Girimulyo Kulon Progo Special Region Of Yogyakarta

Ahmad Salim[1]

Introduction

Relationship among humans is a necessity that cannot be avoided and instead become one of the human characters as social beings who oblige them to make relationships to comply their needs. It can be said that as a human being man cannot live without association. Human life is to enormous extent a group life [1]. The interaction between human beings which is realized through dialectics with other peoples, it not only creates cooperation and harmony but on the contrary can also impact a tension in society. Harmony occurs when there is the same perception and belief in understanding reality and also there is a media or equipment to meet the point of different perceptions and beliefs. Meanwhile, tension is created as a result of different perceptions, knowledge, belief, behavior, custom, and interests in responding to a dynamic that occurs in society and the lack of linking that can bring together some differences

The achievement of harmonization in human relations within the scope of society requires the existence of a standardized norm that can be used as a reference in regulating relations among human beings. The most existing norms will work effectively when there are other realities that support the harmonization, for example, the balance between the majority and the religious minorities in Indonesia. Mudzhar stated that the balance between the majority and minority adherents in Indonesia is one of the instruments to strengthen harmonization in several parts of Indonesia [2]. The majority-minority balance can be seen in the reality that although Muslims are the majority of Indonesia, in some provinces other adherents are the majority, for example in Bali, Hindu is the majority, Christian in Papua and North Sulawesi is the majority, Catholic in East Nusa Tenggara is the majority. Adherents of a majority religion at one level can become a minority at another level to a smaller level, at the district level, adherents of a certain religion are the majority, but at the village level they can become a minority.

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The reality related to the balance of the majority-minority of religious adherents greatly contributes to the feeling of mutual harmony among adherents of different religions. The majority of people in one place will not act "arbitrarily" to the minority, considering that in another places the people may become a minority. The majority's fear of retaliation from minorities elsewhere has become one of the instruments for maintaining the harmony of inter-religious relations in Indonesia. This perception is built based on the many realities of tension carried out by the majority against the minority in one place and getting a backlash from the majority in another. On other hand, the minority may feel safety from the majority adherent, not think whose right was be neglected and can do freely many activities including ritual activity at worship place and public area.

In general, the majority of religious adherent in Kulon Progo Regency, D.I Yogyakarta is Muslim, but in the Jatimulyo Village level, Buddhist is the majority of the people who inhabit Gunung Kelir, Sokomulyo, Sonyo, Jatinganti, and Karanggede. Based on the official website of Jatimulyo Village, in 2020 there are 605 Buddhists who inhabited in Jatimulyo Village area. Of these, Buddhist is concentrated in the areas, namely Gunung Kelir, Sokomulyo, and Sonyo so that Buddhist is the majority religion in the three hamlets, although when be seen as a whole in Jatimulyo Village, Buddhist is only 10% from Muslims, due to musims are 6,725 people in number. According to Jatimulyo's official website Buddhist adherent number is decline continually, particularly at post new era regim in Indonesia. In other hand, the number of Buddhist more than 1000 at new era period in Jatimulyo.

In general, Muslim-Buddhist relations in this hilly area run harmoniously and peacefully. Tensions that occur between religious communities can be resolved effectively at the local level and do not turn into widespread communal conflicts that lead to the division of harmony between religious communities. The reality of religious harmony is an order that must always be guaranteed, considering that religious plurality is a reality that cannot be avoided in almost all parts of Indonesia. Seeing the conditions above, the reality of inter-religious harmony is interesting to study when it is associated with the theory of majority-minority balance, as a guardian of harmonization of inter-religious relations. The writer wants to more deeply reveal several variables of inter-religious harmony in this mountainous area with Putnam and Cheleen's theory, namely social capital. However, it will contribute to expanding the current knowledge, and will have an important impact on domestic and international academic conversations on sociology study, particularly at different ideological relation on one hand may be integrated but on other hand there will be clash between religius group.

Discussion

Relations between Muslims and Buddhists in the Jatimulyo Community

The development of Buddhists in Jatimulyo cannot be separated from the well-known the history of 1965, after the rebellion of the Indonesian communist party (PKI) in Indonesia. The government's intervention to the community in order they have a clear religious identity by affixing it on their identity cards has broad implications for the many people of Jatimulyo choosing Buddhism as their religion so that they are not accused of being the PKI.[3] The tendency of these people to choose Buddhism as a new ideological religion is because Buddhism is more in line with *kejawen* teachings, as their first belief. The pattern of the village community which is still dominant in patronage, both political and spiritual leaders have a strong influence on attracting the community to embrace Buddhism, because many figures embraced Buddhism at that time. Long before 1965, the people of Jatimulyo began to study Buddhism through village leaders, namely *Mbah* Slamet and *Mbah* Dasuki by 1932-34. Through these two figures, Buddha became known to the public and developing in the following years, especially after the PKI rebellion. The community began to pursue and study Buddhism in the 1980s, not only through the two village leaders as mentioned above but also from outside the village leaders, namely from Purworejo, Central Java Province. The implication of the many Buddhism activities is strongly correlated with the rapidly growing number of Buddhists in Jatimulyo Village, so it becomes the majority religion to this community in that of the year.

The Muslim-Buddhist relationship has been running harmoniously, as a logical consequence of the awareness of the two peoples towards the reality of the plurality of society which necessitates harmony between them to achieve prosperity in their lives [4]. The community realizes that harmony is a necessity to catalyze the welfare of life. This harmony condition, besides being based on the theological religious teachings (Islam, Buddhism) is also supported by the legacy of Javanese teachings, which are famous for being tolerant, respectful, as the main behavior to create a harmony. The implementation of a tolerance can be seen in involving young Buddhists in ensuring of health protocols for Muslims who perform Eid al-Fitr and Eid al-Adha prayer in the courtyard of 4 Junior High School Girimulyo during covid 19 period. On the other hand, when Buddhists carry out the *waisak* ceremony, Muslims also do the same activity, namely safeting and ensuring the health of Buddhists who attend to *waisak* rituals.

The harmonization of Muslim-Buddhist relations is also seen in the holding of *syawalan* and *waisak* simultaneously in one of the residents' houses. This associational activity[5] can run smoothly and reflects a strong building of harmony between Muslim-Buddhist interactions. Community harmony is not only based on the theological understanding of the two religions but is also based on the brotherhood of one ethnicity, namely Java. Plurality in the religious aspect does not correlate with an ethnic plurality in the context of the Jatimulyo community so that this ethnic homogeneity is the glue or bond of harmony among two or more peoples. Awareness of ethnic equality and the long history of Muslim-Buddhist togetherness in coexistence in the building of a traditionalist society strengthen the link of brotherhood and harmony between them.

Associational encounters[6] involving Muslim-Buddhist are also seen at social gathering events at the hamlet level. This activity, which involves many elements of women, can foster a sense of brotherhood among people of different faiths because there is no difference among them in the context of religion. They can interact to each in other on behalf of the residents or the community, so that different ideological religious not become a barrier to carrying out activities that are carried out once a week. Muslim-Buddhist relation is not only limited to associational activities, namely interactions that occur because of meet at a forum that can bring together two or more group entities but quotidian patterns which are daily activities and informal are often found in Muslim-Buddhist relations [7]. Visiting residents of different religions in their daily lives is an activity that has been going on for a long time in the Jatimulyo community. Buddhists visiting Muslim homes during the celebration of Eid al-Fitr is a form of relationship that has been built and has become a daily activity. On the other hand, during the *waisak* celebrations, many Muslims visit Buddhist homes to congratulate and eat the food given by the host together.

The quotidian nature of the interaction is not only seen by visiting each other's homes but is also shown by greeting residents when they meet or gather at several places or occasions. Greetings when they are meeting show that Javanese culture is still used which preserves respectful and polite attitude towards others, including people of different religions. Greeting, namely, asking for news, or simply asking for permission from younger people to older people when they pass each other. The Muslim-Buddhist meeting can also be seen in several activities that characterize traditionalist societies, namely *kerja bakti, sambatan, rewang*, community donations, and visits to neighbors [8]. Community service (*kerja bakti*) is basic mutual cooperation carried out when the community concerned has a communal program for the benefit of the residents, such as, building substations, cleaning or widening roads, and even renovating places of worship. The meeting between residents to carry out community service is the bond of the meeting between Muslim-Buddhist who penetrates the boundaries of the theological differences. Residents seem to be able to work on village programs together without being influenced by differences in idiological religius or theology which the aim of facilitating all residents of the programs being carried out.

Variables of Harmony of Muslim-Buddhist Relations in Jatimulyo Community

The majority-minority balance has implications for the harmony of Muslim-Buddhist relations in Jatimulyo Village. Besides Buddhist is majority, they are reluctant to act "arbitrarily" dealing with Muslims, considering that in other regions they are a minority. Buddhism as the majority religion in Jatimulyo, especially in the hamlets of Gunung Kelir, Sokomulyo and Soyo is a social reality that cannot be denied. However, Buddhists are a minority in the Girimulyo sub-district coverage, even in Jatimulyo Village as a whole, because Buddhists are only concentrated in the three hamlets as described above. This majority-minority of religious adherents in an area is one of the balancings that contributes to the creation of harmony between religious communities, including in the context of Muslim-Buddhist relations in this village. This condition is in line with the results of Mudhar's research (2011) which explains that one of the factors of inter-religious harmony in Indonesia is caused by the balance between the majority-minority.

The understanding of moderate religion [10]practiced by Muslim Jatimulyo is a major contributor to the harmony of Muslim-Buddhist relations in this village. Moderate religious understanding which is characterized by several attitudes, namely; commitment to nationalism, tolerance, non-violence, and accommodating to local culture, can bring together several differences into an activity that is minimally debated and requires each in other [11]. Moderate character in religion which requires openness, cooperation, and acceptance from each different group is main evident in Muslim-Buddhist relations in this area. In the context of acceptance of local culture and traditions, it appears that Muslims in this region tend to be more friendly in accepting local traditions and culture in their religious behavior, as long as these activities no conflict with their core teachings. The Muslim-Buddhist togetherness in the feast, as well as salvation events held communally or individually by residents is mainly concrete evidence that Muslims in this region is moderate in character in practicing their religious rituals.

Javanese cultural heritage also main contributes to the harmonization of Muslim-Buddhist relations. Javanese culture, which is famous for upholding the virtues of respect, honor, appreciation and tolerance, has become a strong basis for creating harmonization in society [12]. The internalization of respect and appreciation is reflected in several attitudes, like do greetings and shaking hand when they are meeting, using the Javanese *Kromo* language when younger people talking to older people. The Javanese cultural heritage that prioritizes harmony or common interests over individuals also greatly contributes to the creation of harmonyof Muslim-Buddhist relations in this region. The bond is primordial, namely one Javanese ethnicity that strengthens the harmony of Muslim-Buddhist relations in this area. These ethnic-based bonds can penetrate the barriers of theological differences, so that they are easily united in activities that eliminate theological differences, in several social-humanitarian activities, such as community service, *rewang*, and *kenduri*. These bonds greatly contribute to the creation of a union between them, furthermore the harmony of Muslim-Buddhist relations can be guaranted and to achieve prosperity and welfare of society. The dominance of quotadian activities has significantly contributed to maintaining the harmonization of Muslim-Buddhist relations in this village. This reality is very different when compared to the pattern of life relations in urban areas, which are mostly based on associational networks, namely networking which is based on organizations that appear more formal and formal [13].

Conclusion

The Muslim-Buddhist relationship in Jatimulyo community normally runs in peaceful based on a need to live in harmony that relies on theological bonds to each religion (Islam, Buddhism), it is also supported by the strong internalization of Javanese cultural heritage that prioritizes peace over the reality of the majority- religious minorities. Muslim-Buddhist relations are bridging in the form of associational pattern such as social gatherings between residents, farmer groups, a coffee business groups and quotidian, such as *kenduri*, *sambatan*, *rewang*, community service, and helping each other on religious holidays. The more dominant and stronger schema of relationship is bridging quotadian, the daily association of people of different religions. Through these variables, the harmony of Muslim-Buddhist relations can be assured, furthermore they can live together in the theological differences.

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The Problems for Marjinal Justice

Ahmad Zaini[1]

Introduction

In its function as the protection of human interests, the law has a purpose. The main purpose of the law is to create an orderly social order, to create order and balance. In achieving its goals, the law is tasked with dividing rights and obligations between individuals in society, dividing authority and regulating how to solve legal problems and maintaining legal certainty.

The essence of justice is an assessment of treatment or action by reviewing it with a norm which according to a subjective view exceeds other norms. In this case, there are two parties involved, namely the party who treats and the party who receives the treatment (parents and children, employers and workers, the government and its citizens, creditors and debtors).

In general, justice is an assessment that is only seen from the party who receives the treatment, the judiciary (generally the party who is defeated in civil cases) considers the judge's decision to be unfair, workers who are laid off by their employers, citizens who are treated unfairly by the government. Justice should not only be seen from one side but must be seen from two parties.

Aristotle distinguishes two kinds of justice, namely distributive justice and commutative justice. In history, the content of justice is determined historically and changes according to place and time, so it is not easy to determine the content of justice. If it is said that the law aims to achieve justice, it does not mean that the law is identical to justice. The rule of law does not always bring about justice.

In Mochtar Kusumaatmadja's perspective, the first objective of the law orders. This need for order is the main condition for the existence of an orderly human society. Meanwhile, Subekti argues that the law serves the purpose of the state, which is to bring prosperity and happiness to its people. In serving the country's goals by implementing justice and order.

[1] UIN Sultan Maulana Hasanuddin Banten

Meanwhile, according to our positive law, the purpose of the law is stated in paragraph 4 of the Preamble to the 1945 Constitution, namely to form an Indonesian state government that protects the entire Indonesian nation and the entire homeland of Indonesia and to promote public welfare, educate the nation's life, and participate in carrying out world order based on freedom, lasting peace and social justice.

Law and Human Right

When we talk about human rights, we often talk about law, as if human rights only deal with the law. Human rights are related to all kinds of aspects of life, from small to large, from social, economic, political, legal and cultural issues.

Realizing how wide the scope of human rights is when we talk about human rights we are talking about the human rights of every citizen without exception. The underlying assumption is that every citizen is equal before the law.

The essence of the rule of law is the realization of the rule of law as one of the joints in the life of society, nation and state. It is in this connection that the law must always appear as a means that must colour the lives of individuals, communities, as well as state and government institutions. One of the conditions for a state of the law is the guarantee of human rights. In the concept of a rule of law, there is the protection of human rights which is not only a normative requirement for the existence or absence of a rule of law but empirically these requirements must be implemented by a state that has claimed to be a state of law.

The existence of guarantees for the basic rights of citizens means that every ruler in the country must not act arbitrarily to his citizens. In a state of law, efforts to protect, respect, promote and fulfil the rights of citizens can be a measure of the level of law enforcement, progress and maturity of a country's democracy. On the other hand, small and poor people are very difficult to get justice without any intervention and assistance from the state. Social differences and problems in the social structure of society will not be resolved without state intervention. The presence of the state related to the existence of social inequality in society aims to open opportunities for vulnerable groups of people to get justice. This effort is not only focused on the economic sector but also includes the legal sector, such as providing legal aid for the poor.

In order for the law to be enforced for the sake of maintaining order in people's lives, the law must have a regulatory and coercive nature [1]. With the nature of the law that regulates and compels, the consequence is how then everyone without exception, them are bound by applicable law and must obey the law. Therefore, when we ask about the law, both regarding legal certainty, how the law can bring benefits and how the law can bring justice, we cannot discriminate between people based on their social status or ethnic background, religion, culture and economic situation. . In other words, everyone is equal before the law.

Justice Problems

Indeed, the law must be able to bring certainty, justice and benefit. However, it turns out that with such a noble legal position in regulating life in society, there are still many Indonesian citizens who do not believe in the law, think that the law is unfair and even consider that the law only applies to people who are weak, backward in good standing. science and economics. For those who are backward in terms of their economic position, there are still many who think that the law is like a sharp sword that has been sharpened to the maximum and is ready to be used whenever and when the sword is swung, then he does not have the opportunity to hold back, fight, even just to avoid the worst possible situation. the swing of the sword was considered an impossibility.

The perception of such a law is certainly very concerning. This is certainly a big homework for academics and legal practitioners to provide understanding and knowledge about misunderstandings about the law itself. Academics and legal practitioners must continue to voice that the law is not indiscriminate in its enforcement and enforcement. Similarly, when talking about the rights that everyone has before the law. When it comes to rights before the law, there is no longer a word that I am poor so I will not get justice or vice versa that the person is rich so he will not be caught by the law.

Regarding equal status in law, it has been expressly stipulated in the Constitution of the Unitary State of the Republic of Indonesia. The law has affirmed the rules which in essence explain that all citizens are equal under the law and the government is obliged to uphold the law without exception [2]. In addition to looking at the Constitution, we can also see how important it is for everyone to be treated equally before the law in the Law of the Republic of Indonesia Number 39 of 1999 concerning Human Rights. The regulation also essentially emphasizes that everyone has the right to get equality before the law, the right to and receive the same treatment and protection under their human dignity before the law, the right to get fair assistance and protection from an objective and impartial court [3]. These basic rules can certainly be used as the main basis for academics and legal practitioners in carrying out their obligations to provide understanding and explanations to all elements of society regarding the validity of the law itself.

To be clearer about equality before the law to maintain human rights, among others, we can take an example in the settlement of criminal cases which in the settlement of criminal cases will certainly refer to the criminal procedure law. The purpose of the Criminal Procedure Code in essence is to seek or at least approach the material truth to find out who the perpetrators can be charged with violating the law, which will then be examined in court to explain whether it is proven that the crime has been committed and whether the person accused can be convicted [4].

In-Law Number 8 of 1981 concerning the Criminal Procedure Code or what we are familiar with as the Criminal Procedure Code (KUHAP), it is regulated in articles 50 to 68. the rights of the suspect and the defendant, it turns out that these rights are attached to everyone who is caught in a criminal case, regardless of their background status, regardless of who is strong and who is weak, nor who is not capable and who is rich.

When a legal process is carried out, in accordance with the criminal procedure law, the suspect has the right to immediately get an examination by the investigator, besides that a suspect is also entitled to have his case immediately submitted to the court by the public prosecutor For a defendant, he also has the right to be tried by the Court immediately [5]. In the case of preparing a defence, a suspect has the right to be clearly informed of what is alleged to him at the time the examination begins. Likewise, with the accused, he has the right to be clearly informed of what is being charged against him [6]. In addition, during the examination process at the level of investigation, the suspect has the right to give information freely to the investigator. Likewise with the defendant, during the examination process in court, he has the right to give information freely to the Panel of Judges who examine and decide the case [7].

In addition to the rights mentioned above, a suspect or defendant in the process of examining his case has the right to obtain legal assistance from legal counsel at every stage of the examination process. Each suspect and defendant is given broad rights to choose his legal advisor who will accompany him in the examination process. If it turns out that the suspect or defendant is threatened with the death penalty or a sentence of fifteen years or more or those who are incapacitated are threatened with a sentence of five years or more where they do not have their legal counsel, the official concerned at each level of examination is obliged to do so. appoint a legal representative for them. And the legal assistance provided by the legal advisor is provided free of charge [8].

Regarding the implementation of free legal aid, we can see the rules that apply in Indonesia. In this case, we can see in Law number 16 of 2011 concerning Legal Aid. That this law is intended, among other things, so that then people who are unable to maintain their rights to get justice. In practice, legal aid must be provided based on the following principles:

a. Justice
   This principle aims to place the rights and obligations of each person in a proportional, appropriate, correct, good and orderly manner.
b. Equality in law
   This principle emphasizes that everyone has the right to be treated equally before the law, and must uphold the law.
c. Openness
   This principle provides free access to the public to obtain complete, honest and impartial information in obtaining guarantees of justice based on constitutional rights.
d. Efficiency
   This principle aims that the provision of legal aid must be able to maximize the provision of legal aid through existing budget sources.
e. Effectiveness
   This principle aims so that in the provision of legal aid the objectives of achieving legal aid can be determined appropriately.
f. Accountability
   This principle aims to make every activity and the final result of the implementation of legal aid activities accountable to the community [9].

We can also see the equality of every community before the law in the civil court process. We take an example in a civil case where the case contains a dispute and there are at least 2 parties, in this case, we are talking about a contentious lawsuit. In the process of examining the case, the judge will conduct a contradictory examination where with an examination mechanism like this the parties will be given the same opportunity to present the arguments and deny each other the arguments submitted by the opposing party.

Through the mechanism for examining cases in this way, it can be seen that the panel of judges will give equal opportunities to examine and decide cases regardless of social status, economic ability, skin colour, ethnicity and religion [10].

Academics and legal practitioners must be able to manifest how then the law must be able to become a protector. This is in line with the theory put forward by one of the Indonesian legal warriors who was also a former minister of justice for 3 periods from 1959 to 1963. It was Mr Sahardjo who created the symbol of justice in the form of a banyan tree which is still used as a symbol of protection [11]. He was also the one who discovered the theory of protection. According to Sahardjo, through his theory of protection, the purpose of the law is to protect humans to create a humane social condition, prevent arbitrariness and prevent abuse of rights. Efforts to realize this protection include:

a. Creating peace and order;
b. Realizing true peace;
c. Creating justice;
d. Realizing justice and social welfare [12].

From the purpose of the law as explained in the theory of protection, we can find that in essence, the law must protect the whole community so that peace can be created in people's lives and the human rights of every citizen are protected, without any distinction based on social status. Because when it comes to human rights, every individual has had them since he was born, regardless of who gave birth to them. This right is a gift from God that must be respected, upheld and protected by the state, law, government, and everyone for the sake of honour and protection of human dignity [13].

On this occasion, of course, we must study together how the law can bring justice. As stated by Plato that according to him the law is not justice, but a means of justice. Through this theory, Plato tries to speak and remind us that to achieve justice it is not only a series of rules that apply. More than that, that the factor of law enforcers as people who carry out the law is one very important factor, no matter how good the rules are made, they will never be able to run alone without someone running them. In other words, it can be said that a series of good rules will never be beneficial if law enforcers do not have good morals and integrity [14]. Moral has a high position in the law enforcement process. this is because every process of law enforcement required obedience to morals. In one of the Roman proverbs, it is also mentioned: "Quid Leges Sine Moribus" (what is law without morality) [15].

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Powerpoint Video using Filmora in Online Learning

Ahmad[1]

Introduction

It needs learning to take use of scientific and technological advancements in the context of the Covid-19 Pandemic. In this environment, changes in the area of education and learning must be ongoing and never-ending. Computer-based learning must be utilized in conjunction with e-learning. E-learning is a term that refers to education that is conducted through electronic communication channels such as e-mail and video conferencing [2].

These requirements and developments need a complete improvement effort, including the processes related to the application of learning. The process of education transmits mainly cognitive, skills and attitudes. In education, these three areas must be balanced. In reality, however, the cognitive and skill fields dominate. In the same time, in view of today's understanding of the Covid 19 outbreak, the studets attitude is gettibg decreased [5].

The use of information and communication technology (ICT) has significantly change the way we learn. There is a transformation in the teacher's position, while in traditional education, the instructor is the only source of knowledge. With the advancement of ICT, the teacher's role in learning has shifted to that of a facilitator. The use of ICT and the development of e-learning have facilitated the creation of blended learning-based education [11].

Online Learning

Online Learning is a kind of electronic education. A smartphone and a computer network are two of the mediums that are utilized. With the advancement of smartphone and computer networks, it is feasible to build it in a web-based format, which can subsequently be expanded to a larger computer network, notably the internet. Web-based online learning may

1 Mathematic Education Department, Universitas Muhammadiyah Purwokerto, ahmad@ump.ac.id

be presented in a more engaging manner. This online learning system has no access limitations, which enables learning to take place over a longer period of time [2].

These days, there are many online learning apps that may be used in the field of education. According to Molinda (2005), as cited [1], online learning is a kind of remote learning/training that makes use of telecommunications and information technologies, such as the internet, CD-ROOM, and videoconferencing (directly and indirectly). Online learning connects learners (learners) to learning resources (databases, expert/ instructor, library) that are physically separated or even geographically distant but may communicate, interact, or cooperate (direct / synchronous and indirect / asynchronous) [6].

Google Classroom is one of the free and well-known apps that has been used. According [1], online learning that is implemented via Google Classroom media enables instructors and students to collaborate on learning without meeting face-to-face in class (in the form of power point slides [4], e-books , learning videos, assignments). ad hoc or in groups), as well as evaluations. Teachers and students may engage with this program through discussion forums (streams) devoted to subject issues and the interactive learning process. Even more recently, Google Classroom has incorporated Google Meet [3].

If the media does not support all facets of the learning process, a depiction of how individual facets may contribute to these facets is required. One of them is through online education.

According to [8] some of the benefits of online learning include the following:

a. Increasing the availability of flexible learning experiences that are tailored to individuals individual learning patterns
b. efficiency in assembling and distributing educational materials
c. offer and support sophisticated educational facilities
d. encourage participation in learning
e. offer varied and personalized teaching through a variety of feedback methods
f. enables learners to acquire the same material at varying rates or with varying learning objectives.

These various aspects demonstrate that teachers can be more adaptive when providing online learning because it is flexible; discussions can continue at any time because online learning is still discursive; online learning is also interesting because it is interactive with the visuals displayed; and online learning is highly reflective because it can provide immediate feedback. Students choose some of the most engaging material in online learning for its ease or flexibility [3].

According to Taufik [10], the benefits of online education include the following:

1. Availability of emoderating services that let instructors and students to interact readily through the internet on a regular basis or whenever the communication activity occurs without regard for distance, location, or time constraints.
2. Through the internet, teachers and students may access organized and scheduled instructional resources.
3. Students may study (review) instructional materials at any time and from any location if necessary, since instructional materials are kept on the computer.
4. Students can access additional information about the material they are studying via the internet.
5. Teachers and students may engage online conversations that can be seen by a wide number of people.
6. Changing studetss' roles from passive to active.
7. Significantly more efficient. For instance, it is accessible to people who reside in areas far from colleges or traditional institutions.

The drawbacks of online education are also inextricably linked to a variety of inadequacies, which include the following [7]:

1. Inadequate contact between instructors and students, or even amongst students themselves, may impede the development of values throughout the teaching and learning process.
2. The tendency to overlook intellectual or social elements in favor of corporate or commercial ones.
3. Learning and teaching are more a kind to training than to education.
4. Teachers' roles have shifted from understanding traditional learning methods to being expected to master ICT-based learning strategies.
5. Students who lack a strong desire to study often fail.
6. Not every location has internet access (related to the problem of the availability of electricity, telephones, and computers).

Powerpoint Video using Filmora in Online Learning

The steps involved in creating powerpoint video using Filmora are as follows [9]:

1. Preparation
   a. Preparation of PowerPoint presentations providing instructional content

Create PowerPoint presentations with instructional information. Each slide has a green backdrop.

b. Image for the backdrop (background)
   Create a backdrop picture that will be utilized throughout the video editing learning process. The backdrop picture may be either dark or bright in color (according to taste).
c. Tripod and Camera
   When presenting instructional materials, the camera is utilized to record the teacher/presenter. To provide steady video capture, a tripod is utilized as a camera support.
d. Filmora Software
   Filmora is a video editing program that is used to create educational films. In this instance, integrating video output from powerpoint presentations with camera output.

2. The process of creating a learning video using a mix of Microsoft Power Point and Filmora
   a. Capture of Video
      Record the teacher/presenter while he/she discusses the lesson content. When filming the video, every effort is made to utilize a gloomy backdrop (the important thing is that the video taken does not have the same color as the background color).
   b. Convert PowerPoint Presentations to Video
      Exporting PowerPoint presentations to video format is possible. To convert PowerPoint slides to video format, a timer must be specified on each slide page. One method to include a timer on each slide page is to utilize Microsoft Power Point's Record Slide Show function. To facilitate editing, the slide's backdrop is green. Each slide page in the Record Slide Show procedure will contain a narration, the length of the slide page's display, and the timing of the slide page's animation. Record Slide Show may be accessed through the Slide Show menu item Record Slide Show. When the recording is complete, select File Export. Create a Video by setting the video quality to 0 and the number of seconds spent on each slide to 0 and then clicking Create Video. Due to the fact that the video from the slide will only include the visual aspect, the audio (story) that was added during the Record Slide Show process will be removed and replaced with audio from the camera recording. Then, to ensure that the video from the Record Slide Show is in sync with the voice of the teacher/presenter on the camera-recorded video, the Record Slide Show procedure is performed concurrently with the camera-recorded video.

c. Using Filmora to Combine and Edit Videos

The procedures for combining and modifying the Record Slide Show video and camera recordings are as follows:

1) Launch the Filmora application.
2) Include a picture as a background.
3) Drag the backdrop picture into the timeline, then adjust the length to match the video's runtime.
4) Incorporate a video that was recorded by the teacher/presenter (with a green backdrop) into the time line (above the background). Set the length of the backdrop to be equal to the duration of the video.
5) Define the size and location of the camera's video recording. Following that, click the movie (in the timeline), choose the green screen shortcut, click pick color, and then click the green color on the video backdrop. The following is the view once the adjustments have been applied.
6) Importing the exported video from Microsoft PowerPoint, then inserting it into the timeline (top layer) and adjusting its size and location inside the slide area. Then, like in the previous step, remove the video backdrop from the green slide by setting the green screen. The following picture illustrates the setting outcomes.
7) Remove the narration from the exported PowerPoint movie by right-clicking the video (on the timeline) and selecting Disconnect audio.
8) To trim the video (if necessary), right-click it (on the timeline) and choose the scissors icon. Then, click the area that needs to be removed and then click the delete option.
9) Once your modification is complete, click the Export option. Choose a video format, give the video a name, and choose the video's storage location before clicking Export. Allow time for the export procedure to finish.

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Blended Learning Innovation in Education

Akhsanul Fuadi[1]

Introduction

In any condition, education must be able to produce human resources who have complete competencies, known as 21st century competencies and skills, while all twelve of those skills are necessary to teach, the "four C's" are often considered to be the most important. The four C's of 21st Century skills are: Critical thinking, Creativity, Collaboration, and Communication [1] Therefore, learning in the era of the industrial revolution (RI) 4.0 in addition to being required to emphasize aspects of creativity and innovation (creativity and innovation), critical thinking and problem-solving (critical thinking and problem-solving), communication and collaboration (communication and collaboration). Must be able to harmonize the knowledge taught with affective and psychomotor students. Creativity can give birth to innovation [2]

Student creativity can be developed by facilitating student-centered learning, increasing student active participation, high teacher-student interaction and between students, using various learning strategies that allow students to build their own knowledge. In addition to learning strategies, technology also plays an important role in supporting the development of knowledge, affective and psychomotor abilities for students. Although critical thinking, collaboration, communication, and creativity can be taught in an environment that uses little technology, students in the era of the industrial revolution 4.0, need the use of technology to become effective problem solvers, collaborators, communicators, and creators. They must use technology to collaborate, create, and communicate with others. Students can use digital technology to manage, integrate, and build information/knowledge. They must be able to use technology effectively to investigate, organize, evaluate, and communicate knowledgee.

In this digital era, especially during the pandemic, online-based learning is almost applied in all educational institutions, because the priority of education during this pandemic has shifted. During normal

1 Alma Ata University Yogyakarta

times, academic or learning quality is a priority. In this pandemic era, the quality of education is not a priority, but life safety is the main choice. The Indonesian government has made various policies to minimize the transmission of Covid-19. One of the policies is Work From Home (WFH). This policy advises people to do all their work from home. Not only the world of work, the world of education has also been affected by this Covid-19 virus. Thus, the Minister of Education and Culture of the Republic of Indonesia, Nadiem Makarim, made regulations so that schools asked their students to carry out learning activities remotely or study from their homes. In the next development, the term "new normal" was raised to define a new era in the world of education.

In the context of education, whether we realize it or not, the new normal has begun to occur globally since the Covid-19 pandemic. Teaching and learning activities that are usually carried out face-to-face directly, namely educators and students are physically present in classrooms and learning places, are now being replaced with learning activities through electronic media (e-learning) either synchronously or indirectly. -synchronous. Non-synchronous e-learning can be done both online (online) and offline (offline). In online learning, educators and students are at the same time in the same application or internet platform and can interact with each other like conventional learning has been done so far. Meanwhile, in offline learning, educators upload material via the web, send it via electronic mail (e-mail) or upload it via social media so that it can then be downloaded by students, and offline students learn independently without being bound by time and place.

On the other hand, synchronous e-learning can only occur in an online system. Non-synchronous e-learning can be done both online (online) and off-line (offline). In online learning, educators and students are at the same time in the same application or internet platform and can interact with each other like conventional learning has been done so far. Meanwhile, in offline learning, educators upload material via the web, send it via electronic mail (e-mail) or upload it via social media so that it can then be downloaded by students. Offline, students learn independently without being bound by time and place. On the other hand, synchronous e-learning can only occur online.

The policy of learning from home is a challenge for the teachers, where teachers must conduct a remote debriefing with the demand that there is a change in the character of students for the better result and without being able to interact physically with the students. [3] However, the role of teachers and parents must still have the same goal so that the expected education can be achieved. Online learning during this pandemic is not easy, it's required good cooperation from various educational subjects. Good education is not just a process of giving and receiving learning, but behind it, there is a positive attitude that must grow, namely good and polite character. Blended learning will not be difficult if it is responded to and faced with the right attitude so that it can be a good learning method. [4]

Among the schools that implement blended learning is SDIT Lukman al-Hakim Yogyakarta, Special Region of Yogyakarta. Based on the results of interviews with the Learning Coordinator, it was identified that the process of teaching and learning activities at the school used a face-to-face and virtual face-to-face process. Therefore, the concept of blended learning carried out by the school is interesting to study. Among the learning strategies in this blended learning are several learning methods/ models such as: 1) Flipped classroom, 2). Discovery-Inquiry, 3). Project Based Learning, 4). Self-Organized Learning Environment.

Based on interviews with the principal, education in the learning process must inevitably be carried out even if it is done online or offline. This requires all parties in the school to work more actively in carrying out the teaching and learning process. Students and parents are also required to be ready to take part in this lesson. Based on information from the principal, online learning is carried out by utilizing technology, especially the internet, while offline/offline activities also require creativity, therefore blended learning is a necessity in the current education process. Musta'in as SDIT Lukman Al-Hakim teacher said, with an online and offline learning system commonly known as blended learning, teachers will be able to deliver material in an integrated manner and be able to evaluate correctly.

Methods

This research is qualitative research that leads to a detailed and in-depth description of the portrait of conditions in a context, about what actually happened according to what is in the field of study. [5] Qualitative research is data collection in a natural setting with the intention of describing the phenomena that occur where the researcher is the key instrument, data sampling is carried out purposively and snowball, data collection techniques use triangulation (combined), data analysis is inductive/qualitative. [6] This research has several characteristics, namely; first, taking place in a scientific setting; second, the researcher is the main instrument or data collection tool; third, the data analysis is done inductively. The focus of research is more trying to answer the question of "how". In accordance with the character of the data, the technique of collecting and analyzing this research refers to a qualitative-naturalistic approach and places more emphasis on meaning. [7]

Data collection techniques used include; (1) involved observation, (2) in-depth interviews, and (3) documentation. This research requires research subjects, namely people or anything that is the subject of research. [8] The selection of subjects or data sources was carried out using a purposive sampling technique, namely the selection of data sources was carried out with certain considerations. Research subjects are also needed to serve as informants. Subjects are selected and focused on people who are competent and understand the data sought and needed in this study. Informants in this study included Foundation Management and implementers at SDIT Lukman Al-Hakim Yogyakarta starting from school leaders, teachers, employees, students and parents who know best about activities at SDIT Lukman Al-Hakim Yogyakarta.

Discussion

As an educational institution that strives for optimal learning in every process, based on interviews with the learning coordinator, SDIT Lukman Al-Hakim applies learning strategies in blended learning, including: 1) Discovery-Inquiry, 2). The flipped classroom, 3). Project Based Learning, 4). Self-Organized Learning Environment. Here are some learning methods/models as a teacher's effort in increasing learning responsibility as part of blended learning innovation:

1) Flipped classroom

   Flipped classroom is a learning model that minimizes the number of direct instructions in the learning process, in implementing this strategy the teacher provides material to students to study at home, before the material is taught at the next meeting.[9] The steps for the flipped classroom learning model are that at first the teacher prepares learning instructions that students will learn at home, then the teacher makes a learning video related to the material to be taught, then the teacher asks students to download learning instructions and videos of the teaching materials via google classroom and YouTube, then students study, summarize, and analyze the learning in the video, then if it is the schedule to carry out learning, students are given questions and must convey their learning results to the teacher via zoom/google meet media.[10] this is done to find out whether students really study the video given by the teacher.

2) Project Based Learning
   Project-Based Learning is a learning model that emphasizes the creativity of each student, the application of this model uses projects (activities) as the core of learning. project based learning model is a learning model that will make students active and independent in learning. [11] The steps of the project-based learning model are as follows: (1) preparing questions or project assignments, this stage is the initial action so that students observe more deeply the questions that arise from existing phenomena. (2) Designing a project plan, at this stage students design a project plan to answer the questions posed at the initial stage. (3) Prepare a schedule as a concrete step of a project, scheduling is needed so that the work stage can be in accordance with the available time and completed on target. (4) Monitoring project activities and progress, teachers monitoring project activities and progress, students reporting to teachers regarding the progress of the projects they are working on. (5) Testing the results, facts and data from student work and then connecting or matching them from various sources, to assess whether the project produced is correct and in accordance with what is desired. (6) Evaluating activities/experiences, this stage is the stage of providing suggestions and input related to what is still lacking in the projects produced by students, as a reference for improving project assignments in the same subject or other subjects. [12]
3) Discovery-Inquiry
   The discovery-inquiry learning model is a learning model that emphasizes critical and analytical thinking processes to find answers to the questions posed. This thinking process is usually carried out with question-and-answer activities carried out by two subjects, namely teachers and students. Associated with learning materials the teacher does not provide directly, but students find their own learning materials. Meanwhile, the teacher acts as a facilitator and guide in learning activities.[13] Nasikin (Teacher/Learning Coordinator) explained, the steps of the discovery-inquiry model are: the teacher instructs students to open the zoom/google meet application via WhatsApp group, then the teacher through the zoom/google meet application explains the topic of activities that must be done by students, and explain the importance of this topic to students, after that the teacher gives problems, for example on the themes of Mathematics, Science, Social Sciences, PAI and so on, students are asked to download materials related to these subjects that have been provided by the teacher in Google Classroom, then summarized and studied. After that the teacher gives questions and

puzzles to each student, then the teacher asks students to form online groups consisting of three or four students to discuss the problems given by the teacher in the WhatsApp group. at the last stage students were asked to present the results of their discussions via zoom/google meet. [14]

In extra-curricular activities, this model is also applied at SDIT Lukman Al-Hakim, with almost the same pattern, including when learning the Koran is one of the advantages at the school. The discovery-inquiry model requires students to learn independently and actively, not only that this model also tests whether he really takes learning seriously or not, it can be proven by asking students to make presentations.

4) Self Organized Learning Environment

The Self Organized Learning Environment learning model is a learning model that emphasizes the independent learning process carried out by someone who has an interest in learning and in its implementation uses the internet and other smart devices.[15] The steps of the Self Organized Learning Environment model run by SDIT Lukman Al-Hakim are: first, to develop a learning plan and objectives. the second, forming class groups, preparing big questions. The third is arranging offline and online meeting schedules using zoom, google meet, webx, and so on. In the online implementation, students must form online groups, then the teacher gives big questions to each group and is asked to discuss them, after the discussion process is complete the answers from each student are collected and put together, after that the last process is that each group must present the results of the discussion after the presentation is complete. the other group responded.

To facilitate all these processes, this school has taken the following steps: First, the school ensures that all academics (especially teachers, students and parents) are ready for any changes by strengthening teacher teaching competencies, conditioning students and parents with parent-teacher meetings (POMG) in the context of socializing various activities to adapt quickly.

Second, teachers and students get material reinforcements to improve internet skills and computer literacy. The impact of this strengthening is that teachers are able to take advantage of available channels, such as the Learning Management System (LMS), audio-video-based communication media, social media and data storage media that can be used to assist quality teaching and learning activities. In general, students' internet and computer literacy skills are better than those of teachers, so that what is considered from the students' side is an internet connection, especially in remote, frontier and disadvantaged areas, and some students may be burdened by using data packages.

Third, the teacher performs constructive alignment again to the alignment of the three Outcome-Based Education (OBE) components, namely (1) learning outcomes, (2) learning activities, and (3) assessment methods that have been prepared in the Learning Implementation Plan (RPP). The lesson plans in this school are not completely changed, but it is enough to re-determine which learning outcomes can be delivered by e-learning and which ones cannot, because not all learning outcomes can be met by implementing e-learning, such as hands-on skills, or in the form of physical activity guidance. Next, the teacher remaps learning outcomes to learning activities, including determining the appropriate assessment method for each learning achievement.

Fourth, the teacher always guarantees the readiness (readiness) of the subject matter with an independent learning perspective in a digital format in such a way that students easily understand the subject matter, especially if it is given offline. The delivery of subject matter in the form of lesson summaries is greatly minimized by the teacher but mostly provides lesson notes, the use of open-source simulation software, or audio-video recordings. For practical subject matter that uses the toolbox, the teacher is expected to prepare a tutorial recording, for students to study independently.

Fifth, teachers are guided to be able to convey material according to the duration of each learning process appropriately. The duration of learning is closely related to the student's learning load (Student Learning Time/SLT) which is determined by the number of subjects that must be followed by students. For online learning, teachers always pay attention to coherent time according to the level of self-regulation and students' metacognitive abilities. Determining the duration of each learning unit is very important, especially in giving assignments to students. Time-consuming tasks can make the student's learning load much higher than the subjects he is following.

Sixth, assessments in the form of quizzes and other independent assignments are planned in such a way by the teachers, so that the quality of the questions still meets the taxonomy level in accordance with the grade level. Daily, mid-semester, and end-of-semester tests are still carried out directly and on a scheduled basis as is the conventional method that has been practiced so far.

Seventh, schools always prepare sufficient infrastructure and bandwidth when using the campus network, because a sudden surge in users and simultaneous usage will cause the server to experience bottlenecks, hangs, and down. In addition, the school determines the application or platform used to prevent students from downloading and trying too many applications or platforms

Conclusion

The application of blended learning and SDIT Lukman Al-Hakim Yogyakarta, is carried out using several learning methods so that the teaching and learning process runs optimally. Among the strategies implemented by schools in implementing blended-based learning is optimizing the role of teachers in creating a conducive atmosphere for learning. The strategy of flipped classroom, discovery-inquiry, project based learning, and self-organized learning environment was implemented well by the school.

Among the strategies adopted by SDIT Lukman Al-Hakim in overseeing the blended learning process are: (1) schools ensure that all academics (especially teachers, students and parents) are ready for all changes by strengthening teacher teaching competencies, conditioning students and parents, (2) teachers and students get material reinforcements to improve internet skills and computer literacy, (3) conduct constructive alignment of the three components of Outcome-Based Education (OBE), namely learning outcomes, learning activities, and the assessment method that has been prepared in the Learning Implementation Plan (RPP) (4) guarantees the readiness (readiness) of subject matter with an independent learning perspective (5) teacher guidance to be able to deliver material according to the duration of each learning process appropriately, (6) planning assessment in form of quizzes and other independent tasks effectively, (7) prepare infrastructure Sufficient structure and bandwidth when using the campus network.

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Islamic Teaching about Psychiatry (Islamic Psychology)

Ali Imron[1]

Introduction

The massive movement by Ismail al-Faruqi called the Islamization of knowledge has spread everywhere, including in Indonesia. According to al-Faruqi, westernization has had a negative effect on Muslims. On the one hand, Muslims have become acquainted with modern western civilization, but on the other hand they have lost a solid footing, namely a way of life based on religious morals. The Muslims is difficult to choose the right direction. Thus, the Muslims finally seem to take an ambiguous attitude [9]. The view of this dualism becomes the cause of the decline experienced by Muslims, to eliminate this dualism, knowledge must be Islamized. Al Faruqi said that before Muslims experience decay and decline, they must develop, build and clarify modern scientific disciplines that are in accordance with Islamic views and values [13].

There are two reasons that encourage Muslim scientists to carry out the Islamization of science [2]; [15]. First, the increasingly divided between science and religion which resulted in the abandonment of moral and ethical values. This can be seen from the progress of a country's civilization due to advances in science, that it has brought various social and psychological vulnerabilities. Even though at this time there are some Western scientists themselves starting to look back to pay attention to religion in science, but their mainstream still has not budged from its original position, which considers that religion as a part of the past of science that must now be abandoned. The second reason is the desire of Muslim scientists to look back on the glory of Muslim scientists as in the Middle Ages after transferring various forms of knowledge from Greek and Roman culture. Although not exactly which is same but the situation faced by scientists in the Muslim world today seems to be similar to the situation of Muslims in the middle Ages. This is not just a utopia of Muslim scientists who are in an underdog position, but objectively this is also recognized by the Western scientists

[1] STKIP Muh. Manokwari Papua Barat

themselves [2]; [8]. Some scientists even predict that there will be clashes and cultural battles (after the feud between the two world super-powers), namely the conflict between Western culture and Islamic culture, one of which is in the field of science. One of the Islamic cultural movements in the field of science is the emergence of Islamic Psychology. This paper tries to discuss the position of the Islamic psychology movement in the context of Western Psychology which is developing rapidly

Discussion

Western Psychology at a Glance

On the theory, psychology has four grand theories, namely psychoanalytic, behavioristic, humanistic and transpersonal. Psychoanalytic theory was developed by Sigmund Freud, an Austrian psychiatrist [5]. Because it developed from a clinical background, it is not surprising that psychoanalytic theory focuses a lot on the negative side of humans. Freud's findings were actually very important. For example, the theory of the unconsciousness, personality theory (id, ego, superego) and various forms of self-defense mechanisms are the result of extraordinary thoughts that are recognized by Western scientists as findings about the 20th century [4]; [6]. But this theory received a lot of criticism among psychology itself. Especially Freud's view that humans are basically controlled by two dominant instincts, namely sex and aggression. With this theory, Freud tried to explain various phenomena, ranging from political, economic, social, cultural until religious phenomena.

Freud considered that religious beliefs were rooted in childhood fears and hopes, particularly with regard to the *Oedipus* complex. God according to Freud is a re-creation of the omniscient and omnipotent father figure in childhood [4]; [11]. Therefore, religious adherents generally have ambivalent feelings, namely feelings of love and fear of God. Likewise, Freud considered that ritual services performed repeatedly by religious adherents were nothing but a form of obsessive-compulsive. Finally, it is said that religion is nothing but an illusion that prevents humans from reaching maturity.

The second theory is Behaviorism. This theory developed as a reaction to psychoanalysis which emphasized the unconscious and the past. This genre is often said to be the genre of soul science but does not care about the soul. Ivan Petrovic Pavlov started psychological experiments which reached its peak in the 1940s-1950s. It is said to be a science of the soul but does not care about the soul because this genre defines psychology as a science, while science itself only deals with something that can be seen and observed, and because of the soul cannot be observed. According to this line of thought the soul is not classified into psychology. This genre views humans as machines (*homo mechanicus*) whose behavior can be controlled through a conditioning.

With this, in the perspective of this genre behavior is like a reflex without involving any mental work at all. This genre was also pioneered by J.B. Watson and later developed by an expert named B.F. Skinner [1]; [11]. The relationship between humans and religion (God) is only a mechanistic or causal relationship. Humans worship God because there is reciprocity (profit) obtained from God, so there is no sacredness in religion (believing in God), there is no glory and sincerity in this relationship, there is only a causal relationship.

This theory sees that basically humans are neutral. Good or bad behavior is largely determined by the response to stimuli from the environment. So basically humans only have the ability to respond to various stimuli. The theories of this behavioristic were developed from the results of experimental animal behavior in tightly controlled laboratories [7]; [10]. Other behavioral psychology principles that are widely used in the learning process are the principles of reward and punishment, the law of effect, and modeling theory [6]; [14]. These principles are now widely applied in various forms of behavior change techniques. The criticism that has been raised on this school is its view which sees humans as a product of a response to the environment which implies that humans are nothing but robotic machines that react when they receive a stimulus, without having the ability to determine themselves. As a reaction to the dominance of behavioristic psychology, a third school emerged.

Humanistic Psychology. This flow emerged as a reaction to the flow of psychoanalysis and behaviorism. Both of these streams are considered to degrade humans into a class of machines or inferior creatures. One of the figures from this school is Abraham Maslow [4]. He speaks out loud that the views of psychoanalysis and behaviorism towards humans are very deterministic and reduce the value of human existence as the most perfect creature in their creation. Viktor Frankl then developed a psychotherapy technique known as 'logotherapy'. This view is based on the following principles: a) life has meaning, even in the most depressing situations, b) the main purpose of human life is to find meaning from life itself, c) humans have the freedom to interpret what they do and what they experience, even in the face of adversity [4]; [11].

Frankl calls this the freedom of a person to give meaning to his life. Again, in contrast to psychoanalysis and behaviorism, the humanistic pioneers believed that each individual was responsible for his life and actions, and that in every age humans could change their opinions and behavior through innovative knowledge and will. They propose a theory of self-concept [4]. From this it is clear that human life is not a product produced by the desires of the subconscious mind, nor is it a response determined by environmental stimuli, but human life in personal independence Abraham Maslow calls 'self-actualization'. In other words, the formula that applies is not S (Stimulus)-R (Response), but AD (Self-Actualization), humans always and should actualize themselves. In its development, the movement of humanistic psychology as a school has succeeded in placing human nature as the most perfect creature in its creation. As mentioned above that humanistic psychologists are very self-centered, so when it comes to religion, humanistic psychology approaches the dualistic psycho-physical concept of religion, namely: the human body versus the soul or mind. In fact, Abraham Maslow stated that of the five self-needs, self-actualization needs occupy the topmost hierarchy [11]. This last stream sees that humans have a potential for consciousness called altered states of consciousness that can reach the spiritual realm [17]. This last school has provided an opportunity for the emergence of a new psychology with a religious perspective.

Islamic Psychology

Islamic psychology is a study that was only developed in the early 60's. The discourse of Islamic Psychology in the modern psychology world is still not widely known. Understanding Islamic Psychology in general is the study of the human soul and behavior based on the Islamic worldview. Islamic psychology is a science that talks about humans, especially problems of human personality, which are philosophical, theoretical, methodological and problem approaches based on formal Islamic sources (Al-Qur'an and Al-hadith), reason, senses and intuition [2]; [15].

The basic of western psychology education is philosophical speculation about humans, while Islamic psychology is based on authentic sources, namely the Qur'an and As-Sunnah [2]; [15]. Therefore, it can be concluded that Islamic Psychology is an Islamic study that deals with psychological aspects and human behavior so that individuals are consciously able to achieve a more perfect self-quality and get happiness in life in this world and in the hereafter.

With the spirit of reviving psychological thoughts from Islamic treasures, the embryo of Islamic psychology has germinated in several

Islamic countries, such as in the Middle East as well as in Malaysia and Indonesia. This movement objectively started when Malik B Badri, a psychologist from an African country, published the book The Dilemma of Moslem Psychologit in 1979. This book, which sharply criticizes Western psychology, has received a tremendous response and has become a trigger for the emergence of Islamic psychology. In Indonesia, this movement began in the 1990s, whose reverberations grew louder at the beginning of the third millennium. Several national meetings have been held and books have begun to be published [3].

This study began with the efforts of Dr. Zakiah Drajat who started to introduce psychology from a religious perspective. However, it was only in 1994, through a national symposium, that Islamic psychology enthusiasts were finally gathered and an agreement emerged to name the new knowledge with the name of Islamic psychology, after previously, many names were proposed, including Qur'anic Psychology, Sufism Psychology and so on. [8]; [12]

Fifth sect?

The initiators of the Islamic Psychology movement generally hope that Islamic Psychology will become a new flow or genre in modern psychology after psychoanalysis, behaviorism, humanism and transpersonalism. Several national symposiums and seminars have announced that Islamic Psychology will become the fifth madzab [3]. The assumption that Islamic Psychology has a new perspective in viewing human relationships with God. Each madzab of psychology does have its own view of the relationship between human and God. Islamic psychology, said Nashori, assumes that human devotion will reach an optimal level when humans actualize the perfection that God has given them [3].

The task of Islamic psychology is different from that of Western psychology. Western psychology only explains (explanation), predicts (prediction), compiles theoretical constructs as the basic in the process of controlling (controlling) human behavior [3]; [18]; [16]. Meanwhile, Islamic Psychology explains, predicts, controls and directs to obtain Allah's pleasure in a practical and scientific manner. So the main mission of Islamic Psychology is to save and deliver humans to fulfill their natural and natural tendencies to return to Allah SWT. Islamic psychology was built using the Qur'an as its main reference and the Qur'an was revealed not only for Muslims but for the good of mankind (Q.S. 14: 1).

New civilization?

Besides being expected to be the fifth madzab, Islamic Psychology is also expected to give birth to a new civilization. This picture is motivated by historical fact that Islam was once one of the world's civilizations at the forefront of this prediction, the author feels more optimistic. Because here Islamic psychologists seem to build a house on their own land. If it is finished, then this house will not only be useful for Muslims, but also non-Muslims and seculars may take shelter, so that Islam can become rahmatan lil'alamin [15].

Various approaches in Islamic psychology include: First, the Scientific Approach according to Islamic Psychology is the Scriptual Approach, the Philosophical Approach, and the Sufistic Approach [9]. The scripturalist approach (Revelation) in the study of Islamic psychology is based on the texts of the Koran or Hadith with the pronunciations contained in it are instructions that are considered clear (sahih). The philosophical assumption is that Allah created the human nafs with all its psychological laws, while the methodological procedure can be carried out in four ways, namely Tafsir Maudhu'i (thematic), Tahlili (analysis), Maqarin (comparison) and Ijmali (global).

Second, the philosophical approach that refers to reason (burhan) is based on speculative thinking procedures (systematic, radical and universal supported by common sense). This approach prioritizes reason without leaving the text, only a way of understanding it by taking the essence meaning implied in it. If there is a conflict between reason and revelation, it means that reason has not been able to catch the message of the text. For this reason, a philosophical interpretation (ta'wil) of the pronunciation of texts is needed [2].

Third, Sufistic Approaches that refer to intuition (Irfan) The Sufistic approach in the study of Islamic Psychology is based on intuitive procedures (al-hadsiyah) and inspiration by sharpening the structure of the heart through a process of self-purification (tazkiyah al-nafs) to open the veil (hijab) that becomes barrier between the knowledge of Allah and the human soul. The goal is to obtain the disclosure (al-kasyaf) of knowledge and be able to reveal the true nature of the soul. In the terminology of Tafsir Science, the Sufistic approach is also called Isyari. According to William James, there are four characteristics that can be understood in this Sufistic approach, namely as follows (James, 1974). 1) They prioritize feelings 2) In a neurotic state (syatahat) 3) In a temporary but deep peak state 4) What is gained is a gift that is not earned. In fact, modern psychological scientists are no longer shy about using the holy book as a reference. Regarding the position of the holy book as a source of knowledge, there are at least two steps that can be taken by Islamic psychology reviewers/formulators, namely objectification and theoretical reconstruction [18]; [15].

Conclusion

Several genre or flow in western psychology, First, pioneered by Sigmund Freud with his psychoanalysis, religiosity is; 1) form of psychiatric disorders / neurosis. 2) The relation between the concept of taboo and religion, taboo is something that is sacred or dirty and also something that is forbidden. The oldest taboos practiced by primitive societies and still exist today are the prohibition against killing totem animals and the prohibition against incest. 3) Religion as an Illusion. Religion appears in humans when the despair and frustration that exist in humans due to disasters caused by the omnipotence of nature can no longer be overcome. Second, Behaviorism, religious behavior is nothing more than behavior because humans do not have souls. Third, Humanism has viewed humans as creatures who understand the meaning of life and thus become close to religious views. The four transpersonal.

Islamic psychology in general is the study of the human soul and behavior based on an Islamic world view that is philosophical, theoretical, methodological and a problem approach based on formal Islamic sources (Al-Qur'an and Al-hadith), reason, senses and intuition. Positioning Islamic Psychology (PI) today as a part of psychology with a religious perspective, or a form of indigenous psychology, will be more easily accepted by non-Muslims and secularists. History will prove that it is not impossible that one of these indigenous psychologists will develop rapidly, perhaps even shifting the mainstream position of secular psychology.

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The Impacts of Peer Review Technique on Writing Skill

Amaluddin[1], Muhammad Idris[2]

Introduction

Writing is one of the significant abilities in English. It can assist the students with learning and foster their English by communicating their insight, experience and the perspective. Writing is likewise an action managing how to compose thought, data, information, or encounter and comprehend the composition to procure information or some data to share and learn. Writing exercises propel students to draw in their capacity in learning English. The vast majority of English students of unknown dialect are not keen on writing since writing is a particularly troublesome expertise to be dominated. There are a few reasons why writing is respected troublesome. In like manner, there are two significant troubles in making the writing for EFL students to be specific associating thoughts and composing thoughts. Managing the trouble recorded as a hard copy ability, the 10th grade students of SMP Negeri 3 Parepare, had comparable issues. In light of the prior perception, a few students discovered troubles recorded as a hard copy. The outcome showed that numerous understudies had shortcoming and still face troublesome recorded as a hard copy. They needed more thought and got challenges in picking and utilizing suitable words or jargon. Subsequently, the vast majority of understudies were still absence of revenue in getting the hang of writing. Alluding to the case over, the researcher was interested to do a research implementing the technique of peer reviewing to tackle the issue of writing abilities. At that point, this research will find out the effec of peer review technique on the ninth grade students' writing skill at SMP Negeri 3 Parepare.

The Nature of Writing

Writing is the skill in Language. It is considered to be a useful ability since it permits the user of language to create messages. As a useful language

[1] Universitas Muhammadiyah Parepare; amaluddin1965@gmail.com
[2] Universitas Muhammadiyah Parepare

ability, writing is considered as a movement of developing thoughts or thoughts into oral composition, yet it is not basic as individuals might suspect in light of the fact that the author need to pay considerations to a few parts of composing including substance, punctuation, language use, association, and mechanics [1]. In basic manner, writing is an action of making words, letters, sentences, or significantly different images on the text [2]. All in all, it is the demonstration of framing the realistic images like numbers and letter to be organized in specific guidelines into significant words, passages, sentences, etc [3].

From realities above, it very well may be deduced that writing more worry with the way toward composing. Albeit the result of writing is likewise significant, the way toward writing skill can be a media for educator to treat, guide, and offer guidance to the learners to create a decent result of writing. Instructors additionally need to rise their attention to have great writing and persuade them by working with models, explicit learning objective, significant settings to work on writing, painstakingly organized exercises, clear show of materials, and helpful criticism [4]. The process of writing can be known from the manner in which writing text are made. Hence, the way toward writing can be characterized as the stages in where the author goes through to deliver something in the last composed structure [5].

Moreover, the four primary components in making writing they are arranging, drafting, altering, and last draft. In arranging step, the author plans what the person will compose. Additionally, the author can likewise do a conceptualizing. The person can produce a few thoughts that the individual in question will communicate on the paper. Drafting is considered to be the first or starting form of composing the text. The draft ought to be changed or grown later. Yet, prior to altering or fostering the draft, obviously the author should look cautiously to the writing draft. The author can add much more data, lessening data, offering choice to compose, etc. In altering step, the draft is utilized by the author as the primary form of composing the text. This draft should be altered to create the best last form of composing the text. In the altering step, the author should think about the draft which has been composed. At that point, the last form of writing is unique in relation to the arrangement and the main drafts. It is on the grounds that it has experienced the reflecting, altering, and revising steps which have transformed it into a promptly served text. The author currently can convey the last draft to objective reader [5].

Peer-Review Technique

The term of peer-review in it alludes to peer input, peer reaction, or friend altering in teaching writing [8]. Peer-review is the utilization of students as wellsprings of information to one another. Therefore, students accept obligations and jobs regularly taken on by an officially prepared educator, editorial manager, or guide in remarking on and studying each others' drafts for both writing and oral organizations during the time spent writing [9]. Additionally, there are different reasons why the utilization peer-review has gotten famous recorded as a hard copy classes. To start with, understudies discover peers' feedback an important wellspring of data and an enhancement to any educators' feedback [10]. Second, understudies discover educator's feedback excessively broad, questionable, and endless, in the event that they are contrasted with input from peers which is seen to be more explicit [11]. Third, it assists educators with investigating an action that can supplement her own criticism to their students' writing. Accordingly, peer-review is defined as a conceivably compensating choice [12]. Fourth, the reaction and update measure adds to more successful modification and basic perusing [12]. Last, it gives a genuine crowd to students' works [13].

In addition, there are some reasonable advantages of peer review. Students acquire point of view, certainty, and basic intuition abilities of having the choice to read texts by their friends writing on comparative assignments. They get more input on their composition than they could from the educator alone. Futhermore, they get criticism from some non-expert readers in the forms of manners by which their writings are muddled as to thoughts and language. At long last, peer survey exercises construct a sense of learning in the classroom [14]. At that point, peer review upholds cooperative exchange in this case two-way criticism is perceived in supporting their information and learning advancement [15]. Different scientists consider that through this strategy a sense of resistance and acknowledgment towards peer review is created [12]. Likewise, it improves certainty, assists with fostering a sense of learning in the classroom and leads students to consider elective methodologies [16]. Then, it permits them to be presented to an assortment of composing styles [17], and keeping in mind that surveying, students' advantage intellectually by articulating clarifications to their peers [18]. These advantages are the habitually refered to benefits of peer review regardless of its configuration.

There are several aspects that seem to influence the outcome of the peer review exercises. It depends on five things: all group members are involved, the group work needs to clarify goals and assignments, the group needs to develop a "common vocabulary to discuss writing", they need to figure out how to recognize significant writing issues and the 'learners' group figures out how to esteem group work and to consider educator to be an asset which the gathering can depend on unreservedly'. Giving feedback seems to be even more beneficial than receiving feedback; because when working with the text of a peer and formulating feedback, the learners develop skills that will help them when writing and revising their own texts [19]. They also bring up some factors that can affect the peer review in EFL classroom in a negative way, such as distrust in the ability of the peer who has given the review, or fear of being ridiculed for not having good enough L2 skills.

The Method of Research

This research was quantitative and it employed quasi-experimental method employs quasi-experimental method with two groups of students which received different treatment, namely experimental and control group. In the form of treatment, the experimental group treated through Peer Review Technique besides the control group was treated through teacher feedback. The research design is presented as follows:

Table 1. The Research Table

Class	Pre-test	Treatment	Post-test
E	O_1	X_1	O_1
C	O_1	X_2	O_2

Where: E : Experimental group

C : Control group

X_1 : Treatment for experimental group (Peer review technique)

X_2 : Treatment for control group (Traditional teachers' feedback)

O_1 : Pre-test

O_2 : Post-test [20]

The information were gathered from both pretest and posttest. At the outset, the experimental and control groups are given pre-test. Its goal is to quantify and characterize the students' earlier capacity in writing. They were given familiar issues and afterward they investigated their thoughts in composed structure. Afterward, the posttest was given after the students of experimental and control group subsequent to follow the treatment. It was expected to discover the critical effects of the students writing ability after treating by utilizing Peer Review Technique. Subsequent to following Peer Review Technique procedures, the students' score of the 10th year students of SMP Negeri 3 Parepare in academic year 2019/2020 were got through the given writing test. Both of pretest and posttest information were investigated to get their score for both of the classes. It plans to discover the huge diverse of the students from experimental and control group. The researcher gathered information from the test which has been given to the students. Subsequent to examining the information, the researcher tracked down the mean scores and the standard deviation of the two groups in the wake of ascertaining the consequence of the students' score for both pretest and posttest are introduced as illustrated below:

Table 2: The Students' Mean Score and Standard Deviation in pretest and posttest

No.	Group	Mean Score		Standard Deviation	
		Pretest	**Posttest**	**Pretest**	**Posttest**
1	Experiment	56.03	77.50	6.52	11.54
2	Control	61.80	67,86	11.35	11.32

Table 2 indicates that the students' mean score for posttest in experimental group (56.03) is slightly different than control group (61.80) and those are classified as fair. After treatment, the students' mean score of the experimental group is 77.50, and the standard deviation value is 11.54, while in control group, students' mean score is 67.86 and the standard deviation value is 11.32. The result proves that the students' prior ability in experimental group is lower than the students in control group, but after giving treatment the result showed the significant improvement of the student ability in experimental group compared to the control group. Furthermore, the researcher used t-test to measure the significance difference between group of the experimental and control in the terms of the mean score in pretest and posttest. The result of the test was determined by using SPSS version 24 as demonstrated as follows:

Table 3: The Probability Value of T-Test of the Students' Writing Skill in the Experimental and Control Group.

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Posttest	Experimental Group	30	77,50	11,545	2,108
	Control Group	30	67,87	11,325	2,068

Independent Samples 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
Posttest Score	Equal variances assumed	,292	,591	3,263	58	,002	9,633	2,953	3,723	15,544
	Equal variances not assumed			3,263	57,979	,002	9,633	2,953	3,723	15,544

The t-test result in the table 3 indicates that the significant value (0.002) was lower than the probability value (0.05). It shows that there were significant differences between the students' writing skill on posttest before and after giving treatment by using Peer Review Technique. Meanwhile, the table showed the t-test value for both groups was 3.26, which was higher than the t-table value (2.00). Consequently, based on the data, the hypothesis (H_0) was rejected and (H_1) was accepted. In this case, the students who are taught writing by using Peer Review Technique have better writing skill. The result was in line with the research conducted by Kustati M and Yuhardi (2014), where they found that teaching writing skill by utilizing the Peer-Review Technique to English students was effective than utilizing the technique of the teacher's traditional feedback.

The aftereffect of t-test contains in the table 3 indicates that the significant value (0.002) was lower than the probability value (0.05). It implies that there were huge contrasts between the students' writing ability on posttest when treated by utilizing Peer Review Technique. Then, the table demonstrated the t-test an incentive for the two groups was 3.26, which was higher than the t-table value (2.00). Thus, in view of the information, the hypothesis (H0) was rejected and (H1) was accepted. It implies that the students who are trained writing by utilizing the technique of Peer-Review have better writing skill. This information was upheld by the examination led by Kustati M and Yuhardi (2014), where they explained that teaching writing utilizing the Peer-Review Technique to English students was compelling than utilizing the technique of educators' traditional feedback.

Discussion

The result of this research clearly showed significant impact of the use of Peer Review Technique in teaching writing especially report text to the students of SMP Neg. 3 Parepare. The control group clearly expressed that they have found the peer review session successful. The researcher found that the students were able to help each other with both content and form, and they were able to reflect on what they had done. A positive learning aspect brought up by the students was that the peer review gave them practice in close reading in a more obvious way than when they practice reading finished texts.

The peer review in writing text can contribute to several aspects. The students were very motivated and aware of how they could benefit from working with texts. When reflecting on the task they were able to formulate issues of the exercise and strategies to deal with them. They also showed positive experience that they were aware of the goals of the assignment and all criteria recommended for a successful peer review [22]. In addition, peer review inside writing classroom has shown worth to improve students' writing in the space of composing components. Substance and association came about because of the peer review action showed preferable improvement over language and mechanics. This examination likewise affirmed that substance and association were difficulties to write in a subsequent language, while simultaneously, peer review input drove students to improve organization [21]. During the research, the students felt that peer review was useful generally besides in syntax enhancements.

Conclusion

This study briefly presents a four meeting of writing class that involves the impact of Peer Review Technique in contrast to teachers' feedback in writing context. The research findings prove that the students in experimental class who were taught writing report text by using technique of Peer Review had better improvement on writing skill than the students in control group who were taught through traditional teachers' feedback. It was proved by the rate percentage and score classification of posttest score in which the students' score in experimental group increase significantly if compared to the students' score in the control group. Moreover, referring to the result of t-test value for both experimental group and control group showing that the value 3.26 was higher than t-table value 2.00 indicated that Ho was rejected and Hi was accepted. It means that the students who are taught writing by using Peer Review Technique have better writing skill. In the other words, teaching writing by utilizing technique of Peer-Review to English students was effective rather than using the technique of teacher's traditional feedback.

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Foucault's Power and Society in the Context of Adolescents' Sexual Reproductive Health and Premarital Pregnancy in Indonesia

Andari Wuri Astuti[1]

Introduction

Globally, the WHO, have reported approximately 16 million adolescent pregnancies per year, of which 95% are reported to occur in low-lower and middle-upper middle income countries [1]. Indonesia, is one of low-lower and middle-upper middle income countries; during 2017, 36 per 1,000 pregnancies occurred at the aged 15-19, of these 0.02% were aged 15 or less [2]. Pregnant adolescents are a concern in low-lower and middle-upper middle income countries because of associations with poorer maternal and perinatal health outcomes [3]. In addition, adolescents are likely to have high illiteracy and lower education levels, poorer sources of sexual and reproductive health support and a lack of infrastructure for example services and trained human resources in low-lower and middle-upper middle income countries [4].

Diversity of ethnicity, language and religion is evident in Indonesia and many people still uphold traditional conservative views about sexuality and reproduction; these remain taboo as topics of conversation even for adults [5]. Adolescents therefore often access inadequate information from informal sources such as peers, internet websites and the media [6]. Furthermore, the internet and social media are very popular among Indonesian adolescents. A survey among 400 unmarried adolescents reported that 90% of adolescents had accessed pornography from internet sites to gain information about sexual matters [7]. Such adolescents are therefore more likely to be vulnerable to engaged premarital sexual relationship which could lead to adolescent pregnancy.

In general, Indonesians culturally have values which prohibit premarital sexual relationship. If pregnancy occurs before marriage it is considered as out-with cultural values and there is likely to be an early

[1] Midwifery Department, Faculty of Health Sciences, Universitas 'Aisyiyah Yogyakarta

marriage arranged and most likely judgement and shamefulness would be experienced [8]. Some adolescents have subsequently experienced negative treatment from community such as social exclusion and isolation [9]. In addition, adolescents are less likely prepared to engage in married life, particularly when their marriage is due to premarital pregnancy [10]. Adolescents were also more likely to have an added burden such as financial instability as they were less likely to have completed education and established work, as well as lacking the capacity to be a parent [11].

Therefore, it is important to understand power, society and relationships in this article because this article aimed to discuss power and society in the context of adolescent pregnancy in Indonesia with Foucault's theories as a lens. This theories of power will be used as a lens to explain and explore this topic.

Discussion

It is fundamental to understand the concept of power in society and human relationship. This is because in practical everyday life, power appears in people's interactions, communication, and negotiations, showing perspectives and aspirations as well developing their life goals .

The theorist of choice is Foucault whose conceptual theory of power was shaped by knowledge and decentralized [12]. This is because he explains that power is everywhere and comes from everywhere. Therefore, it is plausibly appropriate to be used as a lens to describe power among Indonesian society relations.

> "Power is everywhere; not because it embrace everything, but becomes it comes from everywhere"

This quote suggests that individuals can be powerful, power is practised in individual's everyday life, it is created from social relations, it relates individuals to one another and not only top to down approach. For example, in Indonesia, that the government includes multi-sectors departments, national NGO's, community leaders, as well as adolescents to campaign Sexual Reproductive Health in order to improve public awareness [13]. It is evident that the government considers organisations, grass roots communities and individual to have the potential power to raise public awareness and guide social behaviour. It also reflects that in this particular case, power not always came from top i.e. government to down i.e. grass roots communities, but it can also come from community leaders, national NGOs as well as individual adolescents themselves.

Foucault's broad and interactive theory is favoured because his thinking challenge previous authors who generally describe power as threating, oppressive and a top-down approach in politics and government, Foucault focuses on power relations in social system [14].

> "We must cease once and for all to describe the effects of power in negative terms: it 'excludes', it 'represses', it 'censors', it 'abstracts', it 'masks', it 'conceals'. In fact power produces; it produces reality; it produces domains of objects and rituals of truth. The individual and the knowledge that may be gained of him belong to this production"

The quote above presents Foucault's concept of power as either positive or negative. In a positive way in some traditional community context where women become sub-ordinate, power can be used as sources of strength to empower women and to promote their involvement, raise critiques for development and struggle for justice, whilst in a negative way, power can be used to prevent women's participations and or aspirations and the fulfilment of women's rights [15]. For example in Indonesia, power was used in a positive way in a case when government developed a programme to empower women including young mothers through entrepreneur skills development in order to enhance their access to finance and jobs, and to raise awareness about contraception and family planning [16]. In contrast, an example when power was used in a negative way can be seen in Indonesia when pregnant adolescents were excluded from school due to policy practices in Indonesian schools [17].

Foucault also discusses "biopower" which refers to the ways in which power manifests itself in the form of daily practices and routines through which individuals engage in self-surveillance and self-discipline [18]. In the concept of "biopower", individuals naturally have power that can be expressed as an instinct or desire. For example, where premarital sexual relationship is prohibited such as in Indonesia, there were many adolescents whom behaved self-surveillance and self-discipline to avoid such behaviour, whilst evidence also showed that other Indonesian adolescent also led their intention to engage in premarital sexual relationships [10]. Therefore, it is more likely that power can also be seen in each individual for controlling their intention whether to engage in premarital sexual relationship or not.

Foucault's concept is important to understand how both the power of individual and society are implicated in mixing people's behaviour. There are studies that used Foucault's concept of power. For example, power can be used to raise awareness and improve the knowledge of people in health and sexuality regulation and management by inviting individuals to address their own behaviours as a matter of their own desires [19]. It can also be seen in Indonesian health programme interventions that power is intended to be used positively, to reduce the number of adolescent pregnancies, the Indonesian government put effort into the establishment of friendly youth centres in order to attract adolescents for accessing SRH education and services in public health centres [13]. It was expected that by educating adolescents about SRH, there would be an improvement in adolescents' awareness related to SRH and practices. Power also has been used positively by community and religious leaders in supporting SRH programme interventions i.e. providing information to the adolescents and their parents about how to get SRH services access and campaigning 'no sex before marriage'.

Power has also been extended by the Indonesian government by using government authority for instance pregnant adolescents and their boyfriend have to marry in order to be legally accepted as certified couple. If couples reject marriage, they will not be able to have legal birth certification for their children. In regards to the social exclusion, Foucault also uses the history of punishment in order to illustrate the larger social movement of power and examine how changing power relations affected punishment from the aristocracy to the middle classes. For example in monarchical law, corporal punishments were key punishments and torture was part of most criminal investigations. Punishment was ceremonial and directed at the prisoner's body. It was a ritual in which the audience was important. On the other hand, in the postmodern era, punishment is a procedure for reforming individuals as subjects; it does not use marks, but signs.

Modern power to punish is theoretically based on the supervision and organisation of bodies in time and space [18]. The description given by Foucault explains how power has been used to construct people's behaviour by using supervision and organisation of bodies. Similarly, in Indonesia there is evidence that culture and religion also strongly influences how people behave [20]. Some people believe that God is their end of life goal therefore has empowered them to have individual commitment and self-regulation without any supervision from others [21]. For example in everyday life, some people in Indonesia practically have individual commitment to do prayer in their daily life without anybody asking them to do so. In the context of adolescent pregnancy, previous study also stated informed that when premarital pregnancy occurred adolescents had no choice other than to accept marriage which was initiated by their parents [22]. Hence, it seems that adolescents behave passively as children of what society expected, that is accepting what their parents asked of them. In Islamic values which is the religion of majority of Indonesian people, there is a recognition of and a request for every Muslim to respect their parents in the Qur'an verse that

> 'Your Lord had decreed, that you worship none save Him, and (that you show) kindness to parents. If one of them or both of them attain old age with you, say not "Fie" unto them nor repulse them, but speak unto them a gracious word. And lower unto them the wing of submission through mercy, and say: My Lord! Have mercy on them both, as they did care for me when I was young [Surah Al-Isra' (17:23-24)].

This seems therefore to be one of the reason why adolescents were complying with engaging in marriage. Whilst, parents were trying to fulfil society expectations, parents also seemed to feel pressure from society to behave as the society expects. Consequently, they also diffused their power to show their role as parents which aims to be responsible. Although such parents' practice more likely resulted in less autonomy for their children to decide what they actually want.

Other concept in regards to power which also explained by Foucault that when power is also related to resistance, he said:

> "Where there is power, there is resistance, and yet, or rather consequently, this resistance is never in a position of exteriority in relation to power."

Thic concept can be seen from the context of Indonesian adolescents when they knew that premarital sexual activities are prohibited but they engaged in premarital sexual relationship. It can be seen that adolescents were conducting rebellious behaviour. Rebellion is defined as the action or process of resisting authority, control, or convention [23]. Rebellion in some cases is shown in the age of adolescence, as in this period some of the young people proudly assert individuality from what parents or societies like or independence from what parents or societies want and ineach case succeed in provoking their disapproval [24]. The findings in this study indicate that Indonesian society seems to control and surveillance people's behaviour by using cultural norms, whilst adolescents were trying to resist the cultural power and society control. Foucault concept also suggests that the society is more likely to be a panoptical tool towards adolescents to ensure they behave in certain way. Whilst, adolescents' rebellious behaviour seems to be a resistant to the power of culture and religion which are strongly diffused within Indonesian society.

Conclusion

In a social relationship power is not always being used to oppress others, rather, power is more likely to be used to influence people to behave like a power holder expects. Having an understanding of a theoretically explanation of power relations in society, it is evident that in society relations sources of power come from each individual within context of SRH and premarital pregnancy in Indonesia. It can become either a positive or negative influence on peoples'live and behaviour as response of the SRH and premarital pregnancy in Indonesia. It does not always come from the top to the down and it may also come with resistance.

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Children's Education At Home During The Pandemic Islamic Education Perspective

Asrori Mukhtarom[1]

Introduction

It's been over a year since the world was hit by the Coronavirus pandemic. Coronavirus (CoV) is a large group of viruses that cause diseases ranging from common cold coughs to more serious diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). A type of coronavirus that has only been discovered in humans since an extraordinary event appeared in Wuhan, China in 2019, the virus was later named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov2) which causes Coronavirus Disease-2019 (Covid-19). [1] Aware of the dangers of spreading the virus, several countries around the world made lockdown policies. While in Indonesia, a large-scale social restriction policy (PSBB) was made to prevent the transmission of Covid-19 disease.

The Covid-19 pandemic has a major impact on the human life sector. The health crisis has triggered the birth of crises in other sectors of life, as well as being a coercive factor in changes in individual and organizational behavior. In the records of human civilization, the health crisis has spawned a "new normality" that overhauls established order at various levels and sectors of life. [2]

In the health sector, until now Covid-19 cases have not been completed, and in Indonesia until May 16, 2021, confirmed cases of Covid-19 amounted to 1,736,670 with 47,967 deaths. [3] In the economic sector, the pandemic caused several countries to experience a recession, including Singapore, the Philippines, and other countries. The Government of Indonesia has not officially announced a recession, only since the Covid-19 case emerged has there been a reduction in labor in some companies, production restrictions due to the availability of imported raw materials, and an impact also on the MSME sector (Micro, Small,

[1] Program Pascasarjana Universitas Muhammadiyah Tangerang, asrorimukhtarom84@gmail.com

and Regional Enterprises). In the social sector, the Covid-19 pandemic gave birth to a transformation of social behavior, for example, to maximize social distancing, work activities and education centered at home, worship at home, and religious rituals were temporarily abolished.

The Covid-19 pandemic also impacted the education sector. In Indonesia, the Ministry of Education and Culture (Kemendikbud) issued Circular Letter No. 15 of 2020 on Guidelines for The Implementation of Learning From Home In the Emergency Period of the Spread of Covid-19. The policy aims to ensure the fulfillment of student's right to obtain education services during the Covid-19 emergency, protect the citizens of the education unit from the adverse effects of Covid-19, prevent the spread and transmission of Covid-19 in the education unit, and ensure the fulfillment of psychosocial support of educators, students, and parents. [4]

With the policy of studying at home and working at home or in other words, all activities are centered at home, the time of togetherness of parents with children is increasingly intense. The opportunity of togetherness needs to be realized as a valuable momentum to strengthen the relationship between children and parents. The momentum can be utilized by parents to the maximum in providing mentoring and education for children. Please note that children's education at home is a challenge for parents, but the challenge can be passed if parents know how to educate their children at home.

One of the educational concepts that can be implemented in educating children at home during the pandemic is Islamic education. This paper will be explained how children's education at home during the pandemic Islamic education perspective which includes the role of parents Islamic education perspective, Islamic education materials, and methods of educating children in Islamic education comprehensively and integrally. The type of research chosen is library research by collecting all information from the main source of Islamic education, namely the text of the Qur'an, then the discussion is supplemented by references to books and journals on Islamic education written by Islamic education experts.

Discussion

The Urgency of Education for Children

Children are one of the things most expected by every family. The happiness of parents seems perfect when having children who grow up healthy and have good character. Children are the most beautiful gifts God gives to parents, and not all parents get them. Therefore, every parent is obliged to take care and take care of their children as a form of gratitude for the grace God gives.

A child is a small human being who has characteristics that are not the same as adults, the child has a high dependence and is not yet independent. Children in a period of physical, psychic, spiritual, and intellectual development. Childhood is a sensitive or sensitive time in which the child is easily receptive to various stimuli and influences from outside the self that he receives through his five senses. [5] Thus in the process of growth and development of the child is in desperate need of mentoring and parenting.

The position of the child in the perspective of Islamic education is an individual who is in the process of physical, psychic, and spiritual growth and development. During the process of growth and development, the child needs guidance and direction that is consistent and sustainable towards the optimal point of fitrah ability that he has. Thus, Islamic teachings require every parent to take care of their children, as hinted in QS. At-Tahrim [66]: 6.

In Islamic education, the position of the child as a descendant who will become a generation or successor, as hinted in QS. Al-Furqon [25]: 74. This verse explains one of the attributes of a believing parent who always ask Allah to be awarded a child or offspring who believes and fears Allah. This is so that the people of this world may be filled with people who believe and fear God, and that their descendants may be the successors in the fight for justice and truth. [6] The future of the nation is determined by the child as the next generation, as well as the existence of religion in the future depends on the child as a direct and relay bearer of the struggle of Islamic da'wah. If the generation is destroyed, then it is certain that the existence of the state and religion is threatened.

One of the strategic efforts in shaping the character of a good child is through Islamic education. The role of Islamic education for children is very important to develop a set of potentials that children have. According to Shahminan Zaini quoted by Abdul Kodir,[7] human potential consists of two parts, namely internal potential and external potential. The first internal potential includes fitrah and hanif, both of which have the understanding that man has a natural tendency to accept religion or religion from the beginning of its creation. Only the meaning of fitrah is broader not only the natural tendencies of religion, but also human beings have social fitrah, gain knowledge, maintain life, and freedom. Furthermore, the second internal potential includes the unity of the body and the spirit. Man is not only a creature in the form of a body, but in man, there is a spirit with which man can live. With the potential of the body (sensory), man can know something outside of himself through his sensory instruments, man can know the sound, color, smell, taste, and so on with his five senses. Then the potential ability is willing to behave. Furthermore, the potential of the reason is one of the elements of human psychology to achieve the true truth. The potential of reason gives people the ability to understand symbols, abstract things, compare right and wrong, and encourage people to create and innovate in realizing human civilization.

While the external potential is outside of human beings who support and support internal potential, namely in the form of religious instructions and the universe. Through religious instruction, man gets information about what he does not know all along. Not all problems of life can be solved by reason. Religion becomes the guide and guide of man in living life. While the external universe is bestowed by God for man as a means of man reaching the perfection of life.

From the set of potentials that have as described above, then Islamic education is a must be given to children. Without Islamic education, the potential does not benefit oneself, others, and the universe. The role of parents in Islamic education is very important in optimizing the set of potentials that children have towards intellectually intelligent, spiritually intelligent, and emotionally intelligent human beings.

The purpose of children's education in the perspective of Islamic education is to form a generation of good character and foster people personally and in groups to be able to carry out their functions as servants of God and caliphs, to build this world by the concept set by God, or in other words to fear God. [8] This goal will be achieved if the parents are maximal in educating their children.

Islamic Education Materials and Methods at Home during the Pandemic

The current condition of the covid 19 pandemics requires all activities centered at home, including education affairs to be returned home. The role of parents as the main educator is very strategic in the process of home education, the success of home education is determined by the role of parents as well as the quality of materials and educational methods provided by parents to their children. Parents are natural educators, meaning that naturally, parents have responsibilities and commitments to educate their children. Therefore every parent is required to be ready in educating their children at home.

Children's education at home must begin with a harmonious atmosphere in the family. indicators of family harmony can be seen from quality husband and wife relationships and relationships between parents and children are well established. One of the principles to realize the harmony of parental relationship with children is with the principle of compassion. In the family, parents should play a role in bringing love and affection, especially in educating children. The importance of compassion for children is based on imperfect thinking and the unstable mental state of the child. A child whose parents were educated was affectionate about the great influence on the formation of his character,[9] a compassionate, responsible, independent, and democratic character. [10]

In Islamic teachings, love and compassion are human nature, according to Nurcholish Madjid, it is very important to educate children in a home atmosphere that is covered by affection. [11] The Qur'an is a source of the teaching of compassion, it can be seen from the many verses of the Qur'an that hint at behaving with compassion and affection, one example when calling a child with affectionate and gentle calls, as hinted in QS. As-Shafat (No. 37): 102 and QS. Luqman [31]: 13. In this verse, there is a parent interaction with the child by calling using the word yaa bunayya. The word bunayya is used as an expression of deep affection towards the child. [12]

The harmonious atmosphere of the house based on affection is the main capital of parents who to further prepare educational materials that will be given to the child. According to Ahmad Tafsir, the material provided by parents to their children is adapted to the development of the child's abilities. [13] According to Muhajir, educational materials provided by children must accommodate aspects of religion, intelligence (reason), character, skills. [14] The educational materials of children at home during the pandemic in the perspective of Islamic education are:

a. Tawhid material. The importance of tawhid education in children is based on human spiritual needs. Tawhid education will lead people to know The One True God who created the universe and the whole. In the current pandemic conditions, parents can give an understanding that the events of the coronavirus outbreak do not escape the power and will of the Creator. Tawhid education will also guide the child to know the nature of man which includes human origin, the process of human creation, the purpose of human creation, human position among other godly beings, and post-life life in the world.

b. Worship material. In Islamic education, worship materials are very important to give to children. It is based on verses of the Qur'an that hint at the commitment of parents to teach their children about worship, such as prayer as instructed in QS. Luqman [31]: 17. Momentum pandemic today, it is important for parents to direct their children closer to God through worship. Dad became a priest to his family.
c. Moral material. In addition to the pandemic problem, we are currently faced with the reality of potential future threats to children. A wide variety of criminal cases do little to involve children. In drug cases, for example, the use of narcotics among children and adolescents is increasing. [15] Subsequently, the negative influence of social media also influenced the child's development, intense use of social media resulting in reduced learning time, and lack of interaction in social life. Based on this phenomenon, the role of moral education for children is needed as a solution in prevention efforts. There are several examples of morality derived from the Qur'an and Sunnah that can be instilled in children, including patience, humility, mutual respect, help, tolerance, respect for parents, discipline, and so forth.

The momentum of the current pandemic should be utilized by parents in providing tawhid education, worship, and morality at home. Parents have required readiness in terms of knowledge and skills in accompanying the child. One of the wisdom of the Covid-19 pandemic is to restore the family as the first "madrasah" for its children.

In educating children, it takes a method for children's education to be successful. No matter how good the material is given if you do not use the appropriate method, then the educational objectives are impossible to achieve as expected. Therefore parents should know the methods in educating the child. The method is the way or way that educators take in delivering educational materials or instilling knowledge according to the planned purpose.

From the perspective of Islamic education, there are types of educational methods. First, the tabligh method or lecture. This method has been used by the Prophet Muhammad in educating Muslims. Parents can educate their children using lecture methods in soft and polite language. This method is inspired by QS. Al-Maidah [5]: 67. Second, the method of uswatun hasanah or conscientiousness. This method is based on the fact that parents as figures for their children. The actions taken by parents can be a reference for their children. Thus parents should set an example of good behavior that is then emulated by their children. This method is inspired by QS. Al-Ahzab [33]: 21. The third, the dialog method. This method is known as the question and answer method between parents and children. There is an interaction between parents and children. Parents can decide which topics to discuss. This method is inspired by QS. Al-Baqarah [2]: 30. Fourth, the method of the story. Parents can pass on the story material to the child who then takes important lessons from the story. This method is inspired by QS. Joseph [12]: 2-3. Fifth, the method of advice. This method is also called mau'idzah hasanah, which is an expression in which there is an element of guidance, warning, and teachings. [15] The advice is spoken in polite and gentle language. This method is inspired by QS. An-Nahl [16]: 125.

These are the types of educational methods that are hinted at in the Qur'an. These methods of education can be implemented in educating children during pandemic conditions. Parents should be able to sort out the methods used adapted to the development of the child's age and psyche.

Conclusion

Educational activities during pandemics are centered at home. Thus the relationship between parents and children is getting closer. Pandemic conditions can be maximized by parents in educating their children at home. In the perspective of Islamic education, parents have a responsibility in guiding, nurturing, and educating their children. The material provided by parents in educating their children is the material of tawhid, worship, and morality. This is as hinted at in QS. Luqman [31]: 13, 14, 17, 18. In educating children, proper methods are needed. In the perspective of Islamic education, there are various methods offered, namely lecture methods, story methods, methods, dialogues, methods of advice, and other methods. Parents can choose the method according to the child's age and psychiatric development. With the right method, the process of education of children at home will be achieved as expected.

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Comparison of Patient Safety Incident-Based on Contributing Factor at Military and Government Hospitals

Desak Nyoman Sithi[1]

Introduction

One of the most significant challenges today is to provide safer and quality care in complex, pressurized, and fast-moving healthcare environments [20]. Ten of millions of patients as hospital customers, suffer disabling injuries or death every year due to unsafe medical care, including nursing care. Behind these numbers lies the stories of devastated lives, not to mention the billions of dollars that are spent on prolonged hospitalizations, loss of income, disability care and litigation, resulting from unsafe care [20].

Unsafe nursing care is a significant source of an incident of patient safety, with unawareness by themselves. 53.3% of nurses had the experience to conduct a patient safety incident [4]. When healthcare providers have not communicated effectively about patient progress, patient safety is a high risk for several reasons. The quality of health care services is an important issue, safety, and quality of care are the core values of hospital services and are inextricably linked to each other [2].

The human Factor, leadership, and communication are the leading cause of an adverse event, around 79 %, [7] found that 13.6% nurse who works in ICU potentially conduct a patient safety incident, and 88% did not report or document this incident. [14] identified the most common factors contributor to surgical incidents were cognitive limitations (30.09%), communication failures (16.11%), and a lack of adherence to established policies and procedures (8.81%). The analysis also finds that adverse events were only rarely related to a single factor (20.71%). In most cases involving multiple contributory factors (79.29%), on the other hand, communication and collaboration problems in healthcare are

[1] Nursing Program, Health Sciences Faculty, Universitas Pembangunan Nasional" Veteran" Jakarta, desaknyoman@upnvj.ac.id

strong predictors of surgical error, [21], [1] and failures of communication can jeopardize patient safety. These studies have shown that these communication errors are frequent during the preoperative, intraoperative, and postoperative, cause clinical incidents and adverse events.

In 2014, the U.S. military medical health care system was criticized for higher-than-average surgical complication rates and concerns regarding patient safety, quality of care, lack of transparency, and compartmentalized leadership

RSDS hospital is one of the Military Health systems in Indonesia, providing health care services to all defense ministry employees, the Army Force, and their families, including Soldiers, Veterans, and wounded troops, besides that hospital also providing services to the public society.

At RSDS hospital, the patient safety program has not been implemented properly, indicate by limited documents available related to incident reports about patient safety. Lack of information and limited socialization about patient safety, it’s part of the hospital's challenges. On the other hand, a lot of complaints about the services, (e.c: patient fall, miscommunication, medication error, limited drug and equipment, and some hospital infection).

Achievement of a good quality of care requires safe care, so good teamwork, effective communication, available medical equipment, enough resources from management, skilled workforce, enough workload and responsibility, comfortable workplace environment, enough training and education for all staff provider is required.

Methodology

Study Design

This study was a descriptive and analytical design with a cross-sectional survey. This was a quantitative approach, within a bigger mixed_ methods study, which used a concurrent embedded strategy, by an open question. Open questions aim to complete the data gained regarding the implementation of patient safety goals which cannot be perfectly answered by the responses of the questionnaire items [8].

Study area, Population, and Sample Size

The study was conducted in RSDS as a Military hospital in Jakarta, and DC hospital as Government hospital Depok West Java.

The population of this research is nurses, who work in an inpatient hospital setting who meet the inclusion and exclusion criteria, with 104 sample sizes in Military hospitals and 94 sample sizes in Government hospitals. This study uses a confidence interval of 95%, with a non-probability sampling quota technique.

Techniques of data collection

After securing ethics clearance from the Hospital Research Ethics Committee and permission from the participating hospitals, the researcher held scheduled meetings with the management of these hospitals. The research purpose, process, participants' rights, and potential risks, including their mitigation, were explained and signed informed consents were secured [8].

Data collection is conducted by the researchers with the assistance of data collection teams that have been given direction on the technicalities of filling in the questionnaires and open questionnaires as instruments of data collection. The self-administered questionnaire was distributed to 218 nurses who worked in an inpatient hospital setting. Each participant was asked to complete the questionnaire. The completed questionnaires were collected with the assistance of data collection teams, from April to Mei 2016. Of 218 questionnaires were distributed to participants and responses were received from 198 respondents, a response of 90.8%, consisting of 104 responses from RSDS hospital and 94 responses from DC hospital.

Data analysis

The quantitative data collection analyzes by Univariate, Bivariate, and Multivariate analysis, while qualitative data, analyze by content analysis. The data from an open question grouped based on incidents of patient safety in general and incident of each goal of patient safety.

Results and Discussion:

The results of this study presented sequentially starting from univariate analysis, bivariate analysis, and multivariate analysis, as below:

1. Univariate Analysis

   Descriptive analysis in this study describes by the tables below:

   Comparison between Results of Research in RSDS Hospital Jakarta with DC Hospital West Java

The Comparison Result of Research between RSDS Hospital Jakarta and DC Hospital, as below: All the research results will be compared in sequence, starting from Univariate analysis, Bivariate Analysis, and Multivariate Analysis, as below:

Table 1. Comparison Characteristic of Respondent at RSDS Hospital Jakarta with DC Hospital West Java

Respondent Characteristic		RSDS Hospital Jakarta		DC Hospital West Java	
Characteristic	Type	n =104	Percentage %	n=94	Percentage %
Gender	Female	90	86.5 %	74	78.5%
	Male	14	13.5 %	20	21.5%
Age	≥ 30 years 's old	63	60.6 %	75	79.8%
	<30 year's old	41	39.4 %	19	20.2%
Education	Diploma in nursing	101	97.1 %	81	86.2%
	Bachelor of Nursing	3	2.9 %	13	12.8%
Work Experience	≥ 5 years	85	**81.7%**	76	80.9%
	< 5 years	19	18.3 %	18	19.1%

Table 1. Regarding the characteristics of the respondent in both hospitals are almost the same. Most of the gender participants are female, age ≥ 30 years old, with the last education, is Diploma Nursing, and most of the respondents had over five years' experience.

Discussion:

Related to most of the nurses in the Inpatient Ward RSDS hospital and DC Hospital is female, it is fit of nurse profile in both hospitals. In general, most of the nurses worldwide, are female, including in Indonesia. This research is almost the same as research conducting [9], [10], that the general characteristics of the participants are shown, of 97.5% of respondents were female, most (50.9%) were in their 20s, with their average age being 31.3 years (±7.3). The majority were unmarried (59.2%), and 56.1% had religion. For clinical experience, most (37.3%) had over ten years experience and a mean duration of 9.0 (±8.6) service years. The difference between these research Characteristics is our study didn't measure Marital status and personality [11].

Nursing is a feminine profession with a mother instinct, more attention, and affection for caring. Accordance with conceptual caring as a competency of a nurse [12]. According to the latest statistics, those male nurses represent just a small fraction of the nursing workforce in the United States (http://www.highbeam.com/). Although male nurses, often face the challenges of gender discrimination, especially in specialties like obstetrics and gynecology, where women usually prefer to have female nurses, male nurses often end up in leadership roles and specialties like intensive care, emergency, and operating room nursing (http://www.jscms.com/).

In an Iranian qualitative study, one of the significant obstacles that may dissuade men from entering the nursing profession is the traditional female image. The feminine nature of nursing prevailing that caring image of the job. Femininity is used to symbolize the epitome of caring. According to [16], although several men entering the nursing profession is on the rise, but not been a significant increase in the percentage of men in nursing. Although Iranian patients prefer to care by nurses of the same gender, many of them are astonished when they are cared for by men nurses. Even though men appear to be marginal in the nursing profession, because of being a minority in the job, but also become an advantage for them, because they occupy most of the prestigious positions—some research exploring men's experiences in other female-dominated professions.

Related to most of the respondent's age is ≥ 30 years old, this condition is caused by most of the nurses in both hospitals are government employees and by the profile of nursing in the hospital's setting. According to [24]. Related to nurse's burnout, show that from 843 direct care hospitals, compared to their older counterparts, nurses under 30 years of age. They were more likely to experience the feeling of agitation and less likely to engage in techniques to manage these feelings. Younger nurses also reported significantly higher rates of burnout, and this was particularly true among those experiencing higher levels of agitation work.

Related to most of the nurse's education is in Diploma Nursing, following the education profile of nursing in both hospitals. In the past, most of the nurse education was in Vocational or Nurse Aid. According to Indonesian government regulation 2005, the lowest knowledge of nurse in Indonesia is Diploma in Nursing, so they continue their study to become Diploma Nursing, the policy of Indonesian Nurses Association determine that the lowest nurse education is Bachelor of Nursing.

Regarding work experience, almost the same with education, most of the nurses in the hospital setting have experienced more than five years. According to Mathis and Jackson, work is an effort that is aimed at production or for achieves results. Paine, Turner, and Payke, give the meaning of working as a mobilization effort that aimed at making something. Meanwhile, Steers et.al, define work as an activity that produces something of value for others [21]. One of the crucial factors to contributes nursing quality is the nurse's experience in nursing [6]; [13]. Multiple experiences of observing cues, and recognizing patterns related to a patient status that need to be acted in specific ways, lead to higher levels of clinical performance [15]. The experienced nurse may assess the same patient as an inexperienced nurse but respond differently based on subtle changes (cues) that serve as a forewarning of significant, underlying issues.

Work experience is a fantastic way to gain insight into a career in nursing. It can also be a valuable way of getting some confidence and skills in caring for people. Work experience can help someone decide if their suited to nursing. Work experience is an excellent way of seeing what it's like working in health service and showing your commitment to your future career. Related to workload and work experience, it may concern that: staff exhausted or to fatigue, caused by Shift with low patient ratio, in some ward. Sometimes staff works extra tasks and lack social relaxation [17].

Table 2. Comparison of Patient Safety Incident at RSDS Hospital Jakarta and DC Hospitals

Variable	Incident of Patient Safety	
	RSDS Hospital	DC Hospital
Incident Rate by questionnaire	40.2 %	47.9 %
Incident Rate from the open question	46.1%	64.8 %
Adverse Event	10. %	26.4 %
Near Miss	36.1 %	38.4%

Regarding table 2. Patient Safety incidents in DC Hospital are higher than RSDS Hospital, both measured by questionnaire and by an open question. An open question divides into Adverse Event and Near Miss.

Discussion:

In the general, the incident of patient safety in both hospitals is slightly high. If this result is confirmed by the result of an open question, it's shown the balance information. Most of the nurses in both hospitals have been conducting mistakes 1-3 times over the last six months when implementing nursing care. Most nurses have conducted Near Miss when administering medication to the patients, but not to report. Some of the nurses have been undertaken to medication error where they are administering medication, including Adverse Events, but no reporting at all, because the harm is not serious. This finding is consistent with the study by [18], found that medication error in ICU, Bau-Bau hospital East Indonesia, reach administration error 46.91% & dispensing errors 38.76%. A similar finding in Santa Anna Kendari Hospital, that the highest incidence of medication errors, is administering errors (42.6%), followed by prescribing errors that were (37.4%), and dispensing errors (20%). Critical incident reporting suggests attention to safety, yet a major cause for concern that can be reflective of the organizational culture is that these are either under-reported or not reported at all [18]. Factors that influence these errors are a hospital management system, where hospital facilities were not complete, as needed. Find out the factors that may cause administration error, in IRD RSWS Makasar East Indonesia were: individual character, workload, inappropriate implementation of Seven Right medication, collaboration with patient's family, poor family knowledge on drug collection procedure. Another type of administration error is giving medicine to the right patient, because of the same name [19].

Besides that, some responses, of an open question from RSDS hospital respondents inform that they have the experience to undertake a reaction of transfusion and miss labeling the blood specimen. Another mistake that has occurred in both hospitals was unchecking the IV drip after administering medication; some of them have experience, forgetting to hand over the physician order, used unproperly devices, and errors caused by time pressure. The nurse does not aware of the importance of reporting patient safety incidents because the safety culture is not performed properly [20].

Although the right number of errors and adverse events may not be known because of under-reporting, failure to recognize a mistake, and lack of patient harm, it is difficult to understand the pervasiveness of errors because there are differences in definitions of reportable mistakes and adverse. [6]. The high occurrence of Patient Safety Incidents (PSIs) leading to preventable deaths remains a global concern [23], [21]. Patient safety recognizes as one of the most critical components of health care delivery [20].

The use of research results in clinical practice promotes safe care, increases quality, and reduces the possibility of adverse events.

Table 3. Comparison Factors Contributing to Patient Safety Incident at RSDS Hospital Jakarta and DC Hospital

Variable	Factor Contributing to Patient Safety Incident	
	RSDS Hospital	DC Hospital
Staff Factor	58.60%	64.90%
Task Factor	36.50%	51.10%
Communication Factor	36.50%	54.30%
Medical Equipment Factor	51.90%	49.50%
Work Environment Factor	55.80%	41.50%
Organization Factor	44.20%	37.20%
Training and Development Factor	37.50%	34.00%
Team Factor	50.50%	53.20%

According to the table above revealed that staff factor with a lot of personal issues is a high percentage in both hospitals (58.6% for RSDS hospital and 64.9% for DC Hospital).

Based on the descriptive analysis, the factors that contribute to the incident of patient safety are a little bit different in both hospitals. In RSDS hospital, the factor that contributes to an incident of patient safety is Task Factor, Work Environment Factor, Medical Equipment Factor, Team Factor, and Organization Factor. While in DC hospital the factors that contribute to an incident of patient safety are Task Factor, Communication Factor, Team Factor, Task Factor, and Medical Equipment Factor.

Discussion

In general, factors contributing to an incident of patient safety are almost the same, the staff factor is the main factor in both hospitals. Based on responses to open questions, most of the respondents felt fatigued, stress, and some of them lack motivation. May cause, most of them had a high workload because of inappropriate skill mix on the daily schedule (Inpatient daily schedule on [22]. The human factors were mainly related to 'lack of

Attention, 'stress', 'anger', and 'fatigue' [5]. It is essential to recognize that errors are simply the symptoms or indicators that there are defects elsewhere in the system and not the defects themselves [27].

Related to communication in DC hospital may concern. Ineffective communication occurs between nurse-physician, nurse-patient, and nurse-to-nurse in the handover to shift day and another professional healthcare provider. In RSDS hospital communication is not to be a concern, may cause of Army force organization culture, that all of the activities are structuring, based on Standard operational procedure [23].

Identify Ineffective communication is now a well-recognized contributor to patient harm in hospitals. For some years, research has been suggesting that clinical handover is a critical site for communication problems. For example, a recent large-scale European Commission project has found that handover communication is responsible for 25% to 40% of adverse events. Identify the most common factors contributing to surgical incidents were cognitive limitations (30.09%), communication failures (16.11%) [24], and a lack of adherence to established policies and procedures (8.81%) [14]. While [5], find out that communication errors contribute (13.7%), to an incident of patient safety. When healthcare professionals are not communicating effectively, the occurrence of patient safety is at risk for several reasons, such as lack of critical information, misinterpretation of data, unclear orders over the telephone, and overlooked changes in status [5].

Related to Task factor in DC hospital it may concern, but not in RSDS hospital. This condition may cause of high workload. Based on responses to an open question, some of the nurses inform that they should perform many tasks at the same time. Besides, maybe hospital management lacks inculcation organizational culture, including responsibility.

Related to the Work Environment in RSDS hospital, it's meant an uncomfortable work environment (55.80%). This condition meaning for the hospital customer, especially for Army Forces employees, and soldiers with disabilities from conflict areas, may have more psychological sensitivity. According to responses to an open question, some nurses complain about shift schedules. It is uncomfortable for new nurses, especially inappropriate skill mix. Another uncomfortable work environment is time pressure, whereas many tasks should perform at the same time, which is difficult for a new nurse. According to [14], found that local working conditions contribute (35.35%), to an incident of patient safety, while latent external factors (25.25%) and communication and safety culture-related contributors (37.37%). [5], found that the healthcare environment contributes 22% to an incident of patient safety and 13% to technical factors

The health care environment setting should be safe for all patients, in all its processes, and all the time. This standard of patient safety implies that organizations should not have a different level of care, apply lower rules on nights and weekends, or during periods of organizational change" (IOM2001. p. 45). Identify the high-risk conditions that handoffs can pose to patients; the report notes that handoffs are frequently the first place where patient safety is compromised.

Regarding Teamwork in both hospitals. This factor is related to less support from other professional healthcare providers as team members. Sometimes lack of team openness/communication with colleagues, or lack of assertiveness. This situation, consistent with Contributory Factors for Root Cause Analysis [1]. Ineffective clinical leadership may cause a weak team and negative team reaction(s) to adverse events.

Uncomfortable teams and downgrade staff mentally may cause neglected for harm. According to [3]; [26],

According to the World Health Organization, by implementing interprofessional collaboration and learning to work together, and respecting one another's perspectives in healthcare, multiple disciplines can work more effectively as a team to help improve patient outcomes. "Healthcare is dependent on many different disciplines working together to address patient needs [14].

Regarding Medical equipment, is incomplete Medical Equipment in RSDS hospital higher (51.90%), than in DC Hospital (49.50%), this situation because of customer need for excellent service in RSDS hospital higher than in DC hospital. according to exploring by the open question, some respondents complained that the devices are not functioning properly, unclear information, inappropriate size, and poor maintenance programmed for some devices. Variations in equipment and lack of training in how to use it also, increase the likelihood of error [19].

It is necessary to recognize that several factors influence the occurrence of Adverse Events, such as quantity and quality of available materials and equipment, structural conditions of the service and access to new technologies (14); undersizing nursing staff, training, and qualification (14), professional experience time shorter than five years, for lighter incidents and greater than five years for more severe damage (1). The implementation of security policies, on the other hand, favors the identification and notification of incidents, steps necessary to strengthen the security culture.

The fourth top primary finding contributing factor to the incident of patient safety of my study in RSDS hospital are staff factor (58.60%), work environment factor (55.80%), medical equipment factor (51.90%, and team factor (50.50%). While fourth top primary finding contributing factor to the incident of patient safety of my study in DC hospital are staff factor (64.90%), communication factor (54.30%), team factor (53.20% and task (51.10%).

The top three Primary findings contributing factors to incidents of patient safety in both hospitals are staff factors as the main contributor, team factor, and Medical Equipment Factor.

Table 3. Comparison Bivariate Analysis base on Characteristic of Respondent to patient safety Incident at RSDS Hospital Jakarta and DC Hospital

		RSDS Hospital						DC hospital					
		Incident of Patient safety						Incident of Patient Safety					
		Incident		Not Incident		P-Value	OR	Incident		Not Incident		P-Value	OR
		n	%	n	%			n	%	n	%		
Age	≥ 30 Yr old	13	44.8%	16	55.2%	0.636	1.250	40	53.3%	35	46.7%	0.035	3.200
	< 30 Yr old	36	48.6%	38	51.4%			5	26.3%	14	73.7%		
Work Experience	≥ 5 Yr old	39	45.9%	46	54.1%			35	46.1%	41	53.9%		
	< 5 Yrs old	9	47.4%	10	52.6%	0.152	1.696	10	55.6%	8	44.4%	0.468	0.683
Gender	Male	5	35.7%	9	64.3%	0.190	0.311	11	55.0%	9	45.0%	0.437	1.481
	Famale	44	49.4%	46	50.6%			33	45.2%	40	54.8%		
Education	Diploma	47	47.0%	53	53.0%			37	45.7%	44	54.3%		
	Bechelor of nursing	2	66.7%	1	33.3%	0.556	0.300	8	61.5%	5	38.5%	0 .288	.526

Table 3. Revealed that all the characteristics of respondents in both Hospitals are not significant to patient safety incidents, except the age of respondents in DC Hospital.

Discussion:

In general, no significant contribution to the incident of patient safety from the characteristic of the respondent in both hospitals, except the age of respondents in the DC hospital with PV 0.035 and Odd Ratio 3.200. It means that age contributes to the incident of patient safety, especially respondents with ≥ 30 years old, 3.2 higher risk to conduct incident of patient safety than respondent < 30 years old. Although respondent characteristic in RSDS hospital is not significant at all, respondent with ≥ 5 years' work experience 1.7 times higher risk to conduct incident of patient safety than respondent < 5 years' work experience.

This result is in line with the responses of respondents by the open question in both hospitals, that almost all of respondents have the experience to conduct mistakes or incidence of patient safety 1-3 times over the last six months.

Table 4. Comparison Bivariate Analysis of Factor Contributing to Patient Safety Incident at RSDS Hospital Jakarta and DC Hospital

		RSDS Hospital						DC hospital					
		Incident of Patient safety				P-Value	OR	Incident of Patient Safety				P-Value	OR
		Incident		Not Incident				Incident		Not Incident			
		n	%	n	%			n	%	n	%		
Staff Factor	Lot of Personal Issue	43	72.9%	16	27.1%	0.000	18.813	35	57.4%	26	42.6%	0 .012	3.096
	Less Personal Issue	5	12.2%	36	87.8%			10	30.3%	23	69.7%		
Task Factor	High Workload	31	81.6%	7	18.4%	0.000	11.071	30	62.5%	18	37.5%	0 .004	3.444
	Low Workload	18	27.7%	47	72.3%			15	32.6%	31	67.4%		
Communication Factor	Ineffective	16	43.2%	21	56.8%	0.594	0.800	33	64.7%	18	35.3%	0.000	4.736
	Effective	32	49.2%	33	50.8%			12	27.9%	31	72.1%		
Medical Equipment factor	Incomplete	26	52.0%	24	48.0%	0.362	1.444	30	65.2%	16	34.8%	0.001	4.000
	Complete	23	44.2%	29	55.8%			15	31.9%	32	68.1%		
Work Environment Factor	Uncomfortable	33	56.9%	25	43.1%	0.041	2.320	22	56.4%	17	43.6%	0 .163	1.801
	Comfortable	16	36.4%	28	63.6%			23	41.8%	32	58.2%		
Organization Factor	Less supported	32	68.1%	15	31.9%	0.000	4.908	14	40.0%	21	60.0%	0.239	0.602
	Supported	17	30.4%	39	69.6%			31	52.5%	28	47.5%		
Training and Development factor	Less Training	31	83.8%	6	16.2%	0.000	14.822	15	46.9%	17	53.1%	0 .889	.941
	Lot of Training	18	27.3%	48	72.7%			30	48.4%	32	51.6%		
Team Factor	Less Support	46	88.5%	6	11.5%	0.000	120.111	27	54.0%	23	46.0%	0 .205	1.696
	Support	3	5.9%	48	94.1%			18	40.9%	26	59.1%		

Regarding table 4. above revealed that 6 of 8 factors significantly contribute to incidents of patient safety in RSDS hospitals are Staff Factor, Task factor, Work Environment factor, Organization factor, Training and development factor, and team factor. While 4 of the 8 factors significantly contribute to an incident of patient safety in DC hospital are Staff Factor, task factor, communication factor, and medical equipment factor.

Discussion

Related to staff factor and Task factor as the main contributing factor to the incident of patient safety in both hospitals. Staff factor with PV 0.000, OR 18.831 and Task Factor with PV 0.000, OR 11.071 (in RSDS hospital). While in DC hospital, Staff factor with PV 0.012, OR 3.096, and Task factor with PV 0.004, OR 3.444. It's mean that respondents with a lot of personal issues, tend to higher risk 18.8 times to conduct patient safety incidents than respondents with fewer personal issues in RSDS hospital and 3 times higher risk to conduct incidents of patient safety than respondents with fewer personal issues in DC hospital. This result is consistent with the responses of the respondent by the open question, that most of the respondents felt fatigued, stress, and some of them lack motivation. Probably some of their high risk to make a mistake when implementing patient safety goals.

A study by [5], identified the contributing factor to a patient safety incident, 35% were related to the care process, 30% to human factors, in primary care.

Related to Communication factor and medical equipment factor are not significant in RSDS Hospital, but this factor is significant in DC Hospital with PV -0.000, OR 4.736 and 0.001 and OR (4.376 and 4.000). It means that respondents with ineffective communication have a four times higher risk of conducting patient safety incidents than respondents with effective communication and complete medical equipment. [5], identified the contributing factors, were communication errors (13.7%), human factors related to healthcare providers (12.9%), and human factors related to patients (12.9%). The human factors were mainly related to 'lack of attention, stress, 'anger' and 'fatigue'. The most common factors identified as contributing to reported surgical incidents were cognitive limitations (30.09%), communication failures (16.11%), and a lack of adherence to established policies and procedures (8.81%). The analysis also revealed that adverse events were only rarely related to an isolated, single factor (20.71%) – with most cases involving multiple contributory factors (79.29% of all cases had more than one contributory factor).

Related Work Environment factor, Organization factor, Training Education factor, and Team factor are significant to patient safety incidents with PV- 0.041, Pv-0.000, Pv-0.000, Pv-0.000, and Odd Ratio (2.320, 4.908, 14.822, and 120.111 respectively) in RSDS hospital. It means that respondent with the uncomfortable environment, less supported from management, less training and education and the less supporting team has a 120 times higher risk, to conduct patient safety incident than respondent with a comfortable environment, more support from management, complete training and education, and a reliable team. And not significant in DC Hospital. Violations from safe operating procedures, standards, and rules, which can be routine and necessary or involve risk of harm. Human susceptibility to stress and fatigue, emotions, and human cognitive abilities, attention span, and perceptions can influence problem-solving skills. Human performance and problem-solving abilities are categorized a skill-based (i.e., patterns of thoughts and actions that are governed by previously-stored models of pre-programmed instructions and those performed unconsciously), rule-based (i.e., solutions to familiar problems that are governed by rules and preconditions), and knowledge-based (i.e., used when new situations are encountered and require conscious analytic processing based on prior knowledge).

Based on the situation above, where the nurse has direct contact with the patient, may provide "Unsafe Acts," nursing care, it probably the high risk of harm. Nurses, as the largest group of health care providers in the hospital, provide vital efforts to prevent errors. Nurses have a significant role in improving care; because of their broad yet intimate perspective, nurses are an indispensable part of the endeavor to find innovative solutions to improve safety [3].

Table 5. Comparison of Most Contributing Factor to Patient Safety Incident-Based on Multivariate Analysis in RSDS Hospital Jakarta and DC Hospital

RSDS Hospital								
	B	S.E.	Wald	Df	Sig. (P- value)	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Staff Factor (1)	2.89	1.412	4.189	1	0.041	17.985	1.13	286.2
Task Factor (1)	3.03	1.403	4.664	1	0.031	20.706	1.323	324.003
Work Environment (1)	4.05	2.189	3.423	1	0.064	57.395	0.786	4188.761
Organization Factor (1)	-2.592	1.842	1.979	1	0.159	0.075	0.002	2.771
Training and Development Factor (1)	2.985	1.451	4.231	1	0.04	19.795	1.151	340.449
Team Factor (1)	6.528	1.815	12.935	1	0.000	683.781	19.5	23977.67
Constant	-7.636	2.314	10.893	1	0.001	0		
DC Hospital								
	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Age (1)	0.97	0.679	2.041	1	0.153	2.637	0.697	9.975
Staff Factor (1)	1.008	0.556	3.282	1	0.07	2.739	0.921	8.149
Task Factor (1)	0.982	0.514	3.648	1	0.056	2.669	0.975	7.31
Medical Equipment Factor (1)	1.363	0.496	7.555	1	0.006	3.907	1.479	10.326
Organization Factor (1)	-0.83	0.567	2.144	1	0.143	0.436	0.144	1.324
Team Factor (1)	0.686	0.545	1.584	1	0.208	1.986	0.682	5.783
Constant	-1.439	0.58	6.158	1	0.013	0.237		

Regarding table 5. Shown that the risk factors to contribute to patient safety incidents are, Staff factor, Task factor, Training & Development, and Team factor, which are contributing to the incident of patient safety in RSDS hospital. While the risk factor to contribute to patient safety incidents in DC hospitals, is Medical Equipment factor.

Discussion

Related to Staff factor with PV 0.041, OR 17.985, as a contributing factor to the incident of patient safety, mean that respondents with a lot of personal issues, tend 18.8 times higher risk to conduct patient safety incidents than respondents with a less personal issue in RSDS hospital. If compered by an open question, this situation causes nurses to have a lot of personal issues, such as stress, fatigue, unhealthy, because short of the nurse in the ward. Similar research by [9], find out that 39.5% of nurses have the experience to conduct patient safety incidents, 78.6% have experienced high stress, 55.2% fatigue, and 71.7 % lack of teamwork who have conduct patient safety incidents in private hospitals Bandung.

Related to the Task factor with PV 0.031, OR 20.706, that respondents with high workload, tend 20.706 times higher risk to conduct patient safety incidents than respondents with low workload issues in RSDS hospital. Based on responses of an open question, some of the responses inform about high workload, many activities performed at the same time, especially for a new nurse, the skill mix in shift day is inappropriate. According to [12], about 4% (2401) of hospital discharges had an adverse event identified by at least one method. Around 38% (922) of identified events were provider-reported events. Nearly 43% of provider-reported adverse events were skin integrity events, 23% medication events, 21% falls, 1.8% equipment events, and 37% miscellaneous events. Nurses have a significant role in improving care; because nurses are an indispensable part of the endeavor to find innovative solutions to improve safety [11]. The nurse's role has long been regarding the physical labor, human suffering, work hours, staffing, and interpersonal relationships that are central to the work nurses do. However, nurses' work stress may be escalating due to the increasing use of technology, continuing rises in health care costs [25].

Related to the Training & Development factor, with PV 0.04, OR 19.795, that respondents with less Training and Development, tend 19.795 times higher risk to conduct patient safety incidents than respondents with a lot of Training and Development in RSDS hospital.

There has been a strong focus on patient safety culture in patient safety research and policymaking in the last decade, but relatively few studies [1], have demonstrated a positive relationship between this culture and outcomes. Although respondents were convinced of the importance of organizational culture that avoids blame and shame, researchers have highlighted the complexity of the culture concept as we do not know what aspects of the patient safety culture most in need of improvement are and how and whether these can accomplish.

Health 2020, the new long-term European policy, aims to address significant health challenges, invest in health through the life course, strengthening health systems, and creating a supportive environment - adding value through partnership. As defined by WHO, human factors refer to environmental, organizational, and job factors (Task factor), and human and individual characteristics which influence behavior at work in a way that can affect health and safety. Aviation has been applying the science of social factors for over 30 years to reduce airline accidents, with all pilots trained in human factors. Education and validation of competency are critical components to improve patient safety. All healthcare workers must be competent to deliver safe care, and their organization must have mechanisms to check this. Education needs to have broadened to include specific patient safety topics, such as human factors, and methods, such as simulation, designed to create a generation of healthcare workers who deliver consistently safe care.

Related to Team factor with PV 0.000, OR 683.781, that respondents with the less supporting team, tend 683.781 times higher risk to conduct patient safety incidents than respondents with the full supporting team in RSDS hospital. Patient safety is not a compulsory subject in the primary school of physicians and nurses in Indonesia. Clinical training in Indonesia, much like elsewhere, is typically organized around underlying science themes, body systems, or core specialty competencies. This finding is in line with [20]; classify the cause of the incident in three domains: first domain is human with several components, are: fatigue, lack of training, poor communication, hostility, shortage of time, poor judgment, heuristics, and Logic error. The second domain is Organization, which consists of working layout, policies planning, administrative and financial system, incentives/leadership, supply management, hand over / transfer of patient, supervision, and feedback, unclear job description, wrong of staff competencies. The third Domain is Technical, consist of poor automation, shortage of facilities, poor facilities available, no decision support, complexities of problem, unintegrated, no forcing function, irritable error, too much information, no checklist available.

To find out the most contributing factor to the incident of patient safety is based on the largest Wald Value test are Staff factors, Task factors, Training factors, and Team factors. The biggest contributing factor of patient safety incidents is Team Factor with a Wald Value of 12.935.

By the R-Square value of the logistic regression model was obtained at 0.906 which means the factors of staff factor, task factor, work environment factor, organization factor, training, and development factor, and team factor are contribute to patient safety incidents by 90.6%.

While in DC hospital Medical Equipment is the completeness of equipment and drugs has a significant contribution to the incidence of patient safety with a p-value of 0.006 and an Odds Ratio of 3.907 which means that incomplete equipment and drugs are at risk of experiencing patient safety incidents.

By the R-Square value of the logistic regression model was obtained at 0.345, which means that the factors of age, staff factor, task factor, Medical Equipment factor, organization factor, and team factor contribute to patient safety incidents by 34.5%.

Conclusion

With the complexity of patient care and how certain factors can cause errors, organization leaders need to dedicate themselves to the use of data and evidence to improve the quality and safety of healthcare, even when a complex problem occurs.

The results of this study, in RSDS hospital and DC hospital, found that contributing factors to patient safety incidents are, as follows:

1. All the characteristics of the respondent in both hospitals are not significant to a patient safety incident, except age in DC hospital.
2. The fourth top primary finding contributing factor to an incident of patient safety of these studies in RSDS hospital are staff factor (58.60%), work environment factor (55.80%), medical equipment factor (51.90%, and team factor (50.50%). While fourth to a primary contributing factor in DC hospital are staff factor (64.90%), communication factor (54.30%), team factor (53.20% and task (51.10%).
3. The incident of patient safety in RSDS hospital as Military hospital, in general, is too high 40.2 %, measured by questionnaire, and confirmed by the open question, is 46.1% with Adverse event 10 % and near-miss 36.1%, but lower than the incident in DC hospital as a government hospital. The incidents are 47.9 %, measured by questionnaire and confirmed by the open question is 64.8 %, with Adverse Event 26.4%

dan Near Miss 38.4 %.

3. Contributory factor, In RSDS hospital:

   By bivariate analysis find out the six top contributing factors to incidents of patient safety are staff factor, task factor, work environment factor, organization factor, training & development factor, and team factor.

   While by multivariate analysis, are the fourth primary finding as follow:

   a. Staff factor is significant to contribute to patient safety incidents with a P-value of 0.000 and an odds ratio of 18.813, which means that nurses with a lot of personal issues tend 18.813 times higher risk to conduct patient safety incidents than a nurse with less personal issues.
   b. Task factor is significant to contribute to patient safety incidents with a P-value of 0.000 and the odds ratio of 11.071, meaning nurses with high workloads are exposed to 11.071 times higher risk to conduct patient safety incidents than nurses with less workload.
   c. Training & Development factor is significant to contribute to an incident of patient safety, with P value 0.04, OR 19.795, which means respondents with less Training and Development, tend 19.795 times higher risk to conduct patient safety incidents than respondents with a lot of Training and Development in RSDS hospital.
   d. Team factor is significant to contribute to an incident of patient safety, with P value 0.000 and Odds Ratio 683.781, meaning nurses with the less supporting team have 683.781 times higher risk to conduct incident of patient safety than to nurse with the full supporting team.
   e. The most contributing factor to the incident of patient safety is the team factor with Wald test value is 12.935.
   f. By summary model shown that staff factor, task factor, work environment factor, organization factor, training, and development factor, and team factor contribute to an incident of patient safety with significantly 90.6%.

In DC hospital primary finding is:

By bivariate analysis are age, staff factor, task factor, communication factor, Medical Equipment factor, contribute to patient safety incidents

By multivariate analysis

The Medical Equipment factor is significant to contribute to incidents of patient safety with a p-value of 0.006 and an Odds Ratio of 3.907 which means that incomplete equipment and drugs are at risk of experiencing patient safety incidents.

By Summary model, the R-Square value of the logistic regression model was obtained at 0.345, means that the factors of age, staff factor, task factor, Medical Equipment factor, organization factor, and team factor contribute to patient safety incidents by 34.5%.

Conflict of Interest

The researcher has no conflict of interest with anyone, and any stakeholder being conducted this research or on this conference

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Spatial Reasoning Based on Gestalt Law to Solve Mathematics Problems

Dewi Risalah[1]

Introduction

Spatial reasoning is the processing of non-verbal information in the form of images or symbols [16] to solve problems. According to [9] it is stated that spatial thinking or reasoning, physically and mentally involves us, the location and movement of objects. Spatial reasoning is very important in informing cognitive abilities to investigate and solve problems, especially problems in mathematics.

In solving a problem, someone will do a mental process by using all the perceptual knowledge that is owned and determine the right strategy to solve the problem. There is an organizational theory of perception about understanding in solving problems, namely the Gestalt Theory. [15] stated that in making a model of perceptual models, people need a continuity of good spatial reasoning from Gestalt Theory. Previous writers have argued that Gestalt principles provide a useful guiding framework for categorizing multi-sensory displays [1] Gestalt is one of the schools of psychology that studies a phenomenon as a whole or totality, wherein it contains four laws namely proximity law, closeness law, equality law, and continuity law. These four laws will support spatial reasoning.

Spatial reasoning is very important in informing our ability to investigate and solve problems, especially problems in mathematics. [8], states that spatial reasoning is not only important in mathematics but also in all fields of study. In the Ontario curriculum it combines spatial and mathematics sense into one unit because both are related to each other. In line with the curriculum, [10] states the importance of spatial reasoning skills in STEAM, mathematics, measurement, and problem solving both inside and outside of school.

Mathematics is one of the materials in mathematics that has been taught to students in junior high schools. Mathematics is the study of shapes and images. Without spatial ability, students cannot fully appreciate

[1] IKIP PGRI Pontiaanak

nature [4] In mathematics students are required to be able to imagine, manipulate, and compare objects in solving problems. For example, if students are asked to find the broad shaded comparisons of a mathematics, then what students can do is imagine and manipulate the shape of the mathematics is one way to solve it.

In the process of solving a problem someone will do a mental process by using all the knowledge that is owned and determine the right strategy to solve the problem. [11] reveals two kinds of problems, namely (a) problems to find, can be theoretical or practical, abstract, or concrete including riddle, and (b) problems to prove, to show that a statement is true or false (not both). In mathematics, problems are usually in the form of mathematical problems, but not all math problems are problems. [5] explained that a question is called a problem depending on the knowledge someone has therefore, a question is a problem for person, but it might not be a problem for others.

The approach in research is qualitative used to describe student reasoning based on the Gestalt law in solving mathematics problems. The subjects in this research were students who had studied mathematics lessons. Subjects were taken from several of these students based on students' spatial reasoning abilities.

The researcher initially gave the subject mathematics problem solving task to the subject to find out the spatial reasoning of students. From the results of the answers given by this subject, the researcher will see whether there are students who use spatial reasoning, namely imagining, manipulating, or comparing objects. All the components of spatial reasoning will be associated using Gestalt law. The data obtained from this research are the results of tests and the results of interviews between researchers and interview subjects. Every data obtained are analyzed during and after data collection.

After the instrument was validated by an expert validator, the researcher corrected the instrument in accordance to the feedback given by the validator who was then consulted again with the supervisor. Then the instrument was used by researchers to collect data from predetermined research subjects. In the instrument, students were asked to determine the comparison of the area shaded with the whole geometry.This instrument is given to students to find out the possibility of a reasoning flow that is different from the research subject.

Based on the above background, the formulation of the problem in this research is "How is spatial reasoning based on Gestalt law to solve mathematic problems?". By knowing this spatial reasoning, it is expected to be able to give ideas for teacher in improving mathematic lesson by paying attention to students' spatial reasoning so it will be more directed.

Discussion

Based on the results of data exposure above, students who have spatial reasoning are students who are able to imagine, manipulate and compare an object. This is in line with [13] stating that spatial reasoning includes mental rotation (imagine) and mental transformation (manipulate) where in the mental manipulate there is the ability to reason by comparing. [12] also stated that spatial reasoning includes mental rotation (imagine) and mental translation (manipulate). Related to the components that exist in spatial reasoning, there are 4 Gestalt laws that support this, namely proximity law, closeness law, similarity law and continuity law.

From the results and process of the analysis above, there are several indications of word/sentence indications on spatial reasoning which indicate Gestalt laws. In the component of spatial reasoning, when the subject imagines an object, there are several indications of words/sentences such as imagining any mathematics shapes, whole mathematics, rotate, parallel, mathematics, in the same direction, opposite, get, part. This is in line with [7] stating that imagining objects is the process of transforming all objects in the mind. Then when the subject manipulates an object, there are several indications of words/sentences such as seeing the shaded part, moved, united, form, parallel, shaded, unshaded, position, forming geometrical shapes, rotation, winding, ignoring, there is a center point, rotated , there are parts, opposite, parts, get, size and shape, length of side. This is in line with [7] stating that object manipulation happens when only parts of the object are transformed. Furthermore, when the subject compares an object, there are several indications of words/sentences like I do a comparison, mathematics, the length of the side of $QC = CP$, is congruent. This is in line with [6] stating that comparing objects can occur when we have two or more things at the same time that are good for the purpose of having a better understanding of the relationship between them or for the purpose of having a better choice.

Regarding the indication of words/sentences that exist in spatial reasoning, there is a Gestalt law that supports this. In words/sentences such as seeing shaded parts, there are shapes, shaded, position, moved, there are parts, parallel, size and shape, united, unshaded, side length, parts, are indications of proximity law. This is in line with [14,3] stating that things that are close together in time or place tend to be regarded as a totality. In words/sentences such as imagining any mathematics, whole mathematics figure, contained in it, rotated, in the same direction, opposite, seeing any mathematics shapes, forming a mathematics, position, apit, there is a center point, based on the image, an indication of closeness law. This is in line with [14,3] stating that things that tend to close will form an impression of its own totality. In words/sentences such as mathematics, move, put together, there are shapes, flaps, comparisons, lengths of sides $QC = CP$, congruent, the same size and shape, based on the image, are indicators of similarity law. This is in line with [14,3] stating that with regard to things that are similar to each other, people tend to perceive as a group or a totality. Furthermore, in words/sentences such as rotation, ignoring form, I make comparisons , it is already done, the results of the comparison obtained is, are some indication of continuity law. This is in line with [14,3] stating that people will tend to assume a pattern of continuity on existing objects.

Based on the description above, on the subject's spatial reasoning when imagining, there are four Gestalt laws, namely, proximit law, closeness law, similarity law, and continuity law. Then, the subject's spatial reasoning when manipulating is divided into four categories based on Gestalt laws namely proximity, closeness, similarity and continuity. Furthermore, the subject's spatial reasoning when is related to two gestalt laws, namely similarity and continuity. However, from several laws that exist when the subject does spatial reasoning when imagining, there is one Gestalt law that dominates it, namely closeness law. This is because, when the subject is asked to explain how to understand and solve the problem, the subject sees more things that tend to close like when the subject says the whole word/sentence, looks at any shapes formed. This is in line with [7] stating that imagining objects is the process of transforming all objects in the mind. Then, when the subject does spatial reasoning when manipulating, there is one Gestalt law that dominates it, proximity law. This is because when a subject is asked to explain how to understand and solve a problem, the subject sees more things that are close together in a time or place that tends to be considered a totality such as when the subject says a word/sentence there is a part, of any mathematics. This is in line with [7] stating that object manipulation happens when only parts of the object are transformed. Whereas from several laws that exist when the subject does spatial reasoning when comparing, there is one Gestalt law that dominates it, namely similarity law. This is because, when a subject is asked to explain how to understand and solve a problem, the subject sees more things that tend to be identical to something similar to each other like when the subject says words/sentences congruent to those geometries. This is in line with [6] stating that comparing objects can occur where we have two or more things at the same time that are good for the purpose of having a better understanding of the relationship between them or for the purpose of having a better choice.

From the discussion above, there are findings that the researcher got, namely when the subject uses spatial reasoning by imagining, there will be an indication of closeness law that arises when subject does spatial reasoning. This occurs because most of the subject's thoughts refer to things which tends to close by seeing the whole object as its own totality. Then, when the subject uses spatial reasoning by manipulating, there will be an indication of proximity law that arises when the subject is doing spatial reasoning. This occurs because most of the subject's thoughts refer to things that are close together by seeing parts of the object as separate totality . Whereas, when the subject uses spatial reasoning by comparing, there will be indication of similarity law that arises when the subject performs spatial reasoning. This occurs because the subject tends to perceive an object with identical things similar to each other as a separate totality. We can see other findings on **Figure 15** and **Figure 16** [17] **.**

1.

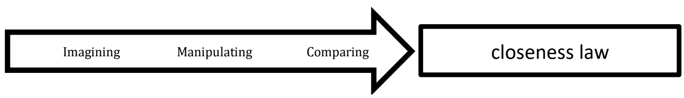

Figure 15. The flow of spatial reasoning on subject with closeness law

From **Figure 15**, it is explained that the subject reasoning process begins when the subject is able to change the overall orientation of the form in his mind (imagining), then the subject is able to do so by moving each part of the object to create a new form (manipulating). From the new form, the subject is then able to solve the problem given by comparing parts of the shape with the overall shape (comparing). From the process, subjects tend to see objects as a whole that close together as something intact because there is no part that is ignored in solving problems.

2.

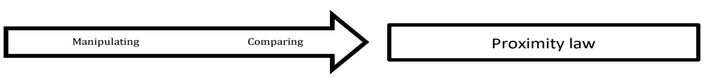

Figure 16. The flow of spatial reasoning on subject with proximity law

From **Figure 16**, From Figure 16, it is explained that the subject reasoning process begins when the subject is able to change the orientation of the form that looks the same and close together by moving each part of the object to create a new shape (manipulate). From the new form, the subject is then able to solve the problem given by comparing parts of the shape with the overall shape (comparing). From the process, the subject tend to see parts that are close together as something intact because there are parts that are ignored in solving problems.

Conclusion

Based on the findings and results of the discussion described previously, the research summarizes the following points:

When the subject solves the problem through the process of imagining, manipulating, then comparing, there is a law for the subject to use the closeness law when solving problems, because the subject tends to see the entire object that closes together as something intact.

When the subject solves the problem through the process of manipulating then comparing, there is a law for the subject to use proximity law when solving problems because the subject tends to see parts of objects that are close together as something intact.

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Representation of Students' Mistakes in Constructing Concepts through Virtual Learning during the COVID-19 Pandemic

Dwi Purnomo,[1] Rochsun[2]

[2]Introduction

The Covid-19 pandemic has plagued Indonesia since March 2, 2020 and continues to this day. As a result, all activities related to mass activities are prohibited. The prohibition is part of a health protocol that all members of the public must adhere to. The purpose of banning mass activities is to break the chain of development of the coronavirus disease-19 so that the pandemic will end soon. The implementation of lecture activity in the classroom as a means of gathering students in teaching is also affected by the existence of rules in health protocols. Referring to existing health protocols, the implementation of the lecture process which is usually carried out face-to-face must be carried out using other learning models that do not violate these prohibitions, however the results are relatively the same when compared to lecture activities before the pandemic and students still think critically, creatively, communicatively, and collaboration which is very much needed in the face of the millennial era and the progress of science which is very fast as it is today [19]; [20]; [2].

One of the learning models that can support health protocols during a pandemic is the virtual learning model (VLM). In its implementation, the virtual learning model refers to the learning process that occurs in virtual classrooms and is in cyberspace via the internet network [12]. Virtual learning is intended to overcome the problem of separation of space and time between learners and teachers through computer devices and the like. Learners can get learning materials that have been designed in learning packages. In addition, virtual learning allows students to learn learning materials on their own or if necessary ask for help in the form of computer-facilitated interactions, such as computer-assisted

[1] Department of Mathematics Education, Institute of Teacher Training and Education Budi Utomo, Jalan Simpang Arjuno 14 B Malang-Indonesia.
[2] IKIP Budi Utomo

learning or interactive web pages, tutor-assisted learning at the same time (synchronous) or at different times (asynchronous), can be used via e-mail, other application-based media. Virtual learning emphasizes remote, computer-based assessments. Through the application of an open scoring system, students can take part in an assessment anytime they are ready to be assessed.

Based on the explanation above, it can be seen that the characteristics of virtual learning are separation between learners and teachers, open learning systems, and network-based learning. Virtual learning was developed not to replace face-to-face learning. The combination of face-to-face learning with the concept of virtual learning allows for an increase in the quality of learning, in addition to increasing the effectiveness and efficiency of education. Virtual learning is developed to support face-to-face learning. The main principles of virtual learning are authority and collaboration. Authority in the sense that students have the responsibility to determine the material, access to learning resources, the time they have, the media used, and the places and steps for learning to achieve learning objectives. Collaborative means that to carry out these responsibilities students are required to interact with other students, teachers or tutors, and other available learning resources. The application of virtual learning can contribute to efforts to improve the quality of learning.

Several advantages can be obtained through the use of computers in virtual learning. These advantages include students can study everywhere according to the speed of learning and the conditions they have, students have broad access to various learning resources available, students have the opportunity to interact with other students, with tutors, and / or with the learning community, and learning resources. This shows that virtual learning provides opportunities for students to make various interactions and collaborate with other learning sources [16]. In addition to having several advantages, virtual learning can provide opportunities for students to interact with various learning resources available via the internet, students' skills in lifelong learning will increase and through online discussion students will master responsible and professional communication skills [1]. In his research concluded that quiet students in class often feel comfortable contributing thoughts in discussions conducted online in virtual learning [6].

Argued that the competence or ability of users, support for facilities, and the adequacy of infrastructure are factors that determine the effectiveness of the application of virtual learning in learning [4]. This is in accordance with the opinion of [3] who stated that there are three main problems that hinder student participation in online learning. First, dispositional problems, namely problems that refer to student personalities, such as attitudes, self-confidence, and learning styles. Second, circumstantial problems, namely problems related to special conditions such as geographic location, time availability, and so on. Third, technical problems, namely problems related to hardware and software programs used in online learning.

Virtual learning that was previously not commonly done can certainly result in errors that can be made when students solve a given problem. The Big Indonesian Dictionary defines error as a matter of wrong, mistake, neglect. If these errors are related to mathematical concepts, the errors that occur can be in the form of fact errors, concept errors, operating errors, or principle errors [15]. On the other hand, the types of errors made by students can be in the form of errors in using data, errors in interpreting data, technical errors, or errors in concluding the end.

Types of student's errors in the research conducted are categorized into concept errors, procedural errors, operating errors, principle errors, language interpretation errors and final conclusion errors. The representation of each error is described in different levels and sequences as shown in Table 1.

Table 1 Category and Error Rate in Solving Mathematical Problems.

Persentage (p)	**Type of Error**		
	Copcept, Procedural	**Operation, Principes**	**Interpretation, Conclusion**
$0{,}00 < p \leq 0{,}20$	very low	very low	very low
$0{,}20 < p \leq 0{,}40$	low	low	low
$0{,}40 < p \leq 0{,}60$	moderate	moderate	moderate
$0{,}60 < p \leq 0{,}80$	high	high	high
$0{,}80 < p \leq 1{,}00$	very high	very high	very high

The percentage (p) in Table 1 above shows the number of students who made mistakes and was calculated based on the types of errors made. In addition to determining the category and level of error, each student's error in solving a given mathematical problem is also determined by an error indicator. Student's errors in interpreting language and errors in concluding answers were analyzed based on 2 indicators, conceptual errors, procedural errors, principle errors were analyzed based on 3 indicators, and operating errors were analyzed based on 4 indicators. Error indicators are benchmarks for knowing what types of errors are made when solving mathematical problems. If one of these factors appears and occurs to one of the students when the student is solving the problem, it means that the student has experienced an error in solving the given mathematical problem.

Indicators of student's errors in language interpretation include mistakes in changing statements in mathematical problems into mathematical statements and making wrong definitions in interpreting statements in mathematical problems. Indicators of student's errors in concluding the final results include answers to mathematical problems given that are not in accordance with what is intended in the answer key and steps or sequences in answering mathematical problems have errors. Indicators of misconceptions include misunderstanding the meaning of the questions given and the use of variable concepts needed, not writing formulas, theorems, or definitions to answer problems, and not answering questions so that there is no solution. Procedural error indicators include carelessly solving problems, incorrectly writing formulas, theorems, or definitions to answer problems, and not writing down the processing process. Indicators of principle errors include not using the appropriate principle in using formulas, making other rules for using formulas, and misunderstanding the properties of formulas. Indicators of operating errors include making mistakes in the multiplication process, making mistakes in the division process, making mistakes in the addition process, and making mistakes in the subtraction process [13].

This research is a qualitative descriptive study, so that all research data and analysis use qualitative research principles. The steps and sequences of the research carried out included (1) the researchers as a lecturer in differential equations gave material to 32 students through a virtual learning model. In this case, a combination of the Zoom Cloud Meetings, Google Meet and WhatsApp applications is used. Zoom cloud meetings are used to explain material to students, google meet is used to provide assignments, while WhatsApp is used for communication between lecturers and students outside of scheduled class hours, (2) the researchers gave assignments in the form of mathematical problems about differential equations and asked students to send written answers through the WhatsApp application in the form of a photo of the answer sheets they have made at the end of each lecture activity through a virtual learning model, (3) the researchers analyzed the students' answers to determine the errors that students did in answering the problems given including concept errors, procedural errors, operating errors, error in principle, errors in language interpretation, and errors in making summaries of answers that refer to each error indicator, (4) the researchers accumulated the number of students who made mistakes in solving mathematical problems based on the emergence of error indicators for each student, (5) the researchers concluded in the form of descriptions of the forms of errors made by students in solving given mathematical problems. Descriptive drawing of conclusions for qualitative data refers to the opinions expressed by [17]; [18].

Discussion

The results of data analysis that were sourced from students' answers in solving mathematical problems, that had been worked on, showed that not all students were able to solve them. In this case, 4 students (12.50%) made operational errors, 6 students (18.75%) made mistakes in language interpretation, 7 students (26.875%) made misconceptions, and 13 students (40,625 %) made procedural errors, principle errors, and errors in the conclusion of the final result. Operation errors were carried out by 4 students, this means that an operation error that had 4 indicators appeared on the students. The emergence of one indicator has shown that students have experienced errors in solving problems, as well as for language misinterpretation, misconceptions, procedural errors, errors in principle and errors in final conclusions. This fact shows that the indicators of these errors appear on students as research subjects when solving a given mathematical problems.

The above statement is supported by previous research conducted by [22] which states that the mismatch in interpreting mathematical concepts is due to a lack of accuracy in understanding mathematical problems. Lack of language mastery, which causes students to lack understanding of question requests. Another study that supports the research findings is conducted [9].

According to Mulyadi, students did not memorize the basic formulas by memorizing the basic formulas but understood the flow. The desire to try with other formulas even if you forgot a little and resulted in not being able to finish until you found the final result. In the final result, students with a moderate level of ability did not re-check because they were sure of the answers and did not write down the conclusions of the final results. Meanwhile, according to Musdhalifah, et al. the location of student errors includes misunderstanding the problem, computation, and concluding answers. The most common mistake was understanding the problem in which students did not write down what was known and what was asked as well as the mistake in concluding answers, namely students did not write down the answers they got. The cause of students making mistakes in understanding the problem is that students do not understand the meaning of the problem given due to difficulties or constraints in changing the sentence from the story to a mathematical model and students are accustomed to working directly on the calculation process without writing down what is known and asked first. The cause of computational errors is that students are not careful in doing calculations and students do not understand operations The cause of the error in the conclusion of the answer is when students have difficulty in concluding the desired final result and students consider the results of the calculation as the final answer to the problem.

Research that strengthens the results of research that has been carried out is the result of research which states that the characteristics of children who have difficulty in learning mathematics are characterized by the inability to solve problems related to aspects of understanding in the process of grouping, adding and subtracting, visual perception, auditory perception, calculating, and transferring knowledge. Of the difficulties referred to above are errors in solving math problems, especially in the quadratic equation material. The existence of difficulties experienced by students can be seen from the many or at least the mistakes made by students in solving mathematical problems. Meanwhile, [10] in his research concluded that error is a form of deviation from the right thing, a previously established procedure, or a deviation from what is expected. One of the strategies to overcome the mistakes made by students in solving mathematical problems is by applying problem solving. This is in accordance with what states about the role of mathematics, namely are mathematical communication, mathematical reasoning, mathematical problem solving, mathematical connection, and mathematical representation.

States that problem solving is a process used to solve problems [21]. As stated by, which explains that teaching how to solve problems is a teacher activity to provide challenges or motivation to students so that they are able to understand the problem, are interested in solving it, are able to use all their knowledge to formulate strategies to solve these problems, carry out that strategy, and judge whether the answer is correct. States that errors in mathematics are divided into 3 types, namely conceptual errors, procedural errors and technical errors. Conceptual errors are mistakes made by students in interpreting terms, properties, facts, concepts and principles. Procedural errors are errors in compiling symbols, hierarchical and systematic regulatory steps in answering a problem. Technical errors that have been made include errors in writing variables and errors in understanding the questions.

Conclusion

Based on the results of data analysis and discussion in research conducted in a descriptive-qualitative manner, it can be concluded that (1) the representation of students' errors in understanding concepts can be categorized as very low, for operational errors and errors in interpreting language can be categorized as low, and for procedural errors, principle errors, and errors in the conclusion of the final result can be categorized as moderate. (2) The level of students' errors in understanding concepts and solving problems raises activities that can be used as indicators to determine the categories and stages of errors made by students. Thus, the virtual learning model carried out during the Covid 19 pandemic still supports learning differential equations for students majoring in Mathematics education.

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The Great Reset And Islamic Economic Solutions For World Welfare

Early Ridho Kismawadi[1]

Introduction

COVID-19 has impacted communities, businesses and organizations globally, inadvertently affecting financial markets and the global economy. The government's uncoordinated response and lockdowns have led to disruptions in supply and demand chains. Initially, in China, the lockdown restrictions meant a major drop in product supply by Chinese factories, while quarantine and self-isolation policies reduced consumption, demand and utilization of products and services. As COVID-19 has grown to affect the entire world, China will begin to recover more quickly than any other country, strengthening its trade negotiations strength against the US. In fact, Chinese companies will be in an advantageous position to acquire their western counterparts, who are highly dependent and will inevitably be affected by the stock market [7].

The COVID-19 pandemic has resulted in more than 4.3 million confirmed cases and more than 290,000 deaths globally. It has also fueled fears of an impending economic crisis and recession. Social distancing, self-isolation and travel restrictions have led to a reduction in the workforce in all sectors of the economy and caused many jobs to be lost. Schools have closed, and the need for manufactured commodities and products has decreased. On the other hand, the need for medical supplies has increased significantly. The food sector is also facing increased demand due to panic buying and hoarding of food products.

Small and medium enterprises (SMEs) are the backbone of every economy. So, when an external crisis threatens the market, such as the recent COVID-19 outbreak, SMEs are hit with great force. What they called petty responsibilities, the lack of resources that would protect them from outside shocks, exacerbated the situation [3]. Small and medium-sized enterprises (SMEs), defined in most countries as organizations with fewer than 250

[1] Institut Agama Islam Negeri Langsa, Kismawadi@iainlangsa.ac.id

employees (OECD, 2005), are the backbone of every economy worldwide. In the US, SMEs make up 99.7 percent of US employers and create 49.2 percent of private sector jobs (US Small Business Administration, 2012). SMEs drive innovation and competitiveness and account for 44 percent of US economic activity (US Small Business Administration 2019). So suffering the economy largely means suffering SMEs and their employees Conspiracy theories emerged shortly after the first news of COVID-19 and continue to persist [4]. Some people worry about the origin of the SARS-CoV-2 virus, for example, that it is a biological weapon made by China to fight against the US or vice versa [5]. Others focus on prevention and cure, for example, that conventional medical treatments should not be trusted and that people should use alternative medicine to ward off viruses [9]

Method

This study applies a qualitative descriptive method, in addition to the author's analysis of several related articles as references in this study.

Discussion

There is an urgent need for global stakeholders to work together to simultaneously manage the immediate consequences of the COVID-19 crisis. To improve the state of the world, the World Economic Forum initiated The Great Reset initiative [11].

In June 2020, the Prince of Wales and heads of the annual Davos Summit launched an initiative calling for the pandemic to be seen as an opportunity for what they called the Great Reset of the global economy. Another founder of the initiative is Prof Klaus Schwab, head of the World Economic Forum (WEF), which organizes an annual summit at a Swiss ski resort for some of the world's richest and most powerful people. He explained the idea behind Great Reset in an article accompanying the launch: "Pandemics represent a rare but narrow window of opportunity to reflect, re-imagine, and reorganize our world to create a healthier, fairer and more prosperous future." There's a Great Reset podcast and even a 280-page book. But the plans are light on specific details. Prof Schwab did speak of a "wealth tax" and ending fossil fuel subsidies [12].

In reviewing the Great Reset, an initiative launched by the World Economic Forum (WEF) in response to the global coronavirus crisis, this perspective considers scenarios of an important transition from capitalism to “restorism”. To facilitate the observation of the underlying trends and assumptions, a systems theory framework was developed for the observations of this Great Reset scenario and the scenarios whose implications are excluded by the WEF vision. It is thus demonstrated that the "common goals" advocated by the WEF will converge to the transition from a modern pluralist to a stratified "new normative" order to the excellence of individual, institutional and planetary health. In discussing the sociological implications of this transition, a vision emerges of a new, digitally enhanced medieval era in which health plays the role that religion once played. In this neo-medieval world health community recovery scenario, the emergence of new social strata corresponding to different levels of purity, infection, or pollution would be a possible consequence. The paper concludes that the idea of deliberately causing major resets and other illusions of control fostered by the WEF initiative is hardly any smarter than and spurring what the UN Secretary-General has called “wild conspiracy theories” [8].

The term "Great Reset" has received more than eight million interactions on Facebook and has been shared nearly two million times on Twitter since the initiative was launched, according to BBC Monitoring research. Among the most popular posts were the unsubstantiated claims that the Great Reset was a strategic part of a grand conspiracy by the global elite, who somehow planned and managed the Covid-19 pandemic. In this narrative, lockdown restrictions are introduced not to curb the spread of the virus, but to deliberately bring about the collapse of the economies and governments of the socialist world, even though they are run in the interests of powerful capitalists [13]. Online activists who deny the existence of climate change often engage with the Great Reset theory to "ignore sustainability and renewable energy initiatives as elite agendas for control".

The World Economic Forum encourages world businesses, including policy-making authorities in various countries, to focus on the social and economic prospects that have been impacted by the COVID-19 pandemic. They say there is good reason for concern: a sharp economic downturn has begun. Even the World Economic Forum predicts the world will experience the worst economic depression since the 1930s [13].

The agenda of The Great Reset World Economic Forum will have three main components.

1. The first is to direct the market towards fairer outcomes. This means that the government must improve coordination in adjusting taxes, regulations, and fiscal policies.

2. The second component is to ensure that investments are aimed at mutual progress. Here, large-scale spending programs implemented by multiple governments will be key. The European Commission, for example, has announced plans to disburse economic recovery funds of up to 750 billion euros. The US, China and Japan have also taken the same steps with ambitious economic stimulus plans.
3. The third priority of The Great Reset's agenda is to move fully to the fourth industrial revolution. Everything has to be digital. Every country needs to build digital infrastructure, both for the economy and for public services. The pandemic has taught the world's citizens about digital life.

The global pandemic response typically follows a cycle of panic followed by neglect. We are now, once again, in a phase of neglect, leaving the world highly vulnerable to massive loss of life and economic shock from natural or man-made epidemics and pandemics. Measuring the size of the losses caused by the large scale of this outbreak is challenging because epidemiological and economic research in this area is still in its early stages. Research on the 191818 H1N1 influenza pandemic and recent epidemics and pandemics has shown a range of estimated losses (panels). A limitation in assessing the economic costs of outbreaks is that they only capture their impact on income. For a very serious pandemic like influenza in 1918, the inclusive cost was more than five times the lost revenue. Costs including the next severe influenza pandemic could be US$570 billion annually or 0.7 percent of global revenue (range 0.4-1.0%) [10].

The Ebola outbreak in west Africa in 2014-16 exposed many weaknesses in the global response to infectious diseases. In particular, it highlights the gap between countries' commitments to outbreak preparedness, detection, and response, as needed under International Health Regulations, and their actual ability to respond when needed. This is partly due to a lack of financing [2].

The COVID-19 pandemic has unleashed the demands of immediate change in various types of investment and financing. Developed and developing countries need compatible infrastructure to survive and survive in new scenarios. The majority of developing countries must rely on foreign direct investment and short-term financing from external sources to build new infrastructure and start new types of business. This situation requires the reallocation of foreign direct investment and fiscal resources [6].

Based on Islamic historical records, there was an outbreak of disease at the time of the Prophet and his companions. Although not a deadly virus like Covid-19, the outbreak at that time also spread quickly and caused not a few people to be affected. At that time, one of the plagues that often occurred was leprosy or leprosy. As a precaution, the Apostle ordered not to be near the sufferer or the area affected by the plague. The concept of regional quarantine is as expressed in HR Bukhari which means: "If you hear of a plague in an area, then do not enter it. But if there is a plague where you are, then don't leave that place." "In dealing with disease outbreaks, Prophet Muhammad SAW gave the concept of quarantine to save human lives from the threat of death due to infectious disease outbreaks. The implementation of quarantine/lockdown will certainly have an impact on domestic and international production, consumption and distribution, which is the largest contribution to a country's economy.

Imam al-Raziy in the book Mukhtar al-Shihab also gives an explanation that reinforcements are indeed used to describe good or bad tests. However, one term that is almost similar to reinforcements is disaster. The difference with calamity, when the Qur'an talks about calamity, it has something to do with human behavior or actions. Meanwhile, when talking about reinforcements, it comes absolutely from Allah SWT.

To describe the term calamity, it can be seen in the word of God which reads, "God created life and death to test you, which of you is better in deed." (Surat al-Mulk [67]: 2). Meanwhile, the reinforcements that come from Allah can be seen directly in another surah, "We will certainly test you until We know who is the one who strives in the way of Allah and is patient." (Surah Muhammad [47]: 31). Life is indeed a trial and a test. However, the form does not always mean that it is only hated, but also can be liked so that Allah SWT forbids His servants to feel hated when something is inflicted on them that they do not like.

In Surah Al Baqarah verse 276, Allah says "God destroys usury and enriches alms. And Allah does not like everyone who remains in disbelief, and always commits sin." It is clear in this verse that Allah will destroy / destroy usury. If we examine further, the majority of economies around the world implement a financial system that uses interest/usury as an economic/financial instrument. So the economy that has been built by mankind for centuries with the arrival of plague/disaster or by other means of Allah will be destroyed, for that the author recommends an economic system used throughout the world using an Islamic economic system, many studies have explained the advantages of Islamic economics compared to conventional financial systems. currently being implemented, one of which is related to Islamic banking.

The number of studies covering bank performance is overwhelming, and the subject has received increased attention over the last few years

– especially in the aftermath of the global financial crisis (GFC) of 2007–2008. Empirical studies conducting comparative investigations on Islamic banks (IB) and conventional banks (CB) generally show that IBs outperformed CBs during the 2007–2008 crisis. The reason for the IB's good performance is said to stem from the IB's compliance with Sharia (Islamic Law). Sharia makes the majority of conventional debt-based finance non-allowable (haram) equipment and promotes the equity-based financing structure of IBS. In this section, a study comparing the performance of the two types of banking banking systems will be reviewed [1]. Also examine the historical stability and performance of IBs and CBs before, after and during the 2007 financial crisis. In terms of stability and efficiency before and during the crisis, IBs were found to be more stable and more efficient than CBs because IBs follow interest-free, risk-sharing, partnership promotion, religious code and social responsibility business model is different from LS. However, post-crisis, CB was found to show higher stability and efficiency due to regulatory adjustments [6]. If we look at many more studies, we can clearly see the advantages of the Islamic economic system, whether Islamic banking or other Islamic financial systems.

Conclusion

The agenda of The Great Reset World Economic Forum which has three main components, justice, mutual progress and the fourth industrial revolution switch is very relevant to the main objectives of Islamic economics which prioritize togetherness, justice and of course adaptive to technology. There is no other choice, but to make the Islamic economy an economic system throughout the world, otherwise the same thing, be it financial crises, economic crises with different causes, will continue to repeat itself with cycles that repeat at different times. This does not mean that the Islamic economic system does not experience a downward cycle in its economy, but the main goal of the welfare of mankind with instructions from the creator of Allah SWT will be realized by applying the rules that have been set by Allah through the Qur'an and the Prophet Muhammad as exemplary examples.

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Integration Of Sharia Banking And Financial Technology (Fintech) In The Agricultural Sector In The Era Of The Covid-19 Pandemic In Indonesia (Co^5 Collaborations Model)

Eko Suprayitno[1]

Introduction

The corona virus has spread so massively that it is called a pandemic, Indonesia is one of the areas that has been affected by this pandemic with the first case being found on March 2, 2020. This virus not only threatens health but also has a significant impact on the economic sector. The agricultural sector is one of the sectors affected by the Covid-19 case, the agricultural sector is a priority need in dealing with the spread of Covid-19 because it is directly related to fulfilling human needs so that the demand for food will always exist. Despite the economic downturn in various business sectors, the agricultural sector being the last sector to survive (sector of the last resort) is proof that the agricultural sector is the safest sector. In addition, the agricultural sector is the basic sector for the development of other economic sectors such as industry and services. Although other sectors have collapsed, at least the agricultural sector is able to become a mainstay in people's food security so that people do not go hungry.

Indonesia is a country with a total population as of December 2020 of 271 million people and is the country with the fourth highest population in the world after China, India and the United States. Of the 271 million people in Indonesia, 85% are Muslim and the largest in the world, while most of the people live as farmers, it is not surprising that Indonesia is known as a country that is rich in the potential of its Muslim population and natural resources.

Data from the Central Statistics Agency (BPS) states that at least in August 2020 there were around 128.45 million people working in the Indonesian agricultural sector, or about 29.7% of the total working

[1] UIN Maulana Malik Ibrahim Malang

population and was the sector with the highest employment rate [40]. History proves that the agricultural sector has a very important role in this country including the highest absorber of labor, contributor to GDP, contributor to foreign exchange (exports), provider of other industrial materials, provider of food and nutrition, as well as various roles.other important.

The issue of employment, The Central Statistics Agency (BPS) stated that the number of working people as of August 2020 was 128.45 million people. Of this figure, most work in the agricultural sector with 38.23 million workers or around 29.76%. Furthermore, most of them work in the trade and manufacturing sectors with a share of 19.23% and 13.61%, respectively, of the total working population. At least work in the gas electricity procurement sector with a percentage of 0.24% [40]. In the midst of the Covid-19 pandemic situation, many sectors experienced a significant decline, but not the agricultural sector. Based on data from the Central Statistics Agency (BPS), the Gross Domestic Product (GDP) of the agricultural sector in the second quarter of 2020 became the highest contributor to national economic growth, which was 16.24% (q to q) and in the third quarter it continued to grow 2.

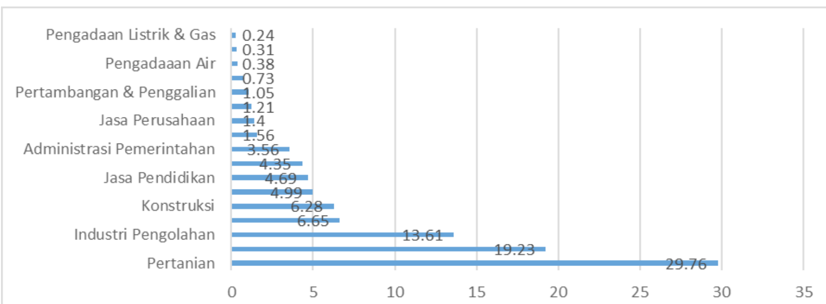


Figure 1.1. Percentage of Working Population by Occupation

Source: BPS, 2020 (data processed)

Furthermore, based on BPS data, the value of agricultural exports in October 2020 experienced positive growth, amounting to USD0.42 billion or growing 1.26% (m to m) compared to the previous month. On a YoY basis, exports from the agricultural sector grew 23.80%.occupies the second position as a contributor to GDP with a percentage of 13.70% of the total, one level more lower than the manufacturing sector which is in the first place [40]. The data shows that it is actually in the agricultural sector that a lot of labor is absorbed, so special efforts and great attention are needed from various parties to synergize to make the agricultural sector the first and largest contributor to GDP and a solution to food security in the pandemic era in this country. .

The agricultural sector is indeed the most absorbent of labor and the largest contributor to GDP in this country, but nowadays the sector is less ogled by the educated community, even agricultural graduates themselves are only a few of them who are involved in the field. One of the reasons for the loss of interest among these young scholars is their sense of prestige to enter a field that is synonymous with poverty and rural areas.

Agricultural businesses face a number of constraints and problems, both internal and external. The internal constraints of small and medium agribusiness entrepreneurs, namely: (1) The level of ability and professionalism of HR in the financial sector is low; (2) Limitations and mastery of technology; (3) Weaknesses in the capital structure, limited access to capital sources because it is assumed to be of high risk and low profitability and has no collateral; (4) Less able to expand market opportunities and access; (5) Weaknesses in the field of organization and management. Meanwhile, external constraints include (1) Lack of trust from various parties in the ability of small businesses; (2) less conducive business climate, due to strong competition from big businesses; and (3) Inadequate facilities and infrastructure.

Data from the Financial Services Authority shows that until May 2017 it was only 5.9% of total loans or around Rp. 290.026 trillion channeled by conventional banks to the agricultural sector of the total national credit. Meanwhile, the level of Islamic banking financing is still relatively low. OJK noted that at the end of May 2017, the total financing funds disbursed amounted to 9.408 trillion or around 3.66% of the total financing of 256.832 trillion [39]. This is because the perception of conventional and Islamic banking institutions towards the agricultural industry has a high risk, the inability of farmers to provide collateral or guarantees, uncertain business activities, not competitiveness, limited number and range of banking operations because farmers live in rural areas.

The pattern of loans provided by conventional banks is considered not pro to the agricultural sector and contrary to the condition of the Indonesian people, who are predominantly Muslim and bound by Islamic sharia law, this is because conventional banking uses the ribawi system (a system in which loan repayments (capital) and interest are the point pressure in lending) which must be paid every month by the borrower and the interest is determined at the beginning of the agreement. For this problem, the role of Islamic banking is highly expected to contribute to the agricultural sector. The principles and concepts of Islamic banking are more appropriate than conventional banking, This is because Islamic banking uses the principle of buying and selling and profit sharing which so far the farmers have been accustomed to the profit sharing system in their agricultural activities such as maro, gaduhan and others. In the sharia system, both banks and farmers must share all risks that occur in the future, both profit and loss (sharing risk). In Islamic banking, credibility and development has also experienced encouraging growth, the Financial Services Authority [39] recorded total assets as of December 2020 of IDR 397,073 billion rupiah, an increase of IDR 46,709 from 2019 of IDR 350,364 billion. This fact certainly reinforces that the concepts, principles and contracts in Islamic banking can be accepted by the Indonesian people and have enormous opportunities for the development of Indonesian Islamic finance.

Access to capital in this millennial era is quite easy, namely with the presence of financial technology companies (fintech). The presence of fintech is often associated with the banking sector. Various groups consider that fintech is a rival and a threat to the banking sector. The reason is that both have almost the same way of working, namely providing payment services and lending and borrowing funds. Actually, banking and fintech have weaknesses and strengths that complement each other and both are very able to collaborate in order to improve the nation's economic progress. Banking and fintech have similar services, but both have fundamental differences and different concentration of market segments.

The focus of fintech targets is businesses that have the capacity to develop but lack funding and do not meet the requirements for obtaining bank credit. Fintech acts as a bridge for a business to grow and develop. Fintech generally offers unsecured loans with high interest rates, relatively short loan repayment tenors of around 1-24 months, limited loan amounts, while banks offer loans with relatively lower collateral and interest rates, fairly long loan repayment tenors, and the amount big loan.

These differences will enable banking and fintech to collaborate and synergize for the welfare of the general public. This collaboration model between Islamic banking and fintech includes, among others, if there are Islamic banking customers who will apply for a loan but do not meet the requirements of Islamic banking, Islamic banking will offer fintech loan products that have easier requirements than Islamic banking, and for these services the bank Sharia will receive compensation or profit sharing from the fintech that cooperates with it.

Contrary to asset growth, the above Islamic banking opportunities, and the presence of fintech above, the level of Islamic financial literacy and inclusion in Indonesian society is still relatively low. According to OJK data (2021) at the end of December 2020 from the 2020 National Financial Literacy and Inclusion Survey (SNLIK) results, the overall national Islamic financial literacy and inclusion levels were 8.11% and 11.06%, respectively. If viewed by sector, the literacy rate and inclusion of Islamic banking reached 6.63% and 9.61%, respectively. This means that in fact people have started using Islamic financial products, but not many understand about Islamic financial products themselves, this is because in Islamic banking there are many foreign terms in it such as mudhorobah, musyarokah, qardhul hasan,

The largest Muslim population, the vast agricultural sector and the well-developed Islamic finance sector are the three inseparable components of the Indonesian economy. Efforts to ground the Islamic economy in these three sectors must continue to be encouraged. The government, scholars, religious leaders, practitioners of sharia economics, practitioners of sharia financial institutions, education practitioners and the Muslim community need to work together to provide inclusive sharia economic education to the wider community,

Literature Review

Islamic Banking Financing

*Financing is the provision of money or an equivalent claim, based on an agreement or agreement between the Bank and another party that requires the party being financed to return the money or claim after a certain period of time in exchange for profit sharing.*The next activity of the bank after collecting funds from the wider community in the form of demand deposits, savings, and time deposits is to redistribute these funds to people who need them. This fund allocation activity is also known as the distribution of funds.

Furthermore, [2] stated, "Financing is the provision of facilities for providing funds to meet the needs of those who are a unit deficit".

According to Rivai and [35] financing is funding provided by a party to another party to support planned investments, either by themselves or by institutions. In other words, financing is funding issued to support planned investments.

The definition of financing according to [23] Financing is often used to indicate the main activity of BMT because it relates to plans to earn income. Based on Law no. 7 of 1992 what is meant by financing is "the provision of money or equivalent claims based on the purpose or loan agreement between the bank and other parties which requires the borrower to repay the debt after a certain period of time plus the amount of interest, compensation or profit sharing".

Funding Purpose

The purpose of financing based on sharia principles is to increase job opportunities and economic welfare in accordance with Islamic values. Such financing must be enjoyed by as many entrepreneurs as possible engaged in industry, agriculture, and trade to support job opportunities and support the production and distribution of goods and services in order to meet domestic and foreign needs.

Sharia Fintech

Finance technology or often abbreviated as fintech is an innovation of a technology to provide better services in finance or banking. Finance technology is the use of technology in the financial system that produces new products, services, technology, and/or business models and can have an impact on monetary stability, financial system stability, and/or efficiency, smoothness, security, and reliability of the payment system.

Finance technology utilize the use of software and digital platforms to provide financial services to consumers. Finance technology has unlimited potential. As a new tool and technology that is developing in the financial industry, fintech can be a challenge faced by old business models and can also be a solution if adopted and used wisely.

Simply put, fintech is a type of company in the field of financial services that is combined with technology. It can also be interpreted as a segment in the startup world that helps to maximize the use of technology to sharpen, transform, and accelerate various aspects of financial services.

So, starting from payment methods, fund transfers, loans, fundraising, to asset management can be done quickly and briefly thanks to the use of modern technology.

So don't be surprised if then financial technology becomes a necessity that can change a person's lifestyle, especially those who are familiar with or struggle in finance and technology.

Providing Financial Services

One of the benefits that may be felt by the public from the presence of financial technology is the ease of financial services. A simple example, if in the past when you wanted to transfer money, then you had to come to an ATM machine or even a bank teller. Meanwhile, with financial technology, you no longer need to queue because you can already do it via a smartphone. Not only fund/money transfers, fintech also allows you to deposit various bills such as telephone bills, electricity, water, even BPJS. So, you no longer need to leave the house to do all these transactions.

Fintech Supports Financial Inclusion

*Fintech*considered to be an alternative solution to help achieve the target of financial inclusion, which so far has only reached 49%. Meanwhile, in 2019, the National Council for Financial Inclusion (DKNI) targets inclusion of 75%. As we know, fintech services are generally online-based. So you can access it more easily at any time as long as you are connected to a capable internet network.

Previous research studies

In the research conducted by Aswar (2017) on the Empirical Analysis of Islamic Financial Inclusiveness in Indonesia, it is proven that the Islamic financial inclusion index in Indonesia is generally low, with an average value of 0.127. This finding means that community groups do not fully use formal financial services, especially as the main source of finance and financing, so policy makers need to increase the availability of Islamic finance by adding and expanding Islamic banking services in Indonesia.

Research conducted by [38] on the Islamic Financing Model for the Agricultural Sector reflects the correct picture of financing the agricultural sector by formulating alternative financing schemes according to the characteristics of agriculture based on the sharia perspective so that it can be used as a sharia banking solution to improve their performance in agricultural financing, in addition to The agricultural products with the obligation of zakat 5% or 10% greater than the assets, namely 2.5% indicate the potential for large profits in the agricultural sector so that they are feasible to be financed. While research conducted by [18] on the Role of Islamic Banking in Implementing Financial Inclusiveness in Indonesia proves that Islamic banking has great potential in implementing financial inclusion, indicated by significant growth in funding and financing in 2010-2014. The results of the financial ratio analysis also show good performance and financial condition of Islamic banking.

Methodology

This study uses a qualitative approach in this article. According to Bodgan and Taylor, a qualitative approach is an observational step that produces descriptive data that starts from the results of the respondent's interview or the behavior being studied. The type of research applied in this article is a Document or Text Study type of research. Mudjia Rahardjo describes the study of documents or texts used as studies to discuss further about a research that comes from published records such as articles, books, newspapers, magazines, journals and others to explore someone's thoughts that have been printed on books or manuscripts. published articles.

Data Types and Data Sources

The types and sources of data applied in this article are secondary data. Secondary data is data obtained from variables that have been concentrated and combined previously by other researchers whose structure is historical or story. Secondary data can be found from libraries, educational institutions, and in the form of documents.

Methods of Data Analysis and Synthesis

In qualitative research, the use of data analysis techniques intends to respond to the formulation of the problem described above. Qualitative research obtains data from various respondents who apply methods with various types and are used many times until the data used are very clear.

In this study, data analysis methods using SWOT analysis will be used, related to collaboration strategies between the banking sector, non-bank financial institutions and fintech.A SWOT analysis organizes the main strengths, weaknesses, opportunities, and threats into an organized list and is usually presented in a simple grid bar. This technique was developed by Albert Humphrey, who led a research project at Stanford University in the 1960s and 1970s using data from Fortune 500 companies. Also admits that it is difficult to trace the origins of the acronym SWOT. He cites [9] as stating that SWOT was a concept used by Harvard academics in the 1960s, and [32] attributing SWOT to Igor [3], of the fame of Matrix Ansoff. [5] considers the contributions of [9], [36]. Again while this is the generally accepted view of thinkers on the topic of SWOT, even the general observer would admit that was not the originator of the concept but the innovator of it. As [15] comments, he recognizes that a series of SWOT/TOWS analyzes has the advantage of a single arbitrary matrix. [35] SWOT to find gaps and matches between competencies and resources and the business environment.

Results And Discussion

CO5 Collaboration Model in Islamic Perspective

Some of the principles of sharia economics according to Metlwally state that, (1) resources are seen as a mandate from God to humans so that their use must be accounted for in the hereafter. The implication is that humans must use it in activities that are beneficial to themselves and others, (2) ownership of wealth should not only be owned by a handful of rich people and must act as productive capital which will increase the amount of national product and improve people's welfare, so that on the basis of Based on these principles a collaboration model was developed.

The CO5 Collaboration Model is the development of a cooperation system based on cooperation lending (distribution), cooperation marketing (marketing), cooperation sharing (profit sharing), cooperation caring (care), cooperation charity (social responsibility) in sharia by several parties with full responsibility to optimization of all related sectors. Cooperation in Islam is called shirkah. The benefit of the existence of syirkah is a reward in the form of profit sharing which will be distributed at the end of the mutually agreed period. The various types of profit sharing in Islamic economics can be carried out with four contracts, namely:

1. *Musharakah*
   Musharakah is a cooperation agreement between two or more parties for a particular business, where each party contributes funds with an agreement that the profits and risks are shared in accordance with the agreement. Musyarakah there are two forms, namely Musyarakah ownership and Musyarakah contract, Musyarakah ownership is created because of inheritance, will or other conditions that result in the owner of an asset by two or more people. In this musharaka, the ownership of two or more people shares in a real asset and also shares in the profits generated by a particular business. As for the musharaka contract, it is created by way of an agreement where two or more people agree that each of them provides musharaka capital and they also agree to share the profits and overcome the losses together.
2. *Mudharabah*
   *Mudharabah*comes from the word dharb which means to hit or walk. The definition of hitting or walking is a process of someone hitting his feet in running a business. Mudharabah is a business cooperation agreement between two parties where the first party (shahibul mal) provides all the capital, while the second party becomes the manager. Mudharabah business profits are divided according to the agreement contained in the contract, while if a loss occurs, it is borne by the owner of the capital as long as the loss is not caused by the negligence of the manager. Likewise in the case of agricultural mudharabah, the land owner hands over his land to someone to manage in exchange for the results being divided according to the agreement. Mudharabah is divided into two

types, namely: mudharabah mutlaqah and mudharabah muqayyadah. Mudharabah mutlaqah is a form of cooperation between shahibul mal and mudharib whose scope is quite broad and is not limited by the specifications of the type of business, the time of the business area. While mudharabah muqayyadah is the opposite of mudharabah mutlaqah in which the mudharib is limited by the type of business, time, or place of business by the shahibul mal, this restriction often reflects the tendency of the shahibul mal to enter the business world.

3. *Muzara'ah*

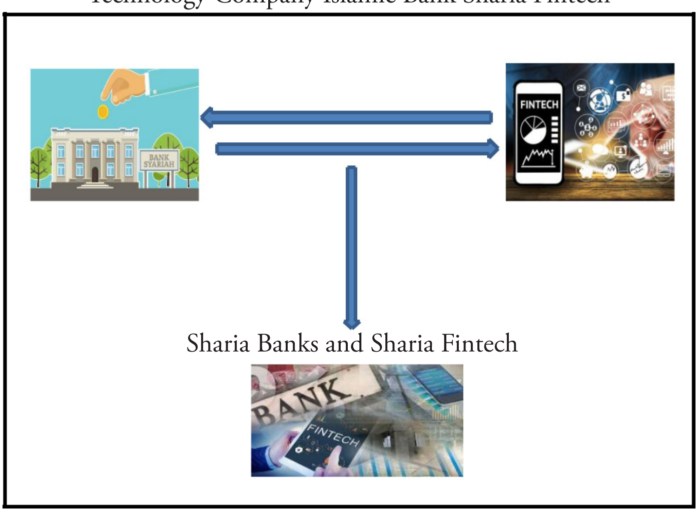
   Muzara'ah is an agricultural management cooperation agreement between the land owner and the cultivator. The land owner provides land and seeds to the cultivator to plant agricultural products in exchange for a certain share of the harvest.

4. *Musaqah*

   Musaqah interpreted by cooperation in the care of old plants in exchange for a share of the results obtained from these plants, what is meant by plants in this mu'amalah are old plants or perennials that bear fruit to expect sap, not plants to expect wood.

Based on the four contracts above, the collaboration model can be carried out optimally by involving all relevant parties, with this concept Islamic financial literacy and inclusion will also be more effective and comprehensive. The collaboration model in this scientific work can be carried out between Islamic banking parties and sharia financial technology (peer to peer lending) companies in Figure 3.1 below:

Figure 3.1 Sharia Banking Collaboration Model and Sharia Financial Technology Company Islamic Bank Sharia Fintech



The collaboration model between Islamic banking and fintech includes the following

1. Co-Lending (cooperation-lending) is a cooperative model for distributing funds. In this model, Islamic banks that have higher legality, regulation, position, market share and excess funds than fintech companies can help fintech company capital to be channeled to prospective customers who will apply for funding to fintech companies. The contract used can be in the form of mudhorobah and musyarokah contracts. At the end of the period or according to mutual agreement, the finetch company will provide profit sharing to Islamic banking.
2. Co-Marketing (cooperation-marketing) is a product marketing cooperation model. In this model, if there are Islamic banking customers who will apply for loan funds but do not meet the requirements of Islamic banking, Islamic banking will offer fintech loan products to these customers, this can be done because fintech has easier requirements than Islamic banking, and for these services, Islamic banks will get profit sharing from fintech. Vice versa, if the prospective customer has met the requirements as a prospective customer receiving Islamic bank funds, the fintech company is required to provide information to the customer to switch status to become a sharia bank customer.
3. Co-Sharing (cooperation-sharing) is a model of cooperation of various advantages and sharing of disadvantages. In this model the profits will be shared jointly and according to an agreement in accordance with Islamic sharia, while sharing losses depends on the contract used. For example, if the contract used in the cooperation is mudhorobah, then it is the investor who bears the loss of the funds because the party being capitalized (mudhorib) has borne the loss in the form of time and energy. The principle developed in this model is in accordance with the cooperation agreement.
4. Co-Caring (cooperation-caring) is a cooperative caring model. In this model, Islamic banking and Islamic fintech must have mutual concern in carrying out this collaboration or collaboration. Concerned that this is an effective collaboration to increase the inclusiveness of Islamic finance and is also a call for da'wah for the application of Islamic economics in Indonesia, so that with this sense of care, each of them will work optimally and full of trust. The principle developed in this model is the principle of Islamic economic da'wah in the Indonesian archipelago.
5. Co-Charity (cooperation-charity) is a model of cooperation in social responsibility. In this contract, Islamic banking and fintech companies must set aside a portion of their profits to be channeled in the form

of social philanthropy. The distribution or distribution of these funds must be channeled in various patterns according to the needs of the maqashid sharia perspective.

Table 3.1 Distribution Pattern of Social Funds from Maqashid Sharia Perspective

Type of Need	**Program**	**Pattern**
Religion	coaching Religious, Worship Supporting Facilities	Consumptive, Traditional
Soul	Health, Clothing, Food, Board	Consumptive, Creative
Descendants	Wedding, Birth, Children's Education	Productive, Traditional
common sense	Education, Training	Productive, Creative
Treasure	Capital, means of production, Skill	Productive, Creative

Source: data processed by the author

Collaboration Model SWOT Analysis Model

SWOT analysis is a strategic planning method used to evaluate the strengths, weaknesses, opportunities, and threats in a project or a speculation. This analysis is very necessary in assessing the strengths and weaknesses of the resources owned by the company as well as assessing external opportunities and challenges faced [12]. Here is the analysis:

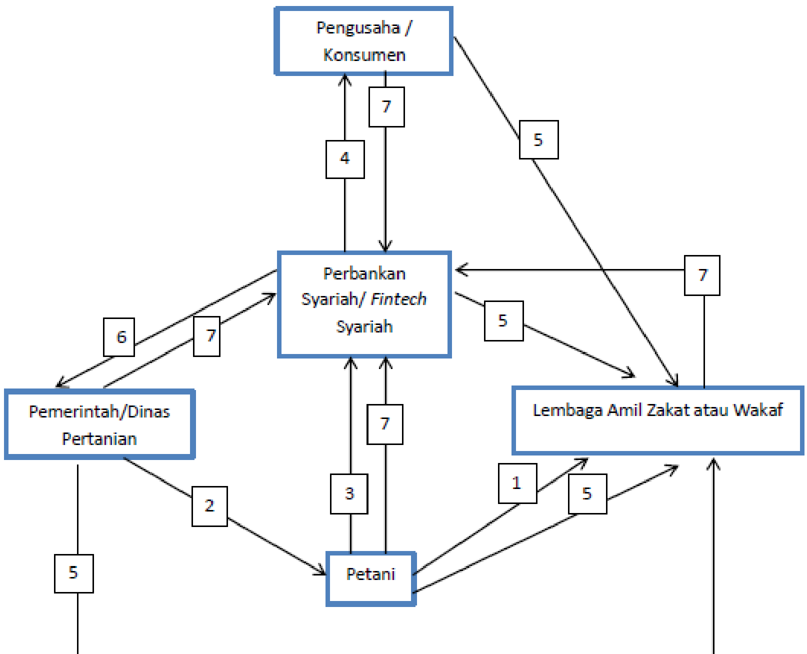
Table 3.2 Collaboration Model SWOT Analysis Model

	Helfull/Beneficial	**Harmful/Dangerous**
Internal	*Strength* (S)	*Weakness* (W)
	A. Islamic Banking	A. Islamic Banking
	1. In accordance with sharia principles 2. A fair system and peaceful for the people 3. Based on positive law and religion 4. Principles of revenue sharing and prohibition of Interest. 5. The balance of the world and the hereafter	1. The network or number of offices is still low and uneven. 2. Low literacy. 3. Lack of education to the community 4. Lack of human resources who are truly economists and sharia experts 5. The market share is still low 6. Many terms are still foreign in society
	B. Financial Technology	B. Financial Technology
	1. Wide market share to the far corners of the country. 2. Internet users are very high. 3. The number of real sectors that have access to finance	1. Highly dependent on the internet network. 2. Insufficient human resources 3. Lack of definite regulations and legal umbrellas
Eksternal	*Opportunity* (O)	*Threat* (T)
	A. Islamic Banking	A. Islamic Banking
	1. Expansion of market share. 2. Improving the qualification of human resources. 3. The population of Indonesia, the majority of whom are Muslims broad market share	1. Exemption of ownership of sharia public banks by Indonesian legal entities with foreign citizens and/or foreign legal entities.
	B. Financial Technology	B. Financial Technology
	1. Wide access throughout the line 2. Wide reach 3. Diversification of new financial products so that many are interested	1. The evil of the virtual world 2. Cybercrime 3. Money laundering

Source: Primary data.

CO5 Collaboration Model Implementation Techniques

The collaboration model implementation technique is a way of applying and using the collaboration model in the Indonesian agricultural sector to increase the acceleration, literacy and inclusion of Islamic finance as a whole. In this implementation technique, there needs to be a synergy or cooperation between the related parties, the parties are sharia banking or sharia fintech, zakat or waqf institutions, entrepreneurs, farmers and the government. The following is a schematic of the implementation technique:



Gambar 3.2 Skema Implementasi Model Kolaborasi Co5

Information :

In the scheme above, the author assumes that this collaboration model is applied to the agricultural industry with the assumption that farmers do not have their own land (mustahiq) so that efforts to procure agricultural land are needed first.

1. Farmers propose cooperation in the procurement of agricultural land with the Amil Zakat or Waqf Institution to assist in the form of waqf land assets intended for agriculture. The Amil Zakat or Waqf Institution provides productive waqf land to farmers. Some of the contracts that can be used are:

a. *Qard* (benevolent loan)
   Qard is the property given by the debtor (muqridh) to the recipient of the debt (muqtarid) to be returned to him (muqridh) as he received (mainly), when he has been able to pay it. In this contract, the farmer can use the land that has been submitted to the amil zakat or waqf institution within a few years. With the same contract and separate from the first contract, farmers can also apply for the procurement of rice seedlings to the institution. When the contract period has ended, the farmer is only obliged to return the initial principal he received as before without giving any additional. In this contract, the zakat institution orwaqf may require zakat from the harvest to be distributed through the institution.
b. *Muzara'ah*
   Muzara'ah is working on (other people's) land such as rice fields or fields in exchange for part of the results (half, third or quarter). Muzara'ah in this scheme is that the farmer proposes the cultivation of waqf land to be planted with the zakat or waqf institution, while the seeds or seeds are borne by the zakat or waqf institution. For these agricultural products, farmers provide profit sharing to the amil zakat or waqf institutions in accordance with the profit sharing ratio that has been agreed upon by both.

2. During the process of planting to harvesting organic rice, the role of the government in this case the Department of Agriculture is very much needed, this is an effort to be responsible for the government to its people. In this scheme, the Department of Agriculture becomes a mentor for farmers to gain additional skills and training to increase knowledge about more effective agriculture and increase crop yields. Another effort that must be made by the Department of Agriculture is to provide education to the community on how to manage rice fields with organic standards. Is it by bringing in organic farming actors from various regions or conducting comparative studies to several regions that have made organic rice commodities a mainstay.
3. Farmers have harvested. Farmers can sell their crops to Islamic banks or Islamic fintechs engaged in the market place for agricultural products. In this scheme, a sharia bank or sharia fintech becomes a container for organic rice farming products from farmers. Sharia contracts that can be used in this sale and purchase are cash sale and purchase contracts in general or salam agreements (orders). In this salam contract, a sharia bank or sharia fintech asks for the required specifications with a written contract (message) and provides a down payment for the purchase of

crops (down payment) then the farmer fulfills it. This is done to break the long and ineffective distribution chain of sales of agricultural crops.

4. Sharia banks or sharia fintech as a container for organic rice agricultural products then sell their organic rice to entrepreneurs or consumers. Sharia contracts that can be used are parallel greetings. This contract is separate between Islamic banks or Islamic fintech and farmers and between Islamic banks or Islamic fintech and entrepreneurs or consumers. In this scheme, the entrepreneur or consumer asks for the required rice specifications with a written contract to the bank or fintech (message) by paying a down payment first, then the bank or fintech fulfills the entrepreneur's rice order.
5. This scheme is related to the payment of zakat, infaq or shodaqoh from all related parties. Farmers who have harvested and changed their status from mustahiq to muzakki can distribute their zakat through amil zakat or waqf institutions. Zakat funds for employees of the Department of Agriculture can also be channeled through these institutions. Entrepreneurs who have reached the nisab of assets and profits can also channel their zakat funds through the amil zakat or waqf institutions. Sharia banking or sharia fintech in order to improve accountability and disclosure of information can channel zakat funds or the company's Corporate Social Responsibility (CSR) to the amil zakat or waqf institution. With the zakat he issued, the assets he obtained became cleaner, reassuring to the soul and also in harmony with the word of Allah SWT in QS.
6. The Department of Agriculture in carrying out official activities or the main tasks of its government requires the role of the banking sector, such as the salary of its employees, procurement of official projects, or the consumptive needs of its employees. This opportunity can be used by Islamic banking to increase its market share to the agency by highlighting the advantages of Islamic banking products compared to conventional banking.
7. In this scheme, farmers who have harvested are given education to save their funds in Islamic banking. Likewise, the Amil Zakat or Waqf Institutions are recommended to save amil cash funds, zakat cash, infaq cash and waqf cash in Islamic banking. Entrepreneurs who have excess funds can save and invest in Islamic banking, as well as with the opposite condition, entrepreneurs can also apply for financing to Islamic banks to meet their business funding. The Department of Agriculture that has received education from Islamic banking can deposit their official funds in Islamic banking. This is done to protect farmers, amil zakat or waqf

institutions, entrepreneurs and the Department of Agriculture from the snare of usury which is forbidden by Allah SWT, according to the word of Allah SWT in QS.

With the collaboration model concept above, comprehensive Islamic financial literacy and inclusion can be improved. Both literacy in Islamic financial institutions or literacy in amil zakat or waqf institutions. This collaboration model is also one way for Islamic banking to attract, obtain and distribute funds more broadly to various related institutions. This is in accordance with sharia economic principles, namely ownership of wealth (property) should not only be owned by a handful of rich people and must act as productive capital which will increase the amount of national product and improve people's welfare. This concept is also in accordance with the word of Allah SWT in QS Al Hasyr verse 7 which means "so that the treasure does not only circulate among the rich among you".

Potential and Challenges of Implementing the Collaborative Model in Indonesia's Agricultural Sector

The agricultural sector has an important role in the contribution of the state and the contribution of the world. The results of diverse and abundant agricultural resources must always be supported and developed with more competitive policies. The condition of the Indonesian economy cannot be separated from the contribution of the agricultural sector. The contribution of GDP (gross domestic product) of agriculture each year has increased in 2014 by 13.94%, in 2015 reaching 13.98% and in 2016 reaching 16%. This shows that the agricultural sector still has a comparative advantage as an industry that contributes to the country's income.

The strategic position of the agricultural sector still has obstacles. Various problems are currently being faced by the agricultural sector, especially the weak access to capital. Minimal access to capital is still the scourge of this problem. The importance of developing an effective and responsive strategy in managing the development of the agricultural sector must be the main program of government in this era. Agricultural development is directed at increasing farmers' income through increasing farm productivity and value added products, as well as distribution of agricultural products. These aspects require funding in the form of working capital financing. The existing financing is conventional banking financing,

The allocation of financing inequality that occurs is not solely caused by the low ability of the agricultural sector to return funds that have been channeled by banks, but is more due to the very low alignment of this sector and very rigid credit rules, especially for agribusiness farmers. Sharia Economics as the most just economic system offers the concept of profit sharing as a solution. Islamic economics in this case Islamic banking should increase the funds channeled to the agricultural sector. Islamic banks have a strategic role as an intermediary institution between the money market and the business world of the real economy, especially the agricultural sector. The concepts and principles of Islamic banking are very suitable and in favor of the farmers.

The collaboration model as a sharia financial inclusion solution provides a broad and integrated space for farmers and related parties to recognize and actively participate in the Indonesian sharia financial system in a more comprehensive manner, this is also in line with the growth rate of the sharia finance industry (sharia fintech, banking, zakat, and waqf) Indonesia which continues to increase every year. This concept also participates in grounding the Islamic economy through Islamic finance in the Indonesian agricultural sector as well as increasing Indonesia's GDP income through its agricultural sector.

Challenge

The challenges of applying this collaborative model to the agricultural sector are as follows:

a. Farmers are afraid to cooperate
   Shirkah or cooperation requires a high degree of trust between the parties who are syirkah, trauma over the failure of syirkah that has happened before makes farmers or syirkah actors reluctant and afraid to do syirkah a second time, where farmers are only made victims of various programs either by the service , government, businessmen and banks.
b. High individualism
   The individualist perspective that comes from the quality of human resources makes this concept difficult to implement. High individualism leads to low ability to be able to run a business in an integrated manner with the latest concepts and methods.
c. The traditional way of working
   Farmers who still use the old method and are not familiar with modern agricultural technology make this condition a special effort. In this model, it is the duty of the Department of Agriculture to provide counseling, assistance, and skill improvement to farmers with the aim of improving the quality of farmers' resources and the quality of their harvests.

d. Access to capital is still low

Skim the financing available from the banking sector for the agricultural industry is still relatively low. Islamic banks are still happy to use murabahah (buying and selling installments) and ijarah (lease) contracts for the property business. This makes Islamic banking not fully sided with the agricultural financing sector by reason of fear of high risk.

Based on the description above, each party in this collaboration model must consistently synergize to minimize these challenges. If we still think and act on personal or institutional individualism, then we as the people of Indonesia will continue to be the monthly month of a tangled system. A system in which consumers will spend more money to buy agricultural commodity prices that alternately expensive from one type to another, while farmers will continue to be trapped in poverty due to minimal price games from middlemen.

Conclusion

From the description above, it can be concluded that the struggle and innovations to ground the Islamic economy, especially Islamic finance, must continue to be encouraged. In both urban and rural areas, large and small industries, productsIslamic finance, Islamic financial technology, Islamic finance schemes, quantity and quality of human resources and policies must continue to be improved.

One of the most effective and comprehensive ways to ground Islamic finance is through the concept of a collaboration model, this concept is safe and able to have a positive impact on farmers, amil zakat or waqf institutions, agricultural services, entrepreneurs, consumers, Islamic banking and fintech companies. With the concept of this collaboration model, it is hoped that the acceleration, literacy and inclusion of Islamic finance can be more optimal and comprehensive. This concept also encourages the contribution of Islamic financial services in equitable distribution of public welfare and supports Indonesia as the mecca of Islamic finance in the world.

Suggestion

In the concept of a collaboration model, information disclosure and high mutual trust are needed to provide good information between the parties involved. In this country, there are various ways that are used to socialize and improve the performance of the Islamic finance industry. However, not all of them are mingled with cooperation between the parties involved. Sharia Finance and the Agricultural Industry are two things that are not contradictory and can be integrated into one so that Islamic broadcasting, especially sharia economics, can be carried out by all economic actors. In this way justice for fellow human beings and the welfare of the world and the hereafter can be achieved. This scientific work is expected to be a solution for acceleration, literacy and sharia financial inclusion in the Indonesian agricultural sector to create an independent, prosperous and prosperous Indonesian society.

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An Overview of Nano-Biopesticide and its Prospect

Elika Joeniarti[1]

Introduction

The role of pesticides in the agricultural sector is a vital dilemma to be studied. To meet increasing food demands in line with Indonesia's growing population, the need for chemical pesticides is inevitable. Yield losses caused by pests and diseases can be significantly reduced. Until now, the dependence of farmers on pesticides is still relatively high. Meanwhile, the adverse effects of pesticide use on humans and the environment are also widely reported. Pesticide exposure to humans has caused many cases of poisoning and health problems. Many evidence showed that pest resistance is also increasing with the use of pesticides intensively. The many adverse effects of chemical pesticides have made people aware of the importance of healthy and agricultural products safe for consumption. Therefore, the role of synthetic pesticides in the agricultural system must be reduced.

One safe alternative to replace that role is to use botanical pesticides. This pesticide has several advantages, such as being biodegradable, the manufacturing process is simple, and it has a broad spectrum of target pests. Botanical pesticides contain active plant compounds that can kill pests and pathogens directly or indirectly. The use of botanical pesticides to control pests was used 4000 years ago in India, while in China and Egypt, a similar technique was used to solve pests in stored problems around 3200 years ago. In Indonesia, the active ingredients are straightforward to obtain because, in this country, there are 38,000 types of higher plants. By having the second-highest biodiversity globally. Indonesia has great potential to source environmentally friendly pesticide-active ingredients. Of course, this condition is very supportive of the research and development of botanical pesticide production. Unfortunately, research on botanical pesticides has not yet reached the level of producing formulas that are practical, durable, and not easily damaged.

Even though it has many superiorities, botanical pesticides are still rarely done by Indonesian farmers. The active ingredients are easily

[1] Universitas Wijaya Kusuma Surabaya

degraded by sunlight, temperature, and microbes. Consequently, the efficacy of botanical pesticides below cannot be stored in the long term and must be repeatedly used. The use of botanical pesticides becomes impractical in its application and lacks development, eventually. Hence new formulas and delivery systems that are stable against degradation of external factors, practical in use, efficient, and effective in controlling plant pests are needed to overcome the various weaknesses of the botanical pesticides. [1] suggested a strict standardization to a certain level of efficacy to compete with synthetic pesticides. [2] said that a good pesticide formula shows biological activity or effectiveness and must also ensure humans and the environment. Various synthetic chemical pesticide formulas such as Emulsifiable Concentrate, Water Soluble Concentrate, Wettable Powder, Soluble Powder, dust, granules have different degrees of danger to the human respiratory system and irritate the mouth and skin.

Many modern techniques are required to improve these pesticides' performance and quality and produce good botanical pesticide formulas. Nanotechnology is a new technology currently being developed in various fields of life to increase the efficiency and effectiveness of essential materials. According to [3], nanotechnology can rapidly change the food industry and agriculture through innovations in detecting plant diseases quickly, increasing the ability of plants to absorb nutrients, and managing diseases at the molecular level. Rizal (2013) added that, in agriculture, nanotechnology is widely applied to modify seeds, fertilizers, pesticides, food packaging techniques, environmentally friendly energy, and tissue engineering. This technology can increase agricultural productivity, product quality, consumer acceptance, and efficient use of resources. It will positively impact cost savings, increase production value, increase income, and improve the quality of natural resources. According to [4], in principle, the application of nanotechnology is more focused on developing an efficient pesticide delivery system, namely by using small concentrations but being able to increase its role in plants. Currently, many developing countries such as India, Iran, Malaysia, and Thailand are investing quite a lot in the research and development of nanotechnology. This technology is new hope for developing countries to catch up with national industries in the competition in the era of globalization.

One part of nanotechnology being developed in the plant protection aspect is nanoencapsulation, a method of coating an active material with a polymer and producing nano-sized particles. The polymer coating will protect active ingredients from external influences, become more stable, and their release will be more controlled. A well-designed controlled release system is projected to increase its efficacy, optimize the function of the active ingredients and minimize their residual impact. In the last decade, this method is considered the most promising technology to maintain the efficacy and stability of natural materials from external degradation. This technology is also seen as able to answer challenges in the agricultural sector, especially food security in the face of climate change. Nanoencapsulation is widely applied in agriculture to increase the efficiency of fertilizers and pesticides, reduce photodegradation problems, control the release of active ingredients, and be targeted. Some research results show that the controlled release of active ingredients can increase pesticide efficiency, inhibit premature evaporation of active ingredients, and reduce environmental pollution. [2] also reported that nanoencapsulation is very appropriate to be used to develop eco-friendly and durable pesticides.

Nanoencapsulation is when a chemical such as a pesticide is released slowly but efficiently in controlling plant pests. This method allows pesticides to be absorbed by plants more easily and quickly than large particles [5]. He explained that the nanoencapsulation release mechanism could occur through the process of diffusion, dissolution, biodegradation, and osmotic pressure at a certain pH. To avoid harmful effects on non-target organisms, encapsulation of active ingredients usually uses materials such as polymers to allow the sensitive active ingredients to be enveloped in a matrix and protected from the effects of light and air. With this mechanism, nano pesticides promise to eliminate environmental contamination better than conventional pesticides. The EPA states that the new nano-pesticides product is more effective in controlling target pests, requires fewer pesticides, and minimizes the frequency of surface disinfection through spraying. It reported that *nanohexaconazole* and nano sulfur are examples of chemical nano pesticides that are 5-10x more effective in controlling pathogens than the Water Dispersible Powder formula.

This review paper will describe the perspective of nano-biopesticide in supporting sustainable agricultural development.

Discussion

Nanotechnology for Botanical Pesticide

Nanotechnology constitutes the science and engineering in the manufacture of materials, functional structures, and devices at the nanometer scale. It is a promising interdisciplinary research field and offers insecticides, pharmaceuticals, electronics, and agriculture opportunities. Nanotechnology is considered to potentially penetrate the boundaries of exact sciences, do modern thinking, and scientific approaches to manipulating the physical and chemical properties at the cellular [6]. Nanotechnology began to develop rapidly after discovering carbon nanotubes by Sumio Iijima in 1991, although Richard Feynman introduced the basic concept of nanotechnology in 1959. According to [7], Norio Taniguchi firstly published the term nanotechnology in 1974. By its tiny size, nanometer-sized materials (nanoparticles, namely) have new physicochemical properties, including surface area, shape, reactivity, and color, which are very different from conventional sizes [8]. These new and unique properties open up great opportunities for the development of innovative applications and products in various fields due to: (i) saving raw materials, (ii) fast and efficient processing, and (iii) increasing precision and accuracy. Nanotechnology is well known, including in the health sector, cosmetic industry, and agriculture. Recently, the science of nanotechnology is developing very quickly, and its applications reach almost all areas of life [9].

As one of the latest technologies, nanotechnology offers an alternative solution for many problems and agricultural development challenges. The application of nanotechnology for agriculture and food is intended at realizing precision farming, which uses minimal input when needed to save production costs while increasing the quantity and quality of agricultural products. This goal will support the attempt to achieve food self-sufficiency and the development of highly competitive local products. [10] Stated that nanotechnology provides significant changes in agriculture and food with guaranteed certainty in planting, producing, and using fertilizers, pesticides, and water. Several research results show that the application of nanotechnology in the agricultural sub-sector has urgency and potential in increasing productivity, water quality, pesticide delivery-system, food processing, and storage, as well as detection and control of pests and their vectors [11]. He clarified, the application of nanotechnology in agriculture always requires a small amount of material. For example, nanosensors can detect the presence of contaminants, pests, pathogens, nutrients, drought, and even stress due to nutrient deficiency, although in tiny amounts. This condition will drive the delivery system of nanosensors to deliver drugs or nutrients to plants and animals with high accuracy. In addition, nanotechnology also helps in monitoring environmental conditions [12].

Nanotechnology, which emphasizes the formation of nanoparticles and slow or controlled release, can overcome the main problems of botanical pesticides. It has been widely used to overcome problems related to increasing productivity and food security. In a particular context, the development of a controlled delivery system in agriculture is crucial. Several research results show that nanoparticles have Physico-chemical properties that are superior to microsized materials, including their properties that can be changed through controlling material size, regulating chemical composition, surface modification, and controlling interactions between particles. The active compounds contained in botanical pesticides with nanoparticle size will penetrate faster, and their properties are very different from the properties possessed when the mixture was still prominent. This reason is that the small particle size and distribution will affect the effectiveness and efficiency of the nanoparticle application [13].

[14] recommended more use of nano pesticides. He said that the advantage of nanopesticides lies in their particle size so that they have better bioavailability, sensitivity, dosimetry, and pharmacokinetics than conventional pesticides. [15], another advantage of using nano-based botanical pesticides is that the raw materials are easy to obtain, safe, and easily degraded. [16] reported that nano pesticides containing active compounds of garlic extract were very effective in controlling *Tribolium castaneum* pests. Likewise, [17] used nano pesticides containing neem seed extract to control *Riptortus linearis* in the laboratory. Nanopesticides are defined as pesticide formulas containing organic and inorganic compounds with nanometer size. Some of the advantages of this nanopesticide are high solubility, the release of active ingredients slowly, and protecting active ingredients from degradation due to environmental factors [18]. The role of nanotechnology on chemical and botanical pesticides can increase use efficiency, suppress the development of resistance mechanisms in pests, and reduce the death of non-target insects. This convenience will certainly positively impact agricultural production because, in the past, secondary pest population explosions mainly occurred due to inappropriate use of pesticides. The application of nanotechnology on botanical pesticides can be conducted by developing plant active compounds in nanoparticle size to be more targeted, efficient, and effective in using pesticides.

According to the research results, [19] said that the development of encapsulated-nano pesticides obviously could reduce pesticide doses, human exposure and be eco-friendly.

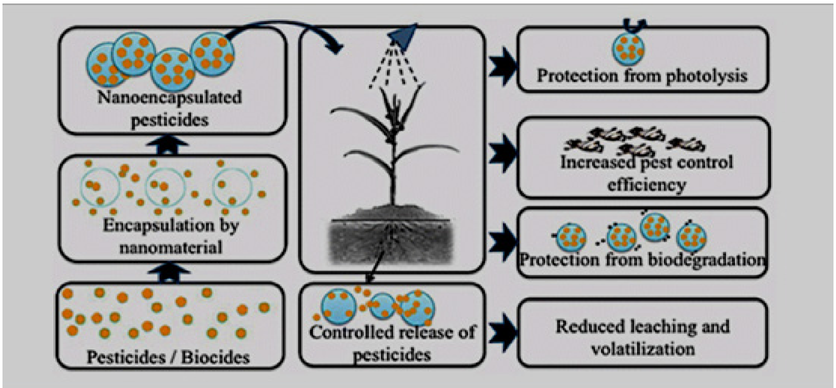

Figure 1. Encapsulation of pesticides and their safe and eco-friendly application on plant and environment [19]

[20] added, the encapsulated-nanopesticide use is effective without causing environmental damage. Similarly, other nano pesticides are biosafety and have molecular interactions with plants, soil, and the environment at low doses. Several research results also showed that the use of encapsulated-nanopesticide causes the release of active ingredients to be slower [21], [22]. Moreover, it was mentioned that the encapsulation efficiency reaches 80%-98%. Meanwhile, [23] found that the encapsulated-nanopesticide was more stable against UV light degradation than unencapsulated compounds. Thus, it is clear that the nanopesticide formula is intended to increase the solubility of plant active ingredients and or slow down their release and or protect them from degradation processes.

Conclusion

The application of nanotechnology in agriculture potentially making a significant contribution to addressing sustainability issues. Nanotechnology promises big changes in agriculture, mainly inefficient use of fertilizers and pesticides without reducing productivity. It can be used as an alternative solution to the shortage of synthetic pesticides. Commercial agricultural products will soon emerge in new, environmentally friendly formations due to the collaboration between botanical pesticides and nanotechnology. In the future, nanobiopesticide will be used for therapy for many plant disorders.

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Marketing Funneling for Urban Consumer as an Enlightenment Insight for Sorghum Entrepreneurs

Endang Noerhartati[1]

Introduction

According to the Global Food Security Index (GFSI), Indonesia is ranked (62), far below Singapore (01), Malaysia (28), also still below Thailand (52), and Vietnam (54) [1]. This gives a signal that Indonesia must seriously continue to pursue the national food security program. So that at this time, a new approach or perspective is needed to overcome the problem of the availability of staple food, especially rice, the issue of which is repeated every year. This approach requires a deepening or diversification of food, in this case through the development of sorghum as an alternative food. Actually, sorghum has long been known in many places, especially in dry areas in Indonesia, and one of the entrepreneurial products has great potential to be developed that is acceptable to the community. This is because the increasing number of entrepreneurs and their persistence in developing businesses are essential indicators of their sustainability and high competitiveness [2],[3]. Entrepreneurs create businesses and create jobs, and what makes an entrepreneur starts from someone's interest in entrepreneurship [4]. Entrepreneurship is the most essential phenomenon in today's volatile economic conditions and is a driving force for countries that want to develop more rapidly.

In this world, sorghum includes five grains that are used as staple foods. However, in Indonesia, the wider community is not very familiar with sorghum food products, and the various processed choices are still not evenly distributed. For entrepreneurs, this is actually a huge market potential. The key is that consumers need to be introduced to the advantages of sorghum products and provide ready-to-cook or ready-to-eat products according to taste. So it is necessary to develop a targeted marketing program. Sorghum-based entrepreneurship is an option to increase the percentage of entrepreneurs and can compete with other entrepreneurial products. To get new customers, especially consumers in

[1] Universitas Wijaya Kusuma Surabaya

urban areas, sorghum entrepreneurs need concrete steps in marketing. Marketing funneling is one of the alternatives that must be well designed effectively to generate positive customers for the business [5]–[7]. Sorghum as alternative food and one of the entrepreneurial products has great potential to be developed [8].

Discussion

Sorghum excellence

The main food component worldwide consumes cereal grains, especially rice, wheat, corn, sorghum, and millet. So that it becomes a challenge to develop a large number of components to meet consumer expectations. Sorghum is an elementary plant in Indonesia with various advantages in nutrition and is beneficial for health. The nutritional content can be equated with rice, corn, and wheat, with the amount of 332 calories, 11 g Protein, 3.3 g Fat, 73 g Carbohydrate, 28 mg Calcium, 4.4 g Iron, 287 mg Phosphor, and Vit B1 0.38 m. In addition to its nutritional content, sorghum products can be equated with rice, corn, wheat, and the superiority of sorghum is that it is gluten-free, high fiber, low glycemic index, low calories, contains antioxidants, and the presence of tannins. So that sorghum products become an alternative choice of healthy and nutritious products, the variations of the products are made from raw rice, flour, soft bran, and sorghum stem, namely processed rice products, fermented products: "tape" and "tempe", variations of cake and cookies, bakery, biscuit, pasta, noodle, milk, and ice cream sorghum, as well as liquid sugar from sorghum stem.

So that sorghum is an alternative food program and can support food security (the superiority of sorghum is presented in Figure 1). Based on these advantages, it is necessary to open the sorghum market, as explained in Figure 2. It is hoped that a sorghum network will be formed and will support the developing sorghum [10]–[12].

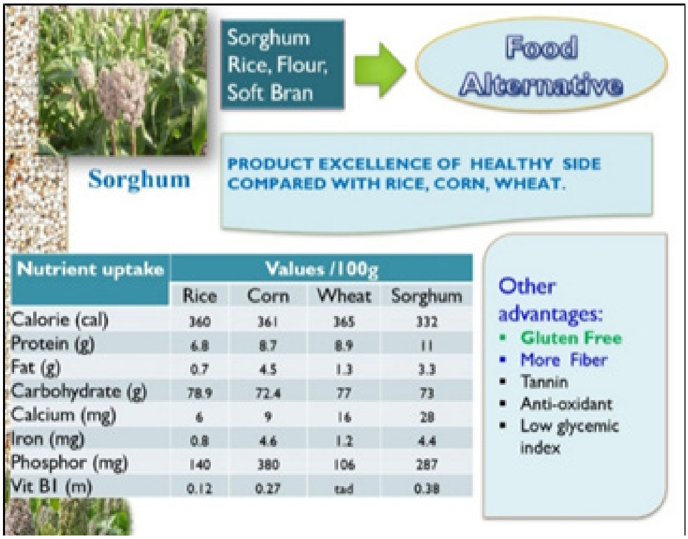

Figure 1. The Superiority of Sorghum

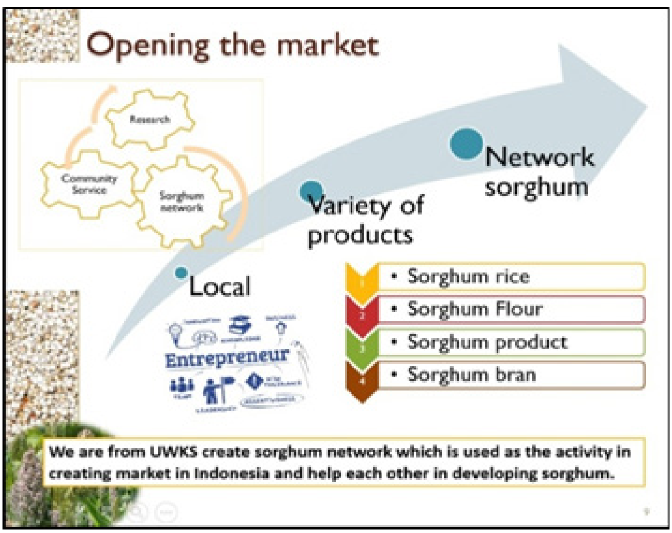

Figure 2. Opening the Sorghum Market

Figure 1, shows the advantages of sorghum over rice, corn, and wheat, where the calorie count is 28-33 lower, protein is 2.1-4.2 g higher, low fat, high carbohydrate, high mineral, and vitamin. Figure 2, as an illustration of the development of research results, community service, and the sorghum network, will continue to support sorghum development and open up new markets for sorghum.

Funnel Marketing

Effective marketing funneling planning will be able to attract consumers and generate positive customers for the business. AIDA marketing model presented in Figure 2, and The adjusting AIDA marketing model to online sales funnels presented in Figure 3.

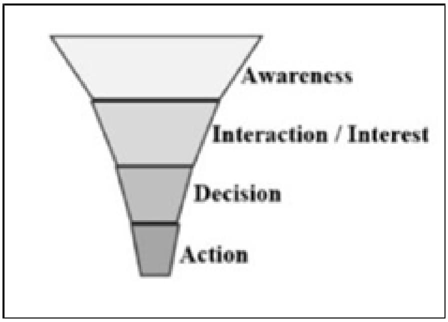

Figure 3. AIDA marketing model [15]

Figure 3 shows that a typical marketing approach is through general stages, known as the AIDA model, which stands for Awareness, Interaction/ Interest, Decision, Action. This model is an approach to lead prospects into potential customers to produce purchase transactions. The structured approach goes through the following stages: 1) Awareness – The potential customer learns of your solutions for his or her problem; hears of your offer, product, sales, or service; 2) Interaction / interest – The potential customer is actively seeking solutions to his or her problem(s). The potential customers find you and take an interest by signing up for your lead magnet or follows you on social media; 3) Decision – The potential customer likes your products, services, and solution and has decided to move forward with your offer; and 4) Action – The potential customer makes a purchase with you.

Figure 4 shows that in its development, especially in the digital era 4.0, the model needs to be adapted to the concept to encourage consumers to be more intense in getting benefits and being loyal to constantly growing products. Psychologically, consumers are more comfortable with the products offered and can be easily accessed by various supporting product information on gadgets or laptop/PC devices. Then the most important thing is that there is a continuity of the "Get customer" (AIDA model modification) stage with the "Grow customer" stage so that the product business can continue to be sustainable. The things achieved in the "Grow customer" stage serve as feedback for the material from the previous step, making it more attractive to new customers. Today's sales funnels model is made more accessible with social media platforms that are very popular in urban communities. Besides being easy, less cost-efficient, it can be accessed almost anywhere and anytime by potential consumers.

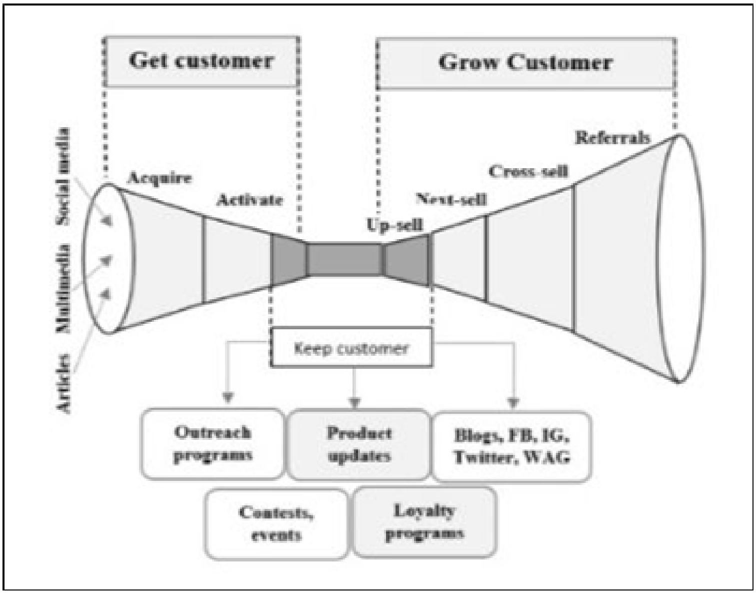

Figure 4. Adjusting AIDA Marketing Model to Online Sales Funnels [16]

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Sorghum product entrepreneurs need to understand this concept well. When planning a business, you have to think about how to "produce" information so that your prospects are well educated. Arranged so that each potential customer, according to the stage of interacting, gets an adequate response and adds to the desire to know more. Everything must be arranged for a fast response or placed so that there is an auto-responder program to reach many potential customers at the same time.

Producing that information means making good and supportive articles or multi-media to fulfill curiosity (Interest/Interaction to be led to make decisions and actions) during the "Get customer" stage, and to give appreciation and pride to later become referrals (at the "Get customer" stage). "Grow customer" stage). Everything is made conical like a funnel - a symbol of marketing funneling.

Funneling Sorghum Marketing

The sorghum development volume chain must have a global strategy, with a community-accepted method, to make sorghum a ready-to-eat entrepreneur. Designing so that sorghum has prospects for consumers, is interested, feels, buys repeated orders, and is sustainable. One effective strategy to make the selected food is the Sorghum Consumer Funnel by educating consumers. As an effort to this strategy, CSE-UWKS was formed, as a sorghum production house, by providing training and assistance in the manufacture of various sorghum products, supporting equipment, socialization, and marketing, as well as variations of sorghum products, where one of the methods is Training, Visit and Online Extension (TVO), is the Sorghum Entrepreneurship Strengthening System, value chain, ready to eat, all of which are summarized. Finally, 26 SEUs have been born, with various products from raw materials, semi-finished materials, and finished materials based on sorghum.

This effort will continue to be expanded and strengthened by CSE-UWKS, forming a network of consortiums and sorghum producers who can contribute and provide solutions for the nation by diversifying sorghum food (the forms of CSE and SEU UWKS are shown in Figure 3) [17]–[19].

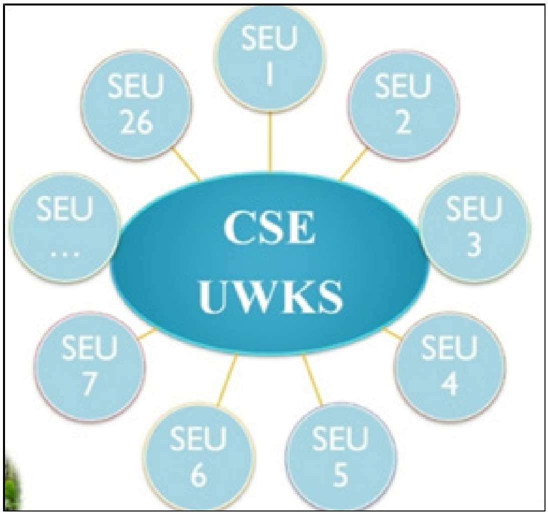

Figure 4. The form of CSE and SEU UWKS

The importance of consumer education about healthy food will be information on alternative foods to be choices that meet the nutritional content needed by the body, namely carbohydrates, proteins, fats, vitamins, and minerals, as well as the presence of fiber content that the body needs to improve digestion [20]–[22]. Continuing to build and improve the sorghum market must continue to be done, which until now the development of sorghum product marketing has begun to penetrate online media, be it in the marketplace, Facebook, Instagram, and other media; however, not all diversified sorghum products are marketed, and not all producers are presented, this is what training and socialization must be done at sorghum production sites to be able to increase online marketing [6], [23], [24].

Urban consumers are actually the next consumer target, mainly because most of them are educated and open-minded consumers, which it is hoped that urban consumers can be educated on new healthy and valuable food products [25], [26], resulting in a change in consumer behavior towards more sustainable behavior. Healthy, innovative, more mature, and responsible for the products they choose. Consumers will prefer those that can increase nutritional value, maintain and maintain health so that the primary product selection will be seen for its nutritional content and health benefits. After that, they will know the price. Consumers need the correct information to guide the selection of products to buy, and it is essential to update healthy and nutritious products as an option [27]–[29].

Conclusion

Marketing funneling for the urban consumer as an enlightenment insight for sorghum entrepreneurs is essential to do with sorghum products, which are alternative food products that can be developed as entrepreneurship products. This activity must continue to be carried out sustainably by educating consumers on the need for healthy and nutritious food alternatives that can ultimately support food security.

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Integration of Remote Sensing and GIS for Monitoring Air Temperature during the Covid-19 Pandemic in Malang City

Endang Surjati[1]

Introduction

Temperature is an important component in determining the weather of an area. The rise of temperature will have a serious impact on global and local climate change. Hence, the research of temperature received extensive attention around the world. The temperature related to many influencing factors, including land use changes, human activity patterns, fossil fuels use, and associated air pollution emissions. Those through a slowly or quickly process. The human activity are more often caused by extreme human activities, such as restrictions on activities in the context of controlling infectious diseases.

Transmission of infectious diseases can occur in several forms, namely vector-borne, airborne, and waterborne diseases [1]. Diseases caused by vectors need a host to transmit diseases, such as malaria, dengue fever, filariasis and chikungunya caused by mosquito vectors. Airborne diseases are linked to the environment by changes in weather, pollution and seasonal changes, such as influenza. Waterborne diseases transmitted through contact with water and associated with drinking water quality, flooding, water pollution and other environmental conditions.

The new SARS-CoV-2 coronavirus, which causes the COVID-19 disease, was reported in Wuhan city, Hubei Province, China, in December 2019 [2]. This new pathogen has spread rapidly around more than 200 countries, in which Indonesia one of the those. Previous studies have supported an epidemiological hypothesis that weather conditions may affect the survival and spread of droplet-mediated viral diseases Redon, 2020. The COVID-19 pandemic is the third major zoonotic coronavirus disease outbreak in just two decades, following the SARS (Severe Acute Respiratory Syndrome) outbreak in 2002-2003 and the MERS (Middle

[1] Dosen Pendidikan Geografi, Universitas PGRI Kanjuruhan Malang

East Respiratory Syndrome) outbreak in 2012. Covid-19 was reported to WHO on 31 December 2019 as a typical pneumonia of unknown cause [3]. This virus is genetically similar to the SARS-CoV coronavirus and assumed to have crossed the species barrier from animals to humans. Although its etiology source has not been acknowledged determinated, its probable ancestor is the bat coronavirus [4].

Coronavirus transmited through the air or after touching contaminated specific objects. Hence, A coronavirus patient can transmit the disease to three people on average without intervention (compared with one for the common influenza, two for Ebola, and 18 for measles) (Lal, 2020;). Symptoms of COVID-19 range from mild clinical symptoms similar to the common cold or flu, with major symptoms appearing 2–14 days from infection and including trouble breathing, persistent pain or pressure in the chest, mental confusion or inability to arouse, and bluish lips or face [2]. Those with persistence symptoms often require specialized respiratory management at intensive care units [6]. Because of human-to-human transmission of disease occurs by droplets, therefore the most effective disease control is avoiding direct contact with sufferers.

The COVID-19 pandemic outbreak had brought major economic disruption in the world [7], with disruptions in global supply chains, business and consumer confidence, the decline in commodity prices, international tourism and business travel, and less demand for imported goods and services. The long-term economic impacts include changes in health care expenditure as well as downstream impacts of COVID-19 on mortality and morbidity, with a rapid increase in economic anxiety in the population at-large . Some of the policies taken by several countries around the world are the implementation of social distancing, closure of schools and workplaces, and restrictions on intra and international movement. The spread of COVID-19 has triggered unprecedented behavioral and societal changes in response to the threat posed by COVID-19. The implementation of the program to limit community activities in several fields has reduced community movement. Restrictions on community activities result in reduced energy use which in turn will reduce heat emissions released into the atmosphere.

Heat emissions released from energy use will directly affect the increase in air temperature, especially in urban [8]. The concentration of pollution in the urban environment also plays a significant role in changes in heat energy in the atmosphere. Additionally, to reduce the greenhouse effect, it can be done by reducing energy use activities, either directly or indirectly. The direct impact of changes in heat energy during the pandemic is the result of restrictions on community activities. Restrictions community will reduce energy use that can make the air temperature decrease.

The increasing number of Covid-19 cases in several regions in Indonesia has prompted the government to implement programs related to the implementation of social distancing. Those programs including as regional isolation (isolasi wilayah), PSBB (Pembatasan Sosial Berskala Besar), and PPKM (Program Pembatasan Kegiatan Masyarakat) to reduce the transmission and spread of the corona virus. The impact of the implementation of community restrictions is the closure of schools, reduced activity in offices, restrictions on industrial operations, closure of shopping centers and restrictions on tourist visitors to prevent human-to-human transmission of the corona virus.

Malang City is the second largest city in East Java Province after Surabaya City, which certainly has very complex urban dynamics. The transmission rate in Malang City is also relatively high. The first covid-19 case was reported in this city on March 18, 2020. Due to the transmission of the virus through droplets without going through vectors that cause disease, this virus spreads rapidly from human to human in several urban villages and sub-districts. In the following months, this disease spread rapidly in Malang.

Malang City divided in to 5 sub-districts, where Klojen the most densely populated and the center of government and business in Malang City. Besides Klojen Sub-district, another sub-district that is also densely populated is Lowokwaru Sub-District where the center of education in Malang City. In those location, many boarding houses were built. Therefore, considered as areas that have busy social and economic activities

In this emergency situation, to prevent the spread of this infectious disease among crowds, Indonesia government further implemented a stringent control management on the basis of communities trough the imposition of restrictions on community activities to curb corona virus disease (COVID-19). Those regulation of restrictions on community such Government Regulation Number 21 of 2020 dan Instruction of the Minister Number 15 of 2021 since March 31, 2020. This community containment aimed to restrain all residents to stay home, and their daily needs (e.g. food, supplies, and medicines) were offered through on-line shopping and delivered by the community managers and volunteers.

Several studies have conducted research to examine the relationship between COVID-19 cases and environmental conditions. Some of these studies examine the influence of the environment on the increase in

Covid-19 cases [2], [5], [16], [7], [9]–[15]. This paper examines the effect of covid cases on environmental changes in urban areas. Previous study was conducted to the relationship between the increase in coronavirus cases and the presence of wastewater and waste disposal (Venugopal et al., 2020; Nghiem et al., 2020).

This paper examines the effect of covid cases on environmental changes in urban areas. The environmental conditions studied were air temperature. Air temperature data is obtained using the integration of remote sensing and geographic information systems. Temperature conditions were examined in three time periods, the first period was before the pandemic occurred, the second period was at the beginning of the pandemic and the third period was when community activities were restricted. Furthermore, based on the results of land surface temperature measurements in the three periods, the spatial and temporal distribution analysis of land surface temperatures was carried out to determine temperature changes that occurred during the Covid 19 pandemic.

Land surface temperature is obtained from Landsat 8 data by using certain sensors mounted on satellite vehicles. Landsat 8 observes the earth's surface with a system that is more advantages than the previous generation, which has a wider spectrum, from the visible spectrum to the thermal spectrum [18]. In addition, the spatial resolution can be used to observes at local, regional and global level. Another advantage is re-visiting at the same area which allows Landsat 8 images to be used for monitoring environmental changes.

The integration of Landsat 8 and geographic information systems is able to visualize environmental conditions such as temperature and vegetation cover. The density of vegetation on the earth's surface is one of the land parameters that affects temperature changes. It assumed that the denser the vegetation, the lower the temperature and vice versa. Temperature also reflects the complexity of human activities, especially in heat emission.

People's daily activities can increase greenhouse gas emissions, such as the use of fuel, use of electronic devices, factory activities, and burning of waste. The increase in greenhouse gas emissions is a global problem related to global warming. The hypothesis states that the restraint of community activities will reduce land surface temperature.

Discussion

Epidemiology is the study of epidemics or outbreaks that aim of controlling them and preventing their recurrence [19]. Spatial epidemiology is the study of disease epidemics/outbreaks related to spatial-based disease control and prevention. Spatial epidemiology can also be considered as a method to analyze the spatial distribution pattern of disease vectors, diseases and hosts in order to determine disease control and prevention strategies.

The epidemiological component consists of vector, host and environment. Those components are used to help explain the factors that influence the spatial patterns that occur in certain epidemic cases to determine the sources of disease (etiology). Vectors are carriers of disease. The survival of vectors, diseases and hosts is largely influenced by environmental conditions in which they live and thrive.

The environment affects the survival of disease-causing vectors, diseases and hosts, either directly or indirectly. Environmental conditions can be a driver of disease or an obstacle to the occurrence of disease cases. An environment that is suitable for the development of disease vectors and disease will play a role in increasing the incidence of disease. Meanwhile, the environment that is not suitable for vector growth and disease acts as a limiting factor for vector and disease transmission. The environmental factor that has the most influence on the incidence of disease is air temperature. Air temperature is influenced by several factors including land use/cover conditions, permeability conditions, human activities, and vegetation density. The association between temperature and disease incidence has been the focus of attention in environmental health studies.

During the COVID-19 pandemic, several strategies were implemented to prevent further spread of the disease. The prevention strategies include reducing human interaction, closing activity centers (education, offices, shopping centers, and tourism). Restrictions on community activities indirectly have an impact on changes in air temperature. Due to the restraint of community activities, the emission of energy into the atmosphere is decreasing. Another impact is the reduced release of carbon dioxide in the air.

Remote sensing is a technology and method for obtaining data about the earth's surface. Remote sensing data is abundant and characterized by spatial, spectral, and temporal resolution. Remote sensing has been widely used in various fields, but in public health it has not been widely used. Image sensors can observe vegetation conditions and land surface temperatures. Vegetation density reflects the type of land cover which indirectly reflects information on the type of land use, while changes in temperature reflect the type of human activity.

Changes in land use/cover occur globally which have various situations from an ecological and human perspective [20]. This broad spectrum certainly requires remote sensing technology to make observations. Furthermore, to obtain data on land cover (vegetation) and temperature (LST) using Landsat 8 images.

The Landsat 8 satellite has two sensors, namely the Operational Land Imager (OLI) sensor which consists of 9 bands and the Thermal InfraRed Sensors (TIRS) which consists of 2 bands. OLI has 2 additional channels, namely Deep Blue Coastal/Aerosol Band (0.43 – 0.45 micrometers) for detection of coastal areas and Shortwave-InfraRed Cirrus Band (1,36 – 1,39 micrometers) for detection of cirrus clouds. Landsat 8 imagery has three kinds of spatial resolution, namely 15 (panchromatic channel), 30 m (channels 1, 2, 3, 4, 5, 6,7, and channel 9), and 100 m for channels 10 and 11 in the thermal region (TIRS 1 and TIRS 2). The advantage of Landsat 8 imagery is that there is a near infrared channel, namely channel 5, which using an appropriate combination of RGB (red, green and blue) will be useful for vegetation studies and land cover identification.

The sensor operates in the infrared region, which records the energy emitted by an object that has a certain temperature above 0^{o} K (-275^{o} C). Therefore, objects on the earth's surface with temperatures above 0^{o} K can be sensed by the sensor based on the value of the emission spectrum and not based on the reflection value of the object that resulting from the interaction between materi and sun radiation. The system allows to obtain land surface temperature data both during the day and at night). Observation of land surface temperature can monitor heat stress in urban areas that have an impact on human health. The heat stress is more often due to the rapid increase in urbanization by the development and expansion of cities and global warming.

Land surface temperature is controlled by many factors, one of which is land cover conditions in urban areas. The more green open space, the lower the temperature value. The existence of green open space can be observed based on the type of vegetation. Vegetation density can be measured using a vegetation index (eg NDVI, SAVI and EVI). This study uses the NDVI algorithm to measure the vegetation density in the study area.

Malang is located in East Java Province, Indonesia. Some areas in Indonesia are located on the equator. Therefore, the climate in Indonesia is a tropical climate and is more often dominated by tropical rain. Malang is astronomically located at the position of 112,060 – 112,070 East Longitude and 7,060 – 8,020 South Latitude. The area of Malang City is 110.06 km2 which is divided into five sub-districts, namely: Kedungkandang, Sukun, Klojen, Blimbing and Lowokwaru Districts. The altitude of Malang City is at 445 -526 meters above sea level, surrounded by mountain ranges in the west there are Mount Kawi and Panderman, in the north Mount Arjuno, and Mount Semeru in the east.

Geographic information system is used to determine the spatial and temporal distribution of land surface temperature. Obtaining the image and land parameters using Google Earth Engine (GEE). The selected image period is recording in November 2019, March 2020, and July 2020, with recording times before the pandemic, the beginning of the pandemic and the limitation period during the pandemic (Feature 1).

Land surface temperature is obtained from the results of processing using Landsat band 10 imagery which is a thermal channel. The spectral emission of the object is visualized using pixel values (digital number) which vary according to the characteristics of the object under study. The range of LST values in the three images is $26.6^{o} – 39.3^{o}$ C in the November 2019 recording period, $23.6^{o} – 31.2^{o}$ C in the March 2020 recording period, and $22^{o} – 29.3^{o}$ C in the recording period of July 2020.

LST and normalized difference vegetation index were collected during the period November 2019, Mach 2020 and July 2020. The Landsat 8 composite LST product includes local time day and night observations which on average in 1 month, with a spatial resolution of 30 m . Those satellite data with a temporal resolution of higher than one month were averagely combined in to monthly data.

LST value has a level of red brightness gradation in the image. The brighter the color, the lower the LST value. On the other hand, the darker the red color in the image, the higher the LST value. Based on the LST value, it is known that the spatial distribution of air temperature in urban areas has a high temperature and the closer to rural areas the lower the air temperature. Meanwhile, the temporal distribution shows that there was a decrease in temperature values at the beginning of the pandemic and during the pandemic. During the pandemic, a community activity restriction program was implemented to reduce the level of transmission of COVID-19.

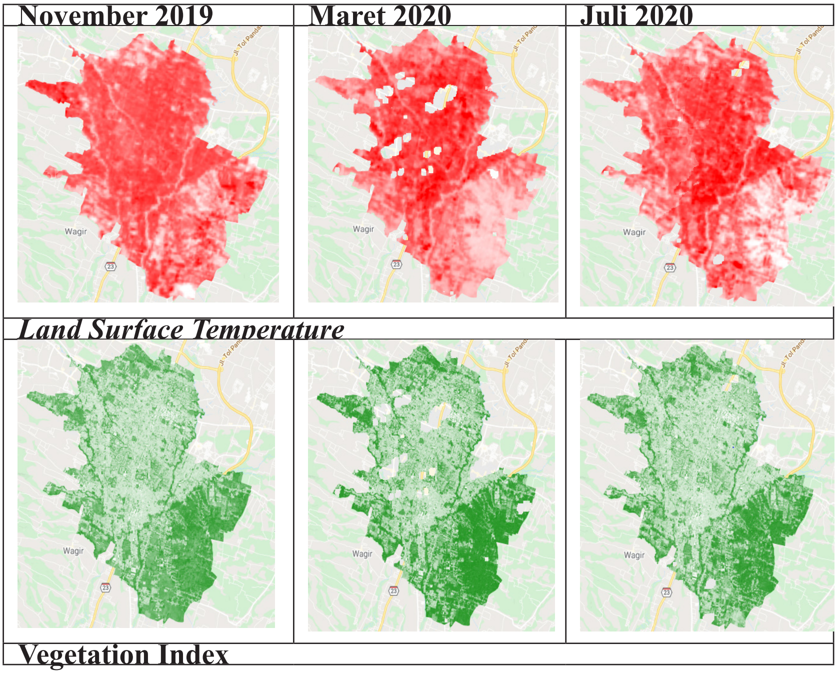

Figure1. Spatio-temporal LST Pattern and Vegetated Land Cover of Malang City.

Urban area LST's show higher values than areas outside city, and most of the pixels representing higher temperatures are inside city. The effect of the low built density of an area can be clearly understood by analyzing the urban and non-urban zones, since the temperature of the non-urbanized zone is lower than that of the urban area. The red color in Figure 1 shows high temperatures in the central part of the city, and white color shows low temperatures in the periphery of the study area which is under the rural belt, low temperatures in the countryside due to green vegetation. Urban areas exhibit higher temperature pixels due to the presence of impermeable surfaces such as built-up areas. The LST's pattern for the entire study area as a whole changed in the three recording periods.

Vegetation index is a value that shows the level of vegetation density in an area [21]. To determine the vegetation index is done using the NDVI (Normalized Difference Vegetation Index) algorithm, which uses the equation:

NDVI = NIR – RED/NIR.RED ……………................ (1)

Quantifying the spatial heterogeneity of land cover using multi-temporal NDVI, near infrared (NIR) and red reflectance, range of vegetation index values varies between -1 – (+)1. The range of NDVI values in the November 2019 period is 0.24 – 0.5. In March 2020, it is 0,18 – 0,85, and the July 2020 period is 0,16 – 0,81. A large NDVI value indicates a high vegetation density, while a small NDVI value indicates a sparse vegetation density. The spatial distribution of vegetation density in the image of Figure 1 shows that in the city center, vegetation is rarely seen because it is covered mostly by buildings. The spatial distribution of high vegetation density is in the southeast of the city, precisely in Kedungkandang District

Changes in air temperature are influenced by changes in human activities. This is due to a reduction in the use of energy from motor vehicles, electricity use, and industrial operations. This activity causes an increase in carbon in the atmosphere. When there is a reduction in activity, there will be a reduction in carbon dioxide (CO^2) in the atmosphere. Indirectly, restrictions on community activities have an impact on decreasing air temperature.

In the case of temporary changes, the resilience of the ecosystem makes it possible to return to the initial situation. As in this study, it was conducted to determine environmental conditions (temperature) at the time before, the beginning and during the covid 19 pandemic. Knowing the air temperature can be used to monitor the level of population mobility, which can then be used to control the community so that they comply more with regulations related to activity restrictions.

The integration of remote sensing and geographic information systems as a technology helps in monitoring air conditions (temperature) using real-time time series Landsat 8 images. Implicitly this technology can also be used in strategies for preventing and controlling infectious diseases as well as appropriate mitigation measures.

Conclusion

Remote sensing can provide data depicting environmental conditions and GIS assists in data acquisition and integration with other data. The role of integration of remote sensing and GIS in the field of environmental health, besides being able to be used to determine environmental factors that cause disease, can also be used for monitoring dynamic environmental conditions (temperature) during a pandemic.

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The Influence of Occupational Health, Occupational Safety and Job Stress on Work Productivity of Air Traffic Controllers at Indonesia.

Farida Elmi[1]

Introduction

Work productivity not only determines the success and sustainability of a company, but also contributes to the national economy. According to the International Labor Organization (ILO), labor productivity is an important economic indicator that is closely related to economic growth, competitiveness, and living standards in an economy. Based on data of the International Labor Organization (ILO), Indonesia ranks fourth in terms of work productivity level with a total output volume of $25,412. Indonesia's work productivity level is still lower than Malaysia, Singapore and Brunei Darussalam.

The low work productivity condition occurs in Indonesia, which is one of the state-owned companies engaged in aviation navigation services. Indonesia was established based on Goverment Regulation no. 77 of 2012 which has the purpose as a provider of flight navigation services in accordance with applicable standards to achieve flight efficiency and effectiveness in the national and international scope. To achieve its goals, vision and mission, human resources have important role, especially those who enggage in Aviation Traffic Controllers (ATC). The problem is, based on Air Traffic Controller work productivity data at Indonesia traffic data there has been a decrease of amount of traffic that can be served by the Air Traffic Controller in 2019 compared with previous year period. In 2018 data the amount of traffic that can be served by the Air Traffic Controller as much as 1,561 traffic fell in 2019 to 1,207 traffic. Furthermore, based on the Internal Data of the Directorate of Human Resources and General Affairs at Indonesia in 2018, there was an increase in ATC violation sanctions at Indonesia with 38 ATC who received warning letters.

[1] Mercu Buana University, Indonesia

Air Traffic Controller personnel are very susceptible to experiencing burnout, stress and health problems, so that health services for personnel's physical and mentality are needed. Health risks are factors in the work environment that work beyond the specified time period, an environment that can create emotional stress or physical disturbances. According to Megginson in [2] occupational health is a condition where the workers are free from mental, physical, emotional or pain disorders caused by the work environment. Furthermore, according to [3] occupational health is a form of health insurance that is given to worker while working, have a medical clinic that is well staffed and equipped. Air Traffic Controller duty has a very high risk, therfore occupational safety is a very important factor. Based on the results of the pre-survey, it was found that 3.5% of personnel considered that the work equipment was outdated and damaged, 3.2% of respondents considered that security in the preparation and storage of dangerous goods has less concerned. Pre-survey results also show that Air Traffic Controller personnel have a high level of job stress. According to [15] job stress is an imbalance of physical and psychological abilities in carrying out the work given by business organizations so that it affects various aspects relating to the emotional, thinking, acting, and other aspects of the individual. The high job stress is caused when traffic conditions (aircraft movement) increase. According To [2] high job stress is caused by a workload that is too heavy, time is urgent, an unhealthy climate, and work conflicts.

Based on the results of the pre-survey, it was found that there was a tendency that the work productivity of Air Traffic Controller personnel has decreased work productivity. The decline in work productivity is thought to be caused by a lack of occupational health and safety, as well as high levels of job stress. The influence of occupational health and safety and job stress on work productivity was found in the study of [4] The influenceof occupational health and safety was partially found in the research of [1], [5]and the research of [6] who found Occupational Health and safety had a positive and significant influenceon work productivity. In contrast to the results of those study, research by [7] found that occupational health and safety had no significant influenceon work productivity. The influenceof job stress on work productivity was found in the research of [8]. In this study it was found that high job stress causes a decrease in work productivity. In contrast to the results of those studies, the research of [9] and [10] found that job stress had no significant influenceon work productivity. Based on the findings of primary and secondary data and the identification of problems and several research gaps found, this studi aimed to analyze deeper “The Influenceof Occupational Health, Occupational Safety, and Job stress, on Work Productivity of Air Traffic Controllers at Indonesia.

Literature Review

Work Productivity

According to [11] productivity is defined as the correlation between output (products or services) and inputs (employees, resources or raw materials, and money). [12] argued productivity implies two dimensions, namely effectiveness and efficiency. Effectiveness is about doing something right in order to meet the needs of the organization to achieve maximum work result, in the sense of achieving targets related to quality, quantity, and time, while efficiency is doing the right thing with the right process related to the efforts to compare inputs with its realization of use or the manner in which the work is carried out. According to [12] there are five dimensions used to measure work productivity, including work quality, work quantity, timeliness, work spirit and work discipline. The quality of the work produces the quality of result.

Occupational Health

According to [3] occupational health is a form of health insurance that is given to worker while doing work. Health risks are factors in the work environment that work beyond the specified time period, an environment that can create emotional stress or physical disturbances. According occupational health is divided into physical and mental health. Physical health includes physical examination at the time of duty, periodic physical health examination for each personnel, periodic and voluntary physical examinations for each personnel, medical clinics equipped with good personnel and equipment, availability of industrial cleaning experts and trained medical personnel, Systematic and preventive attention aimed at industries that have high levels of stress and tension and periodic and systematic inspections of proper sanitation provisions. Mental health according to in consists of the availability of psychiatric counseling officers and psychiatrists, collaboration with specialists and psychiatric institutions from outside the organization, providing education to company personnel about the nature and importance of mental health problems, developing and maintain an appropriate human relations program.

Occupational Safety

According to [2], occupational safety shows conditions that are safe or safe from suffering, damage or loss in the workplace. According to [3] occupational safety is the main instruments for preventing accidents, disability and death as a result of work accidents. According to [2] occupational safety shows conditions that are safe or safe from suffering, damage or loss in the workplace. According to [13] the factors that influence employee safety include the completeness of work equipment, quality of work equipment, employee discipline, leader assertiveness, work motivation, work motivation, supervision and the age of work tools. According to Mangkunegara in [12] the dimensions and indicators of work safety include the state of the work environment and the use of work equipment. The condition of the Workplace Environment includes the preparation and storage of dangerous goods whose safety is not taken into account, the work space is too crowded and sesa, and the disposal of dirt and waste that is not in place. The use of work equipment includes the safety of work equipment that is outdated or damaged, the use of machines, electronic devices without good security and lighting arrangements.

1. Job stress

According Job stress is an increasing problem for workers, employers and society. Stress is caused by overwork conditions, job discomfort, low level of job satisfaction and lack of economy. Job stress has a negative influenceon productivity and profitability at work. According to [14], stress is a dynamic condition in which individuals are faced with opportunities, demands, or resources related to what the individual wants and whose results are considered uncertain and important. According to [2] the factors that cause job stress include the over workload, work conflict, urgent work time, unhealthy work climate, low quality of work supervision, inadequate work authority related to responsibilities, the difference in values between employees and leaders who are frustrated at work. According to [14] in [15] job stress can be measured from three dimensions, including economic uncertainty, organizational factors, and individual factors.

Method

Research Design

This research is a quantitative study with a causal study approach. This research design is used in order to find out that X variable (health and safety), causes the Y (job stress (Y2)) and work (productivity (Y1)). If the variable X (health, safety) is removed or changed in a certain way, the problem Y (job stress and work productivity) is solved. The population in this study is the number of samples of Air Traffic Controllers at Indonesia with a population of 556 people. From the total population, a sample of 233 respondents was obtained.

Data Analysis Method

This research uses SEM (Structural Equation Model) analysis model. SEM model is a statistical technique that can directly analyze potential variables, indicator variables and measurement errors. SEM helps researchers to analyze the relationship between latent variables and indicator variables, the relationship between one latent variable and other variables, and find out the magnitude of the measurement error. The data analysis technique used is the Structural Equation Modeling (SEM) analysis technique with Partial Least Square (PLS) using Smart PLS 3.2.9 software.

Results

Descriptive Analysis

1. Descritive Analysis of Occupational Health (X1)
   The results showed that the Occupational Health variable had an average value (mean) of 3.41 which was interpreted as being in the agree category. As for the X1.1 indicator with the statement item "The company always performs a physical examination when I will be on duty" gets the highest average value of 3.82 with most of the respondents answering agree.
2. Descritive Analysis of Occupational Safety (X2)
   The results showed that the work safety variable had an average value (mean) of 3.09 which was interpreted as being in the agree category. As for the X2.1 indicator with the statement item "The preparation and storage of dangerous goods in the place where I work is not considered safe, so it can cause work", and the X2.2 indicator with the statement item "The workspace where I work looks crowded and crowded. ” got the highest average score of 3.82 with most of the respondents answered agree.
3. Descritive Analysis of Job stress (Y1)
   The results showed that the job stress variable had an average value (mean) of 3.83 which was interpreted as being in the agree category. As for the Y1.1 indicator with the statement item "Economic uncertainty can increase stress at work" gets the highest average value of 4.12 with most respondents answered strongly agree.
4. Descritive Analysis of Work Productivity (Y2)
   The results showed that the work productivity variable had an average

value (mean) of 3.71 which was interpreted as being in the agree category. As for the Y2.12 indicator with the statement item "I am always optimistic about the activities and tasks given by the company" it obtains the highest average score of 3.95 with most of the respondents answering strongly agree.

Verification Analysis

1. Analisis R^2 *(R – Square)*

Evaluation of the Coefficient of Determination (R^2) is used to show the degree of influencethe independent variable has on the dependent variable.

Table 5. R – Square Test

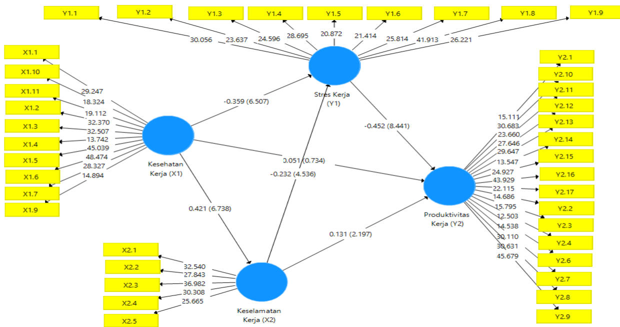
	R Square
Occupational Safety	0,181
Work Productive	0,273
Job Stress	0,259

Source: Results of Data Processing Using Smart PLS (2021)

Based on table 5 above, it is found that that the occupational safety obtained R-Square value of 0.181, which means that the predictor variable, namely occupational health, can explain occupational safety by 18.1%. The job stress response variable obtained R-Square value of 0.259, which means that Occupational Health and Occupational Safety can explain job stress of 25.9%. The variable of Work Productivity obtained an R-Square value of 0.273, which means that the predictor variables, namely Occupational Health, Occupational Safety, and Job stress, can explain Work produktivity of 27,3%. The remaining of 72.7% (100% - 27.3% = 72.7%) is influenced by other factors outside the research model between Occupational Health, Occupational Safety, and Job stress on Work Productivity.

2. Hypothesis Testing

Hypothesis testing is basd on the path coefficients to find out the significance of the influence between variables according to the parameter coefficient values (t statistic) and the significance value (P Value) through the bootstrapping method on Smart PLS software. The hypothesis is accepted if the T statistical value is greater than the T table (> 1.970) and the P value is smaller than the significant level used (< 0.05).



PICTURE 1. The MainConstruct of Structural Model (Inner Model)

Source: Results of Data Processing Using Smart PLS (2021)

- H1: Occupational health has a positive and significant influence on the work productivity of the Air Traffic Controller at Indonesia.
  The path coefficient value is positive at 0.051 and the t-statistics value (0.734) < t table (1.970) and the P-value (0.233) > 0.05, so the hypothesis H0 is accepted. Based on the result it can be conlude that there is no significant influence of occupational health on work productivity.
- H2: Occupational health has a negative and significant influence on the job stress of Air Traffic Controller at Indonesia.
  The path coefficient value is negative at -0.359 and the t-statistics value (6.507) > t table (1.970) with the P-value (0.000) <0.05, then the hypothesis H0 is rejected and H1 is accepted. The result showed that there is a significant negative influence of occupational health on job stress.
- H3: Job stress has a negative and significant influence on the work productivity of the Air Traffic Controller at Indonesia.
  The path coefficient value is negative at -0.452 and the value of t-statistics (8.441) > t table (1.970) with the value of P-value (0.000) <0.05, then the hypothesis H0 is rejected and H1 is accepted. The result showed that there is a significant negative influenceof job stress on work productivity. Thus H3 which states that job stress has a negative and significant influence on the work productivity of the Air Traffic Controller at AirNav Indonesia is accepted.
- H4: Occupational safety has a negative and significant influence on the job stress of the Air Traffic Controller at Indonesia.
  The path coefficient value is negative at -0.232 and the t-statistics value (4.536) > t table (1.970) with the P-value (0.000) < 0.05, so the hypothesis H0 is rejected and H1 is accepted. The result shoed that there is a significant negative influence of work safety on job stress.

- H5: Occupational safety has a positive and significant influenceon the work productivity of the Air Traffic Controller at Indonesia.
  The path coefficient value is positive at 0.131 and the t-statistics value (2.197 > t table (1.970) with the P-value (0.014) < 0.05), then the hypothesis H0 is rejected and H1 is accepted. The result showed that there is a significant positive influence of work safety on work productivity.
- H6: Occupational health has a positive and significant influenceon the work safety of the Air Traffic Controller at Indonesia
  The path coefficient value is positive at 0.421 and the t-statistics value (6.738) > t table (1.970) with the P-value (0.000) < 0.05, then the hypothesis H0 is rejected and H1 is accepted. The result showed that there is a significant positive influence of occupational health on occupational safety.

Table 6. Test Results of Relationships of the Constructs

(*Boostroping Value*)

	Original Sample (O)	**Sample Mean (M)**	**Standard Deviation (STDEV)**	**t Statistics (|O/ STDEV|)**	**P Values**
Occupational Health (X1) -> Work Productivity (Y2)	0,051	0,049	0,070	0,734	**0,232**
Occupational Health (X1) -> Job stress (Y1)	-0,359	-0,364	0,055	6,507	**0,000**
Job stress (Y1) -> Work Productivity (Y2)	-0,452	-0,457	0,054	8,441	**0,000**
Occupational Safety (X2) -> Job stress (Y1)	-0,232	-0,228	0,051	4,536	**0,000**
Occupational Safety (X2) -> Work Productivity (Y2)	0,131	0,131	0,060	2,197	**0,014**
Occupational Health (X1) -> Occupational Safety (Y2)	0,421	0,428	0,063	6,738	0,000

Source: Results of Data Processing Using Smart PLS (2021)

Managerial Implication

The results show that job stress has a significant influence on work productivity, therefore, to increase work productivity at Indonesia have to reduce job stress levels. The high job stress is influenced by occupational health and safety, therefore at Indonesia is advised to improve occupational health, especially in terms of providing hygiene experts and trained medical officers at the Head Office and Branch Offices at Indonesia. Further more at Indonesia is also advised to provide professionally good rest room facilities and make regular ATC Gathering programs.

Conclusions

1. Occupational health has no significant influence on work productivity, but has a significant negative influence on job stress and has a positive influence on work safety.
2. Job stress has a significant negative influenceon work productivity, which means that the lower the job stress value, work productivity will be increasing, and vice versa.
3. Occupational safety has a significant negative influence on job stress, which means that the lower the value of Occupational safety, the job stress will be increasing and vice versa. Work safety has a significant positive influenceon work productivity, the better the work safety, the work productivity will increase.

Acknowledgement

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Maternal Immunity

Farida Kartini[1]

Introduction

At the end of 2019, precisely in December, the world was shocked by the Covid 19 outbreak that first appeared in Wuhan, China [1]. The Covid 19 virus is very easy to spread. In March 2020, the first case of Covid 19 was found in Indonesia [2]. With the increasing number of Covid 19 cases worldwide, on March 12, 2020, WHO declared Covid 19 a pandemic [3]. As of May 31, 2021, there were 171,006,105 cases of Covid 19 in the world and 1,816,041 confirmed cases of Covid 19 in Indonesia [4]. Various efforts were made to break the chain of the spread of Covid 19, among others, by implementing 5M (wearing masks, washing hands with soap and running water, maintaining distance, avoiding crowds and limiting mobilization and interaction). Other efforts are performed by implementing PSBB (large-scale social restrictions), increasing body resistance by eating nutritious foods, consuming vitamins and what is currently being intensively implemented is the Covid 19 vaccination. Vaccination is intended to provide immunity to individuals. One way to generate immunity is through immunization [5].

Immunity is an essential element for the human body. In human history, individuals who have been infected with a disease and are healthy will be immune/protected against the same disease in the future [6]. When the body enters microorganisms, the body will react to fight against these microorganisms. If it turns out that the body wins against microorganisms, the body will have immunity. Immunity is resistance to disease, especially infectious diseases [6]. There are two kinds of immune/immunity systems, which are the natural/nonspecific/innate/ immune system and the acquired/specific/acquired immune system. In the body's defense system, there are three known strategies: 1) physical barriers (skin and mucosa intact) and chemical (stomach acid); 2) Natural immune response (innate/ nonspecific), such as phagocytosisl; and 3) Adaptive immune response (acquired/specific). In most cases, the defense against invading pathogenic

[1] Universitas 'Aisyiyah Yogyakarta

microorganisms is sufficient by physical barriers and natural immune responses, the adaptive immune response is only activated when physical barriers and natural immune responses fail to kill the invader [7], [8].

The specific immune system has the ability to detect objects that are considered foreign to itself, causing sensitization. It has an impact on when the same antigen enters the body a second time, it will be recognized more quickly and destroyed immediately. In the discussion of the immune system, the terms antigens and antibodies are known. Antigens are substances that enter the body so that antibodies are produced. Antibodies (immunoglobulins) are soluble proteins produced by the immune system in response to antigens [6], [9]. In relation to the Covid 19 pandemic, the implementation of the Covid 19 vaccination is currently being promoted. The vaccination is aimed at making the body immune to the Covid 19 virus. However, not all individuals can be given this Covid 19 vaccine. Groups that are not allowed to be vaccinated against Covid 19 such as people with allergies, children, people with impaired immunity and pregnant women [10].

Pregnant women or mothers have their own uniqueness because there are many changes in their bodies. These changes include biological, psychological, social and spiritual changes. In addition to the changes that occur, a pregnant woman's body also grows and develops a fetus. In the field of midwifery, the term for pregnant women, maternity and postpartum is also referred to as maternal. Pregnant women are one of the groups who are vulnerable to contracting Covid 19 [11]. It was stated that the initial findings did not indicate the safety of the Covid 19 vaccine for pregnant women [12]. It was also reported that Brazil had discontinued the use of Astra Zeneca's Covid 19 vaccine for pregnant women following the death of a pregnant woman after the vaccination due to a stroke [13]. The Indonesian Doctors Association also stated that they had not researched the safety of the Covid 19 vaccine for pregnant women, because the research was unethical. For this ethical reason, research on vaccine safety in pregnant women cannot be conducted directly. Thus, for the safety of pregnant women and their fetuses, the Covid 19 vaccine is not given to pregnant women [14].

Unlike pregnant women, the Covid 19 vaccine can be given to breastfeeding mothers. Since February 2021, the government has allowed to give the Covid-19 vaccine to breastfeeding mothers. According to Iris Rengganis, this policy is very good because it will also benefit the baby. It is known that breast milk, especially colostrum, contains many immune substances from the mother which are given to the baby in the form of immunoglobulin A (IgA). By giving the Covid 19 vaccine to the mother, it is hoped that the baby will also have immunity to the Covid 19 virus [15]. Based on the above, it is necessary to know how the immune system is formed in the body, how the mother's immunity can be transmitted to the fetus/baby.

Discussion

The body's immunity cannot be taken for granted. However, it is something that every individual must have. Various ways are completed to get excellent immunity. Starting from consuming certain foods, taking certain vitamins or drugs and exercising regularly. Individual immunity is also very dependent on the lifestyle of the individual itself. The functions of the immune system are: 1) As a defense of the body, which is to prevent and fight infection with microorganisms from outside the body; 2) As homeostasis, that is eliminating components and body cells that are old; and 3) As a supervisor, recognizing and destroying body cells that undergo mutations. During the COVID-19 pandemic, as it is today, a strong individual body defense system is needed and has immunity against the Covid 19 virus.

Body's Main Defense

It is understood that a person's antibodies can be formed when his body is exposed to antigens. In fact, it is not easy for antigens to enter the individual's body. This is because Allah has given the body's defense system in layers. The main and first defense system of the body is the skin [6], [7]. The skin is the first door that microorganisms must pass when entering the individual's body. Intact and healthy skin is a powerful barrier to prevent the entry of microorganisms into the body. On the skin, there are many normal microflora that will fight pathogenic microorganisms. Sweat secreted by the skin, fatty acids secreted by the fat glands function to reduce and destroy the growth of microorganisms on the skin surface. Colonization of microflora on the skin will inhibit the growth of potential pathogenic microorganisms by competing for space and food. In addition to the skin, other physical/mechanical defenses in the form of mucous membranes, coughing, sneezing and cilia in the respiratory tract [6], [7].

Thus, the role of the skin is tremendously significant as the front line of the body to dispel pathogenic microorganisms from invading deeper into the individual's body. The problem that needs attention during this pandemic is the 5M policy, one of which is washing hands with soap and running water. Everyone must prioritize cleanliness, especially during a pandemic like today, one of which is washing hands with soap and running water or using hand sanitizer after touching objects, and using rational masks when visiting high-risk areas [16]. As it is known that the purpose of washing hands with soap and running water or using hand sanitizer, is to kill microorganisms on hands. The reality in the field is that not a few people excessively clean their hands using soap or hand sanitizer. It will be bad for the skin because it will damage the skin microflora. Microflora on the skin will die too. The death of microflora and the destruction of fatty acids produced by the skin will be very detrimental to the individual body's defense system and will facilitate pathogenic microorganisms to enter and invade deeper into the individual's body. Likewise, the use of masks that are not rational will be very detrimental to the body. The circulation of the respiratory process will be greatly disrupted by the use of a mask. It is due to CO2 which is a waste product of the body's metabolism, it is also possible that there are microorganisms which are immediately wasted with the expiration process, with the use of a mask, it will be inhaled again. It will be very harmful to the individual body.

In addition to the skin, the digestive, respiratory, urinary, and reproductive mucosa also functions to protect themselves from microorganisms that can infect the body. The antimicrobial enzyme, lysozyme, which is present in the respiratory tract such as the nose, in tears, saliva, and stomach acid will kill microorganisms that enter the individual's body. Everyday the human body is contaminated with hundreds of microorganisms and almost all of them are killed by the body's defense system [7]. With such a strong defense system, if a person's immune system is in good condition, it is certain that the person is not easily infected with a disease. The immune system is further in the form of white blood cells with various components and their job is to defend themselves from being infected by microorganisms. This system is known as the innate immune system. Both of the body's defense systems are not specific for a particular microorganism. The body's defense system is special for certain microorganisms as played by lymphocytes [6], [8], [7].

The innate immune system is present from birth, and is a normal component found in a healthy body. This innate immune response includes physical/mechanical defense, biochemical defense, humoral defense and cellular defense. This immune system is present and ready to function from birth. Previously, it was mentioned how the mechanical defense system and the biochemical defense system work. The biochemical defense system, among others, is played by lysozyme in sweat, hydrochloric acid in the stomach, proteolytic enzymes, antibodies and bile. Humoral defense is related to B lymphocytes, and cellular defense is related to T lymphocytes [6], [7]. B-cell lymphocytes, also known as plasma cells, are a type of lymphocyte and are produced by the bone marrow. These cells do not kill antigens directly. These cells produce antibodies. T cells are also a type of lymphocyte produced by the bone marrow. T cells mature in the thymus gland. T cells regulate the immune system's defenses and kill antigens by direct contact. The recovery of the infection experienced by the individual causes most of the lymphocyte cells to be apoptotic and a small number of lymphocyte cells to differentiate into memory lymphocytes which if one day the same antigen re-infects the individual, it will quickly be destroyed by these memory cells [7]. It is the basis for developing vaccines to provide adaptive immunity to individuals.

The Role of Vaccines in Formation of Immunity

Vaccination has been conducted 2000 years ago in India and China, which is by giving material obtained from the pus of smallpox patients in healthy people. However, it is considered as the person who introduced the concept of immunization is E Jenner, a doctor from England in 1796. Jenner managed to inoculate material obtained from cowpox to patients to prevent smallpox caused by cows [17], [18]. Vaccines are microorganisms or toxins that have been made in such a way that their infectivity is very weak, but can still stimulate the formation of individual antibodies [19]. In fact, the vaccine itself is not dangerous. The side effects that occur after vaccination are due to vaccine carrier substances commonly known as adjuvants. This adjuvant is different in each vaccine, therefore, the reactions caused are different for each individual.

For some dangerous diseases that can cause disability and death, efforts are made to develop the manufacture of vaccines. One of the vaccines being developed is the Covid 19 vaccine. The formation of post-immunization immunity begins with the introduction of antigens into the individual's body through vaccination. The body will respond to these antigens by forming antibodies. These antibodies will destroy the antigen so that the antigen disappears from the individual's body, while some of the antibodies against the antigen remain in the body. In other words, the antibody level against the antigen will decrease, but remain in the body (memory). These antibodies are specific to that antigen, so they are called specific immunity. The first formation of these antibodies takes time, for the period of time, the formation of these antibodies varies from one antigen to another. In contrast to the formation of immunity due to direct exposure to disease/natural antigens, several types of antibodies formed through immunization must be repeated in order to stimulate more antibodies and respond more quickly to their antigens. Similarly, the Covid 19 vaccine must also be injected repeatedly [6], [7], [8], [17], [20]. Naturally obtained antibodies have very strong antibody power.

Antibodies from mother to fetus/infant

The placenta is an organ that only exists when the mother is pregnant. The placenta functions as a supplier of nutrients from the mother to the fetus as well as removing the metabolic products of the fetus through the mother. As it is known that almost all substances in the mother's blood circulation can pass through the placental barrier. For example, some infectious diseases that infect pregnant women, either causing pain or without symptoms can have a bad impact on the baby. For instance, Rubella disease which if it infects pregnant women, especially the first trimester (organogenesis phase), it can cause multifunctional defects for the fetus [21]. What about Covid 19, will the danger posed by Covid 19 to the fetus be like Rubella? The literature study found that most of the Covid 19 cases found in pregnant women were mild cases and from the test results, it was revealed that vertical transmission was low from mother to baby. Breast milk from pregnant women who are positive for Covid 19 is also quite safe to give to babies [22]. It is even possible that babies born to mothers with Covid-19 will have immunity to the Covid-19 virus itself. It is very possible considering that one that can cross the barrier is an immune substance. Therefore, a newborn baby already has some immunity inherited from his mother.

Although the Covid-19 virus infection is relatively low in pregnant women, vigilance for preventing transmission must still be applied. The condition of pregnant women is susceptible to contracting Covid 19 considering that in this condition, the mother experiences a decrease in lymphocytes and NGK2A inhibitor receptors and an increase in ACE2, IL-9, IL-10 and IP-10 receptors. Although vertical transmission is low, 3.2% in third trimester pregnant women, however, ACE2 receptors, N and S proteins are expressed in the placenta. It was further stated that Covid infection was associated with the incidence of preterm birth and fetal distress. Due to this vulnerable condition, pregnant women are not given the COVID-19 vaccine [23]. To prevent pregnant women from being exposed to Covid 19, the protocols that must be followed include minimizing contact with other people, pregnant women continue to do antenatal care, but consultations can be performed using communication facilities such as WhatsApp or online consultation services. At the time of delivery, screening for Covid 19 and several other protocols must be conducted [24].

Conclusion

Antibodies will be formed when there is an antigen that invades the individual's body. Antibodies will make memory cells in the human body which has an impact on if the same antigen infects the individual, then antibodies are quickly formed and immediately destroy the antigen. The same thing will happen if individuals are exposed to the Covid 19 virus, either exposed naturally or through vaccination. Especially for Covid vaccination for pregnant women, the safety is not yet known, thus, pregnant women should not be given the Covid 19 vaccine. Pregnant women who are exposed to or infected with Covid 19 from the study found that mothers only experience mild infections as well as the incidence of vertical transmission from mother to fetus is quite low. For breastfeeding mothers with Covid 19, breast milk is quite safe to give to their babies.

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Internalization of Character Education Values in Indonesian Language Learning in Higher Education

Firman Alamsyah Mansyur[1]

Introduction

Education is a means to create superior human beings who are intelligent, have strong character, and are competitive. Therefore, education not only emphasizes the knowledge aspect but also teaches character values so that students can develop their potential and find their life goals [1]. In other words, education is a means of knowledge transfer, a means of enculturation and socialization [2] . Internalization of character values aims to humanize humans so that students grow and develop into humane, responsible, proactive, and cooperative individuals so that they can provide benefits to the surrounding community [3]. The values of character education are very important to be included in the school or college curriculum as an effort to shape and improve the quality of the personality of students, as well as overcome value disorientation due to family and community environmental conditions that teach negative things or the inclusion of global culture that is not by the nation's personality. The Indonesian National Education System Law, No. 20 of 2003 explained that "National education functions to develop capabilities and shape the character and civilization of a dignified nation to educate the nation's life. National education aims to develop the potential of students to become human beings who believe and fear God Almighty, have a noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens."

The importance of character values taught in learning is difficult to argue with. Many studies show that character values are very important to be integrated into learning at school or university to develop the abilities and character of students towards a better direction in building an intelligent and civilized nation's civilization [1], [2], [3], [4], [5], [6], [7]. In addition, various results of studies from these experts also show that the

[1] Department of Indonesian Language and Literature Education, Universitas Muhammadiyah Buton

role of character values possessed by students has an important role in their success in the present, and in the future. However, the character values of students are currently very concerning due to a negative environment, both family and community environments that do not support the development and formation of students' character [8], [9]. Schools or universities that fail to shape the character of their students will produce graduates who justify any means to achieve their goals and only think about their interests. Therefore, we should not be surprised if the print or online media currently provides news about increasing social violence, corruption, social crime, and the prevalence of plagiarism in the world of education in Indonesia. Even though we all agree that our education should not only aim to build an intelligent nation but also aim to create a moral nation [9].

The internalization of the values of character education should be carried out by educators, both teachers and lecturers in every subject matter they teach, including Indonesian language courses. Indonesian language learning in higher education is very important and is a good means for inculcating the values of character education. The Indonesian language course is a course that is very helpful for students in studying other subjects. Through Indonesian language courses, students can practice and improve their listening, speaking, reading, and writing skills. These four skills are needed in the learning process of other subjects [10]. Indonesian language education and teaching are considered successful if the knowledge, attitudes, and skills acquired by students are useful for their lives [11]. On the other hand, the current teaching of Indonesian still emphasizes linguistic structure, not language skills. As a result, it is still found that the low ability of students in good and correct spoken language, writing scientific papers, and polite language [12]. The use of polite language is one of the important things that is closely related to the character education of students, so it should be the attention of lecturers. Especially at this time, we are entering the 4.0 era, an era filled with rapid changes in technology and values that require students and graduates to be so strong and ready to compete globally.

From the description above, this paper seeks to describe how to internalize the values of character education in Indonesian language learning in higher education. Two things will be discussed in this paper, namely: how to understand the concept of character education values, and how to instill these character education values in Indonesian language learning in higher education. Through a literature review, the author explains the concept of character education values and previous studies related to inculcating character education values in language learning, especially Indonesian language courses. From this description, an understanding of the concept of character education values will be obtained and how these values are instilled in students in higher education.

Discussion

Concept of Character Education Values

Concepts related to the values of character education consist of three elements, namely, values, education, and character. Value is an important element in human culture because it becomes a human benchmark to determine whether something is allowed or not to be done. Values are abstract which are expressed through language, symbols, and verbal and nonverbal messages [13]. Frankl stated that values reside in people's minds [14]. In other words, value is abstract in nature, stored in the human mind, related to good and bad, which is used as a benchmark by humans in their social life. Meanwhile, education is a process of internalizing culture into individuals and society to become civilized [15]. In addition, etymologically, Wyne explained that the word "Character" comes from Latin which means, "character, character, psychological nature, character, personality, and morals." [16]. The word character contains the meaning of psychological, moral, or character traits that characterize a person or group of people [2], [17].

Lickona et al explained that character education is value education, character education, moral education, and character that seeks to help students understand, care, and behave by ethical values [18]. The concept of character education comes from two words, namely education, and character. Character education is very useful for students so that they can know themselves, understand their strengths and weaknesses, and build harmonious relationships between human beings [8].

Sources of character education values can come from religious values, Pancasila values, positive cultural values, or local wisdom, and national education goals. In addition, the Ministry of National Education of the Republic of Indonesia explains some character values that must be possessedby students, namely: religion, honest, tolerance, discipline, hard work, creativity, independence, democratic, curiosity, national spirit, love for the homeland, respect achievement, friendly/communicative, peace-loving, fond of reading, environmental care, social care, and responsibility [19].

From the description above, it can be concluded that the values of character education are the values of character or positive personality that must be internalized in individuals or students to become civilized, creative, and intelligent human beings in building their nation. In other words, the values of character education are the ideal values that humans need to shape themselves into superior humans. With a strong character, individuals are expected to be able to build relationships with themselves, fellow humans, their environment, and God well.

Internalization of Character Education Values in Indonesian Language Learning

The inculcation of character education values in Indonesian language learning is very important. Indonesian language courses are a means to transfer knowledge, attitudes, and encourage students to develop their interests and talents [20]. One of the principles in teaching is how educators start from the abilities that their students already have to be able to use the strengths of students to build their confidence [21]. This principle can also be adapted by lecturers in teaching character education to their students in Indonesian language courses. Lecturers can reinforce appreciation of the positive character that students already have. That way, students are expected to be more motivated to have good personalities, both on-campus and off-campus.

Character education and the Indonesian language have a close relationship. Language is a means of expressing character education values, both orally and in writing. Through language, lecturers or parents teach character education to students or their children. Therefore, lecturers can integrate student competencies, namely listening, reading, conversing, composing, and writing, with character education values, such as the values of honesty, courage, rationality, creativity, mutual respect, hard work, and politeness [22]. In line with that, Zuhdi added that the cultivation of character education values in reading lectures can be done through cooperative methods. The integrated character education values can be in the form of honesty, religious values, responsibility, discipline, caring, and cooperation. The description shows that language learning can express the values of character education so that students behave by the ideal values taught [22].

There are various studies related to the integration of character education values in language learning that can be used as a reference in teaching the value of character education in learning Indonesian language courses in universities. Triyono [4] in his study of the German language explained that the integration of character education in language learning can be done in several ways as follows:

1) compiling a syllabus and lesson plans that contain values, 2) compiling materials and teaching materials for language skills in each lecture. , and 3) evaluate character education through observation and reports. The results of Triyono's study are basically in line with the studies of other experts regarding the cultivation of character values in learning in universities.

Marten [23] suggests three stages of inculcating character values to students in learning, namely: identification of values, learning of values, and the application of the values of character education. In the first stage or the value identification stage, educators identify what values must be instilled and owned by their students. In the second stage or stages of value learning, the character education values that have been found are then taught to students through the following stages: a) educators must create an environment that supports the application of these character education values, b) educators must set an example or become a model for the application of the values of character education, c) educators must make rules governing good behavior, d) educators should explain and discuss good behavior, e) educators teach ethics in decision making. f) educators encourage students to develop good grades. In the third stage or the stage of value application, educators must ensure the consistency of students in carrying out the values taught so that the application of these values becomes a habit, and provides rewards for students who become role models in the application of these characters education values.

In line with the description above, Shodiq [2] describes three stages of internalizing character values in language learning, namely: 1) the planning stage of character education. At this stage, educators should first determine the competencies to be achieved as a direction. After that, character values need to be included in the syllabus or semester learning plan so that it will become clear what competencies must be possessed, procedures, which sources can be used, what values must be instilled, and how to know that students have mastered these competencies. 2) the implementation stage of character education. At this stage, character education can be carried out through six strategies, namely: a) integrating values into subjects, b) internalizing positive values instilled by all school members (principals, teachers, and parents), c) habituation and training, d) giving examples or role models, e) creating an atmosphere of character in schools, f) civilizing. 3) evaluation stage, evaluation is needed to determine the level of success of the implementation of character education. Character evaluation is carried out by identifying the development of the behavior hierarchy (character) of students from time to time. Therefore, the evaluation of character in schools should involve three components, namely educators, students themselves, and other students, while evaluations at home should involve parents/guardians, and siblings.

Rabiah [6] explains several strategies that can be carried out by lecturers in integrating character education in Indonesian language learning in universities are as follows: a) lecturers express the values that exist in teaching materials or materials, b) lecturers integrate educational values characters in learning materials, c) lecturers use parables, and make comparisons with the life experiences of their students, d) lecturers must be able to turn something negative into positive, e) lecturers can reveal the values of character education through brainstorming or discussion, f) lecturers can reveal the value of stories, g) lecturers can tell about the life stories of successful people, h) lecturers can introduce characters in the scriptures, i) describe the values of character education through drama, j) carry out various social activities, k) lecturers invite students to practice in the field. In addition, Rabiah also explained the implementation of character education values in learning Indonesian language courses at universities which can be seen in the following table:

Table.1 Internalization of character values in Indonesian language learning (Rabiah, 2013).

No	Subject matter	Method	Value
1	History of Indonesian Language Development	Expressing the values contained in the learning materials through discussion and brainstorming	Struggle
2	Enhanced Spelling	Expressing the values that exist in the learning materials	Discipline
3	Absorption Element Writing	Expressing the values that exist in the learning materials	Accuracy
4	Word selection and vocabulary	Expressing the values that exist in the learning materials	Politeness
5	Sentence Compilation	Expressing the values that exist in the learning materials	Politeness
6	Formation of the Paragraph and Its Development	Expressing the values that exist in the learning materials	Politeness
7	Quote	Expressing the values that exist in thelearning materials	Accuracy
8	Footnotes	Expressing the values that exist in the learning materials	Accuracy

9	Bibliography	Expressing the values that exist in the learning materials	Discipline
10	Preparation of Scientific Papers and Reports	Integrating character values into an integrated part of learning	Creativity
11	Reproduction and Reviews	Integrating character values into an integrated part of learning.	Creativity
12	Etc	-	
	Drama	Describing events that contain values in drama	Creativity, appreciation
	Study Group	Field practice such as inter-student thematic study groups	Togetherness

Conclusion

Instilling the values of character education in Indonesian language learning at higher education to create superior human beings who have competent knowledge and strong and positive character in building the nation's civilization. There are two things that we can conclude regarding the cultivation of character education values in Indonesian language learning in higher education. First, conceptually the values of character education are the values of character or positive personality that are internalized in individuals or students to grow into civilized, intelligent, and creative human beings. Second, the internalization of character education values in Indonesian language learning in universities should continue to be carried out in a planned and sustainable manner with the following stages: 1) lecturers as educators must make clear plans related to character education values that will be included in the lesson plan, 2) lecturers apply these values in learning, either explaining explicitly or implicitly in student learning activities, and lecturers should be role models or role models of these character education values, and 3) lecturers carry out monitoring and evaluation as far as where students apply the values of character education. These three aspects must be a minimum reference in instilling the values of character education so that it can run well. In addition, we as educators need to realize that character education is not something that is quickly recognized for its success but takes a long time. Therefore, lecturers should always carry out their plans consistently and carry out evaluations and corrective actions in learning. In addition, lecturers also need to innovate strategies in instilling character education values in Indonesian language courses so that learning objectives can be achieved.

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A Study on the Non-Fulfillment of the Right to Wages for Workers During the Covid 19 Pandemic According to Government Regulation of the Republic of Indonesia Number 36 of 2021

Fithriatus Shalihah[1]

Introduction

Until the end of July 2021, according to the World Health Organization (WHO), there were around 194 million people exposed to Corona Virus Disease 2019 (Covid-19), with a death toll of around 4 million people spread over 188 countries. For Indonesia, in the same period since March 2, 2020, there are more than 3 million people exposed to Covid-19, with a death toll of almost 87,000 people [11]. With a large number of Covid-19 cases in Indonesia, the government issued a policy limiting community activities to reduce the spread of Covid-19 [5].

The spread of the Covid-19 outbreak as a global pandemic has caused various new problems in various sectors in Indonesia, even the world. Not only a health issue, but the spread of the Covid-19 outbreak has also caused a multidimensional crisis. One of them is in the economic field, especially business activities in Indonesia, which have been severely disrupted since the Covid-19 pandemic [4]. Community activities are prohibited and temporarily suspended, the economy weakens, transportation services are reduced and strictly regulated, tourism is closed, shopping centers are empty of visitors, and the informal sector is closed, such as; Online motorcycle taxis, drivers, street vendors, mobile traders, MSMEs (Micro, Small, and Medium Enterprises) and rough porters have decreased their income. Trade centers, such as malls and markets, usually busy with visitors, are suddenly deserted and are currently closed temporarily. The tourism sector has decreased, the government has closed tourist attractions and entertainment venues. Work and study are also carried out at home online [7].

1 Faculty of Law, Ahmad Dahlan University, Yogyakarta, fithriatus.shalihah@law.uad.ac.id

Many companies have gone out of business in the industrial and business sectors due to the Covid-19 pandemic. This has resulted in companies that are still surviving being forced to lay off their workers. There are even companies that issue extreme decisions, namely terminating employment, being sent home, terminating work contracts before they expire, cutting wages, working parts, reducing their salaries, and enforcing the principle of no work, no pay [12].

Based on data from the Ministry of Manpower in March 2021, more than 29 million workers were affected by the Covid-19 pandemic. This number includes Termination of Employment workers laid off without pay to reduce working hours [8]. With so many workers/laborers having their employment terminated and sent home without wages, this causes the worker concerned to lose income to support himself and his family, especially the unavoidable fulfillment of daily basic needs.

In general, companies that cut off work relationships during the Covid-19 pandemic often use force majeure or efficiency reasons. The clarity of force majeure is still a question of whether it is classified as a natural disaster or not. For this reason, the company used to terminate the employment relationship cannot be justified. Considering that there are still some misunderstandings for companies and workers regarding the status of workers being temporarily laid off. So many companies are taking advantage of the pandemic period to lay off their workers without paying wages and severance payments [2].

Wages significantly influence workers in carrying out their duties and guarantee the survival of themselves and their families [3]. The regulation of the right to work for wages is based on the provisions of Article 28D paragraph 2 of the 1945 Constitution of the Republic of Indonesia, which states that "Everyone has the right to work and receive fair and proper remuneration and treatment in an employment relationship."

The condition of workers during the Covid-19 pandemic is like the word "having fallen on a ladder," meaning that workers who are laid off without being given wages will suffer even more (double suffering), namely that apart from their safety being threatened in the face of Covid-19, the workers concerned also suffer from constant hunger haunted him and his family. Moreover, coupled with the imposition of restrictions on community activities that urge the public to do social distancing, self-quarantine, and work from home, WFH (work from home) even prohibits people from traveling from one area to another, this further adds to the suffering for workers and their families [6].

These situations and conditions require appropriate policies or solutions both by the government and employers so that workers can get their rights, namely in the form of wages that employers should give to meet the needs of themselves and their families. As regulated in the Manpower Act, every worker has the right to a decent living. A decent living includes basic human needs in the form of clothing, food, and shelter.

Based on the description of the background above, the author is then interested in studying the problems related to the non-fulfillment of the right to wages for workers during the Covid-19 pandemic according to Government Regulation Number 36 of 2021 on Wages.

Methodology

The author uses normative legal research methods. The normative legal research method is a scientific research procedure that functions to find the truth based on the logic of legal science from the normative side, namely the legislation. The data used is secondary data using primary legal materials and secondary legal materials. This research is descriptive-analytical in conducting the discussion (data analysis), and the author uses an inductive method in making conclusions.

Discussion

In Indonesia, the concept of human rights is expressly guaranteed in the 1945 Constitution of the Republic of Indonesia, including the right to a decent income for workers. Although the employment relationship is in the realm of private law, wages can be desired according to the agreement of workers and employers. The State has an interest in determining the minimum wage. This is a manifestation of the State's responsibility in protecting the rights of workers to live decently in meeting their basic needs.

The attachment of the Indonesian people to human rights issues can be seen from the arrangement of fundamental rights contained in the constitution. The regulation contains legal and political rights and includes human rights in the social, economic, and cultural fields. Although the arrangements are not as complete as those contained in the Universal Declaration of Human Rights 1948, these arrangements have shown that the Indonesian people have high respect for human rights. The incomplete formulation of human rights contained in the 1945 Constitution of the Republic of Indonesia compared to the formulation of human rights in the 1948 Universal Declaration of Human Rights is because the 1945

Constitution of the Republic of Indonesia was first formulated from Universal. Declaration of Human Rights 1948.

Recognition of human rights as legal rights can be seen based on their legitimacy through international legal instruments such as the 1948 Universal Declaration of Human Rights (UDHR) and several Covenants relating to human rights in the political, social, cultural, and economic fields. As well as national legal instruments through the legitimacy of the Constitution of the Republic of Indonesia and other organic laws. As in Law Number 39 of 1999, they concerned human rights [8].

In the Universal Declaration of Human Rights or UDHR (Universal Declaration of Human Rights) or known as the UDHR, the right to work has been outlined in article 23, paragraphs 1 to 4, which reads:

1. Everyone has the rights to work, to free choice of employment, to just and fovourable condition of work and to protection against unemployment;
2. Everyone, without any discrimination , has the right to equal pay for equal work;
3. Everyone who works has the right to just and fovourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, an existence worthy of human dignity, and supplemented, if necessary, by others means of social protection;
4. Everyone has the right to form and to join trade unions for the protection of his interests.

The rights regarding workers' wages as mentioned above are contained in paragraph 2, namely the right to receive equal pay for equal work; and in paragraph 3, namely the right to just and favourable remuneration insuring an existence worthy of human dignity.

A new right can function effectively if the right can be maintained and protected. For this reason, as a country based on the law (rechtsstaat). Human rights must be part of national law, and there must be legal procedures to defend and protect these human rights. The government, in this case, is obliged to establish a wage policy, on the one hand, to ensure a decent standard of living for workers and their families, increase productivity, and increase people's purchasing power.

In the current Covid-19 pandemic situation, many companies have to implement Work From Home (WFH). This, of course, has implications for the mechanism of the wage regulation itself. Because it affects the working hours of the company itself. Meanwhile, most companies pay their workers based on the fulfillment of working hours [14]. This policy was taken because many entrepreneurs were affected by the Covid-19 pandemic. In addition, some companies lay off their workers or lay off their workers in rotation to the point of termination of employment for reasons of efficiency such as reducing/or cutting wages, reducing facilities, implementing shift work, working overtime, reducing working hours and working days to dismissing workers.

Wages are one of the factors that greatly affect work motivation, namely an encouragement for the willingness of workers to do more for what they are doing [13]. In-Law No. 13 of 2003 on Manpower, wages are regulated. The state has guaranteed wages in such a way that there is no arbitrariness of employers in paying wages to workers in private relations between workers and employers. Article 1 number 30 of Law Number 13 of 2003 on Manpower explains that "Wages are the rights of workers/laborers received and expressed in the form of money as compensation from the entrepreneur or employer to workers/laborers who are determined and paid according to an employment agreement, agreements, or laws and regulations, including allowances for workers/laborers and their families for a job and/or service that has been or will be performed." So based on this mandate, business actors should pay wages/salaries of their workers.

Since Law Number 11 of 2020 on Job Creation, several articles have been replaced and deleted in Law Number 13 of 2003 concerning Manpower. In Article 88 paragraph 4 explains that further provisions regarding wage policies are regulated in a Government Regulation, namely Government Regulation Number 36 of 2021 on wages.

The Central Government establishes a wage policy as one of the efforts to realize workers' rights to a decent living for humanity. The wage policies include:

a. Minimum wage;
b. Wage structure and scale;
c. Overtime wages;
d. Wages do not come to work and/or do not do work for certain reasons;
e. Form and method of payment of wages;
f. Things that can be calculated with wages; and
g. Wages as the basis for calculating or paying other rights and obligations (Article 88 of Law 11/2020).

The components of wages according to Article 7 Paragraph (1) Government Regulation Number 36 of 2021 on Wages consist of::

a. Wages without benefits;
b. Basic wages and fixed allowances;

c. Basic wages, fixed allowances, and variable allowances; or
d. Basic wages and allowances are not fixed.

With the existence of the Manpower Act, workers have a clear and firm legal umbrella regarding the rights obtained upon the completion of the fulfillment of obligations to the employer/business actor by the work agreement as regulated in the Manpower Act. The right to wages is one of the most crucial rights in the working relationship between employers and workers. The wages given by entrepreneurs are theoretically considered as the price of the labor sacrificed by workers for the sake of production, in connection with this, the wages received by workers can be divided into two types, namely:

1. Nominal Wage, which is several wages expressed in the form of money regularly received by workers;
2. Real Wage is the nominal wage ability received by workers when exchanged for goods and services, which is measured based on the number of goods and services that can be obtained from the exchange [10].

The policy regarding the minimum wage aims to guarantee workers' rights to wages as long as they are still in status as workers and provide protection for workers who receive the lowest wages. Lower than the net [1]. The minimum wage must meet the living needs of workers, at a minimum that can meet the needs of food, clothing, household needs, and other basic needs. As guaranteed in Article 2 paragraph 1 of Government Regulation Number 36 of 2021 on Wages, every worker/labor has the right to a decent living for humanity.

The determination of the minimum wage policy in each region is different. The minimum wage determination is adjusted to the stages of achieving a comparison of the minimum wage with the needs of a decent living, the amount of which is determined by the Minister of Manpower. Decent living needs to be achieved gradually because the minimum living needs are primarily determined by the business world's ability [9]. In Article 25, paragraph 1 of Government Regulation Number 36 of 2021, the minimum wage consists of:

a. Provincial minimum wage;
b. Regency/city minimum wage with certain conditions.

The urgency of State policy in determining the Provincial Minimum Wage is to provide legal protection to workers to fulfill their basic needs. Article 23, paragraph 3 Government Regulation Number 36 of 2021 states that employers are prohibited from paying wages lower than the minimum wage. The Provincial Minimum Wage which is based on the components of a decent living requirement of one worker, cannot be contested because if a worker is not fulfilled, Entrepreneurs cannot fulfill their basic needs to survive, so they cannot live a decent life, so the payment of the right to wages must be paid in full by the provincial minimum wage so that workers can meet the needs of a decent living.

Suppose the company cannot pay labor wages according to the provincial minimum wage in a public health emergency due to the Covid-19 pandemic. Companies are not allowed to terminate employment or not pay workers wages immediately. As stipulated in Article 151 paragraph 1 of Law Number 11 of 2020 on Job Creation, it has been stated that Entrepreneurs, workers/laborers, trade unions/labor unions, and the Government must strive to prevent termination of employment. Suppose the worker/ laborer has been notified and refuses to terminate the employment relationship. In that case, the settlement of the termination of employment must be carried out through bipartite negotiations between the entrepreneur and the worker/laborer and/or the trade union/labor union.

The deduction of workers' wages has been regulated in Government Regulation Number 36 of 2021 on Wages with certain conditions. The deduction of wages by employers is carried out by work agreements, company regulations, or collective labor regulations for:

1. fines;
2. compensation; and/or
3. wage advance.

On the other hand, there are wage deductions by employers that must be made based on a written agreement or written agreement, namely for:

1. payment of debts or installments of debts of workers/laborers; and/or
2. rental of houses and/or rental of company-owned goods rented out by employers to workers/laborers.

Then the deduction of wages by the entrepreneur can also be carried out without the consent of the worker/ laborer in the event of an overpayment of wages to the worker/ laborer. For the total amount of wage deductions, a maximum of 50% of each payment of wages received by the worker/laborer. So that if workers' wages are cut because the company is losing money due to the Covid-19 pandemic, the wage cuts are not based on law and can lead to industrial relations disputes, namely rights disputes.

The Government makes regulations that specifically regulate the protection of workers during the current Covid-19 pandemic. Through the Circular Letter of the Minister of Manpower Number M/3/HK.04/III/2020 of 2020 on Protection of Workers/Labourers and Business Continuity in the Context of Prevention and Control of Covid-19 as follows:

1. For workers/laborers who are categorized as Persons Under Monitoring (ODP) related to Covid-19 based on a doctor's statement so that they cannot come to work for a maximum of 14 (fourteen) days or according to the standards of the Ministry of Health, their wages are paid in full;
2. For workers/laborers who are categorized as suspected cases of Covid-19 and are quarantined/isolated according to a doctor's statement, their wages are paid in full during the quarantine/isolation period;
3. For workers/laborers who do not come to work because of Covid-19 illness and are proven by a doctor's statement, and their wages are paid according to the laws and regulations;
4. For companies that limit their business activities due to government policies in their respective regions for the prevention and control of Covid-19, thus causing some or all of their workers/laborers not to come to work, taking into account business continuity, changes in the amount and method of payment of workers/labor is carried out by the agreement between the entrepreneur and the worker/laborer.

In the description of the points above, it is explained that the laid-off workers/ laborers are still entitled to total wages or wage deductions if the company and the workers have agreed upon it. Provision of total wages by employers to workers in the form of basic wages and fixed allowances as long as the workers are laid off other than those stipulated in the work agreement of company regulations or collective labor agreements, and for workers who experience termination of employment, the form of protection provided by the entrepreneur is based on statutory regulations. That the law requires employers to provide severance pay, service fees/service fees, and compensation/entitlements compensation, severance pay is compensation that the company/employer must pay in the event of termination of employment.

Conclusion

The 1945 Constitution of the Republic of Indonesia has guaranteed human rights, one of which is the right to a decent income. In carrying out its responsibilities, the state determines the minimum wage to protect the right to wages for workers to live decently in meeting their basic needs. These provisions are regulated in detail in Government Regulation Number 36 of 2021 on Wages, a derivative, or implementing Law Number 11 of

2020 on Job Creation. The state policy in setting the provincial minimum wage aims to fulfill a decent living for workers and their families.

During the current Covid-19 pandemic, many workers are being laid off or working from home. This causes the wage system to change because many companies temporarily pay workers based on the fulfillment of working hours. This is contrary to article 23, paragraph 3 of Government Regulation Number 36 of 2021 concerning Wages. Meanwhile, regarding wage cuts, Government Regulation Number 36 of 2021 concerning Wages does not regulate worker wage cuts because the company is losing money due to the Covid-19 pandemic, so the wage cut has no legal basis. It can lead to industrial relations disputes, namely rights disputes, so that the company is obliged to pay wages in full to workers as stipulated in the Circular Letter of the Minister of Manpower Number M/3/HK.04/III/2020. As for Termination of Employment Relations, employers must provide severance pay as stipulated in the legislation. This means that even though the COVID-19 pandemic can be categorized as a force majeure situation regarding the suspension of wages or unilateral termination of employment by the employer, it cannot justify the employer to release him from the employer obligation to fulfill the rights to workers wages.

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Biology Education Student's Perspective Toward Online Learning During The Covid'19 Pandemic

Handoko Santoso[1], Ade Gunawan[2]

Introduction

The health condition of the humans in 2021 is still threatened by the pandemic *Coronavirus Disease* (Covid-19), Indonesia itself since March 2020 has declared emergency status to the spread of covid -19. According to the *World Health Organization* (WHO), a pandemic is a global scale of disease spread throughout the world [1]. Pandemic has a higher level than the epidemic because the spread of the virus was very quickly that occurs between human and causes disturbances in almost all aspects of life, included in the education and learning. *The United Nations Educational, Scientific and Cultural Organization* (UNESCO) stated that the spread of COVID- 19 had an impact on the education sector throughout the world and threatened the educational rights of students in the future. Education in Indonesia also felt the impact of the spread of the virus [2]. The pandemic has made the learning system change drastically from face-to-face learning to online learning.

The government through the Ministry of Education urges the implementation of long distance learning by utilizing online media for elementary schools to universities [3] . *Online* learning is a learning activity that requires an internet network with connectivity, accessibility, flexibility, and the ability to bring up various types of learning interactions . Learning conducted in *online,* is expected to reduce the chain of virus transmission in the educational environment. In other words, even though health conditions are threatened, education and learning activities still continue . Online learning must still pay attention to the activities of the learning process so that it can strengthen the educational competencies that are carried out by students. Learning organizers are still required to have varied roles, so that they can organize efficient, effective, and optimal learning[4]. According to Muhfahroyin and Susanto, learning by using

1 Universitas Muhammadiyah Metro
2 Universitas Muhammadiyah Metro

e-learning can increase student's virtual activities in the era of the industrial revolution 4.0. The interaction of learning based on information and communication technology, by minimizing the interaction directly (*on site*) [5].

Varieties of *platform* of online learning that can be used include Learning Systems Networking (SPADA) , *Google Classroom, Zoom, Google Meet, email* , etc. Or through social media such as Facebook, Youtube, Whatsapp Group, Telegram etc. Muhammadiyah Metro University as one of the Universities in Indonesia has established an Academic Policy on the UM Metro Online Learning System (SPADA) through Rector Regulation No. 666/II.3.AU/F/SK-UMM/2019. This is in response to the emergence of various government legal instruments that are used to accommodate the implementation of online learning, namely SK Mendiknas No. 107/U/2001, PP 66/2010, Permenristek DIKTI No. 44 of 2015 concerning SNPT, and Permendikbud No. 3 of 2020. This policy is expected to guarantee the quality of online learning.

This change in study habits is not without problems. Changes in learning methods from face- to-face to online get various reactions from students [6]. At first, some students responded positively to online learning, but as the learning process progressed, students meets some difficulties. Difficulties include unfavorable signal, some students shortage of quota, a lot of distractions when studying at home, students feel less focus on learning without any direct interaction with faculty and other students, the material presented is difficult to understand, the lack of preparedness of lecturers in preparing the material [7] . Research conducted by Andiarna and Kusumawati concluded that online learning during the COVID-19 pandemic had an influence on student academic stress. Academic stress occurs because of the rapid change in the face-to-face learning process to online learning where students play an important role in their own academic progress. Independence and students skill during the online learning process as a benchmark for students' academic success [8].

Based on the rationality, the research was conducted to explore students' perceptions of Biology, University of Muhammadiyah Metro towards implementing online learning during Covid-19 Pandemic. Respondents in this study included biology education students at the undergraduate and postgraduate levels of the University of Muhammadiyah Metro in the even semester of 2020/2021. This research was conducted using a *survey* method with 93 student respondents consisting of 80 undergraduate students or 86% and 13 postgraduate students or 14% . Field survey data were analyzed descriptively and presented *visual graphic* to show the respondents' perceptions of online learning during Covid-19 Pandemic.

Discussion

In response to the COVID-19 pandemic, which has not subsided since it was announced by the government on March 12 2020, it had an impact on the implementation of learning from elementary school to university levels. Lessons usually done face to face changed drastically to online learning. The government through the Letter of the Ministry of Education and Culture Number 3 of 2020 concerning Covid-19 Prevention in education units requires every educational institution to carry out school activities from home or *School From Home* (SFH) and *Work From Home* (WFH). This, of course, reaped various responses from both students and lecturers as the learning implementer. Changes in the system and way of learning, but with relatively the same number of courses as face-to-face learning, have become a burden for most students.

The results of this study were described descriptively based on data obtained through a survey of biology education student's respondent . The research aims to explore the Biology Education Student of Muhammadiyah Metro University's preception during Covid-19 Pandemic learning. The results of the study describe the conditions and expectations that students want for the implementation of learning carried out during the covid-19 pandemic . Based on the results of the research, the following is the distribution of the number of courses that must be followed by UM Metro biology education students, even though the learning process is carried out online. Figure 1 shows the distribution of the number of courses of biology education student conducted online during the covid-19 pandemic.

Figure 1. Distribution of the Number of Online Courses

Based on Figure 1 it can be described as follows: 69.9% of student respondents stated that 6-10 courses were conducted online, 9.7% of student respondents stated that 11 -15 courses were conducted online, while 20.4% of respondents stated that more than 15 courses are conducted online. The number of subjects that must be followed by student affected the use internet quota. Not a few students who complain about *online* learning. Besides increasing the cost for internet quota purposes, students also do not get relief in terms of tuition payments [9]. However, the Government through the Ministry of Education and Culture and Directorate General of Higher Education has issued a learning aid in the form of quotas for students and lecturers to facilitate the implementation of the online learning. Figure 2 shows students' perceptions of the benefits of internet quota assistance provided by the government.

Figure 2. Student Perspectives on Government Internet Quota Assistance

Based on Figure 2, it can be described as follows: 55.9 % of student respondents stated that they had received benefits from internet quota assistance, while 44.1% of student respondents stated that they did not receive benefits from internet quota assistance.

The platform of online learning, facilitated by Biology Education UM Metro lecturers i.e *Moodle*, *Google Classroom, MS Teams,* Edmodo, Learning Systems Networking (SPADA), and a combination of various *platforms* and social media. Figure 3 shows an overview of the *platforms* that are often used by students in carrying out online learning.

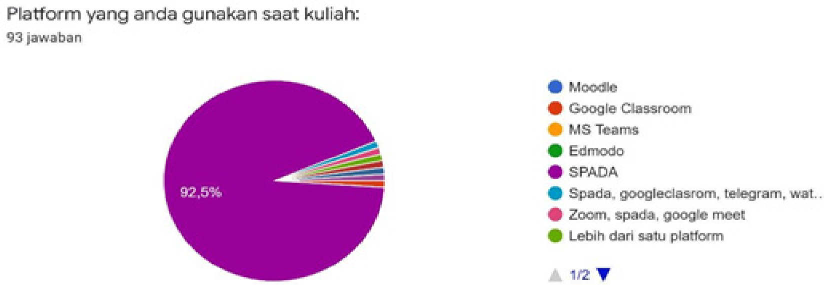

Figure 3. *Platforms* Used by Students in Online Learning

Based on Figure 3 it can be described as follows: 92.5% of student respondents stated that the *platform* that is often used in implementing online learning is SPADA, while the remaining 7.5% of student respondents use other *platforms* such as Moodle, *Google Classroom, MS Teams,* Edmodo, and a combination of various *platforms* and social media. The use of SPADA has become dominant because UM Metro has now issued an Academic Policy on the UM Metro's Online Learning System (SPADA) through Rector's Regulation No. 666/II.3.AU/F/SK-UMM/2019, so that SPADA becomes *the* main *platform* that must be used by lecturers in online learning that can be combined with other *platforms* or media. The combination with other media such as *Video Conference* and Social Media is expected to increase student interest in learning in *online* lectures . In line with the research results of Hikmat *et al.* that the majority of students said the online system with Zoom was an alternative to face-to-face learning during covid-19 pandemic . Therefore, they hope that its effectiveness is expected to be on par with conventional lectures (face to face). In *online* learning , the creativity of lecturers is needed so that this learning can run effectively, so that students can understand the material presented [10]. Figures 4 and 5 show an overview of *video conferencing* facilities and social media that are often used to support online learning.

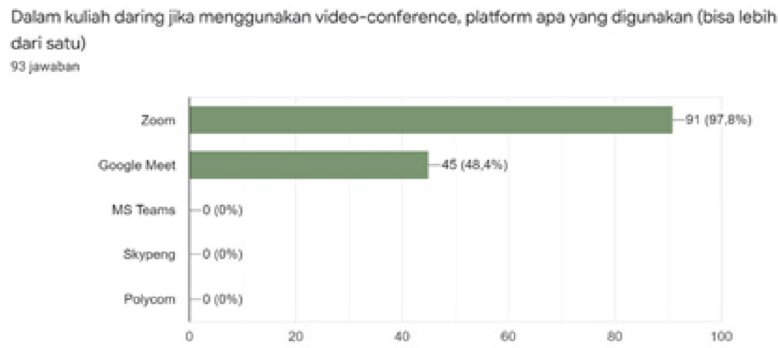

Figure 4. *Video Conference* Facilities Used by Students in Online Learning

Based on Figure 4. can be described as follows: 97.8% of respondents student uses *Zoom Meeting* , and 48.4% of respondents students using Google Meet, while *video conference* such as MS Teams, Skype and Polycom 0%. Thus, if the total respondents are 93 students, then 43 respondents or 47.3% use both (Zoom and Google Meet).

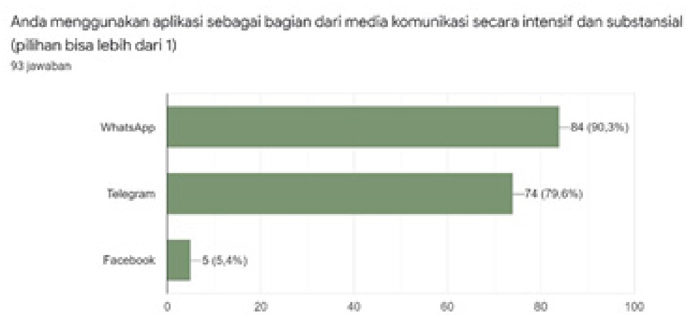

Figure 5. Social Media Facilities Used by Students in Online Learning

Based on Figure 5, it can be described as follows: 90.3% of student respondents use *WhatsApp*/ WA Groups as a communication medium in learning, 74.6% of student respondents use Telegram as a communication medium in learning, and 5.4%. using Facebook as a medium of communication in learning. From the many *platforms* used in learning, researchers collected student perceptions of the implementation of online learning that had been carried out. Figure 6 shows students' perceptions of increasing interest and interest in learning.

Figure 6. Student Perceptions of Interest and Interest in Online Learning

Based on Figure 6 can be described as follows: 33.3% of respondents agreed or interested students with online learning, 53,4 % of respondents students expressed less agree or less interested deng an online learning , and 3,2 % of respondents student disagrees or not interested in online learning. Meanwhile, students' perceptions of increasing focus and concentration in learning are presented in Figure 7.

Figure 7. Student Perceptions of Focus and Concentration in Online Learning

Based on Figure 7. can be described as follows: 22.6% student respondents agreed that online learning can improve focus and concentration studied, 68.8% responden students expressed less agree that online learning can improve focus and concentration studied, and 8,6 % of student respondents disagreed that online learning can improve focus and concentration on learning. The results of the survey show that most students feel less focused and less concentrated when learning online, this of course has an impact on understanding the learning material provided. Figure 8 shows how students' perceptions toward understanding of the material taught.

Figure 8. Students' Perceptions of Understanding Learning Materials

Based on Figure 8, it can be described as follows: 24.7% of student respondents agreed that online learning could improve the ability to understand learning materials, 65,6 % of student respondents stated that they don't agree that online learning could improve their ability to understand learning materials, and 9,7% of student respondents disagreed that online learning can improve the ability to understand learning materials . Furthermore, the low ability of students to understand the material in online learning is caused by several factors. Figure 9 shows some of the main obstacles that students feel when participating in online learning.

Figure 9. The Main Obstacles Experienced by Students When Learning Online

Based on Figure 9 it can be described as follows: 73.1% of student respondents stated that they had difficulty understanding the lecturer's explanation during online learning, 57% of student respondents stated that they had difficulty understanding the explanations of their colleagues during online learning, and 26.9% of student respondents had difficulty finding sources or materials during online learning . In addition, the increase in the learning burden due to the many assignments given by the lecturers is also the cause of the low ability of students to understand the material taught in online learning . Figure 10 shows the student's perception of the assigned task.

Figure 10. Students' Perception of the Tasks Given During Online Learning

Based on Figure 10 can be described as follows: 77.4% student respondents agreed that the task given when learning online is more than offline learning, 19,4% of respondents expressed less students agree that the task given online learning more than offline learning, and 3,2% of student respondents stated that they didn't agree that the tasks given during online learning were more than offline learning. In addition to the many tasks, the condition of the place and facilities for students to do also need to be considered. Figure 11 shows the obstacles students face when conducting online lectures using the *School From Home* (SFH) method.

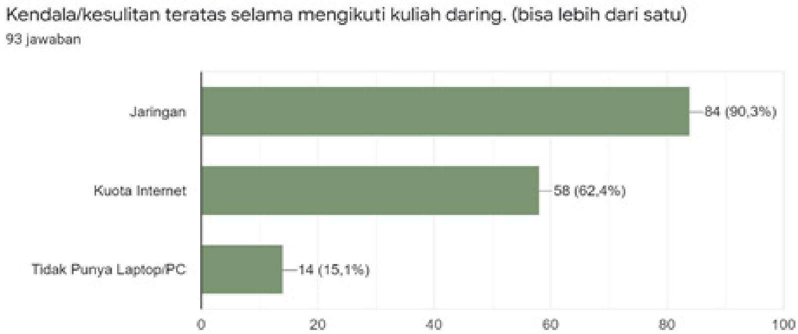

Figure 11. Student Constraints When Implementing *School From Home* (SFH).

Based on Figure 11 can be described as follows: 90.3% of respondents stated student Internet network becomes the biggest obstacles when performing the online learning from home, 62.4% student respondents stated internet quota constraint while doing the course online from home, and 15,1% of student respondents stated that they did not have a PC/Laptop to carry out online learning. With so many problems and obstacles, of course, students hopes that the learning process during this pandemic can run optimally and effectively. Figure 12 shows the methods students want in learning during the covid-19 pandemic.

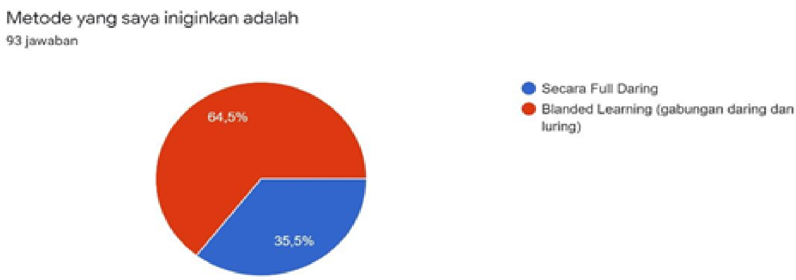

Figure 12. Learning Methods Expected by Students during the Covid-19 Pandemic

Based on Figure 12, can be described as follows: 35.5% of student respondents agreed that learning during the covid-19 pandemic was carried out fully online, while 64.5% of student respondents wanted the Blended Learning method or a combination of online and offline learning. This is certainly natural because with the ongoing online learning process , students experience academic boredom and stress, in addition, distractions when studying at home such as an unsupported network and limited internet quota causing students to feel less focused in studying. For this reason, special *treatment* and solutions from educators (lecturers) are needed so that online learning becomes more effective. One of them is by preparing teaching materials and learning methods that can attract students' interest so that they do not experience boredom in learning. In line with the results of research conducted by Baety and Munandar that educators need to pay attention to input from students such as summarizing learning materials that need to be downloaded, saving quota by only using *virtual meetings* as a medium to explain material that is difficult to understand, avoiding giving assignments, always ask the students regarding the material is less understandable for reduce missconseption, provide information related to the discussion forums / webinar to train adaptable online, learning done in accordance with the timetable that has been determined and using collaborative *platform* as online learning media [10].

Conclusion

Online learning for UM Metro biology education students has been carried out since the implementation of the health emergency status by the central government in March 2020, the survey results show that students' perceptions of online learning are not good. As many as 68.8% of student respondents stated that they lacked focus and concentration in learning and learning, 73.1% of student respondents stated that they had difficulty understanding the explanations of lecturers, 77.4% of student respondents stated that the tasks given during online learning were more than when offline learning, 90.3% of student respondents stated that the internet network was the biggest obstacle when conducting online lectures from home, while 64.5% of student respondents *wanted* the *Blended Learning* method or a combination of online and offline lectures. Lecturers need to prepare strategies and solutions so that learning runs effectively, such as teaching materials and learning methods that can attract students' interest so they don't experience boredom, reduce the task load and collaborate *on* online learning *platforms to* be more interesting.

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Heavy Metal Pollutant Foodstuff Management On The Downstream Area By Utilizing Local Wisdom And Culture As Teaching Materials Of Bioremediation And Chemical Environment Course

Hening Widowati[1], Agus Sutanto[2], Widya Sartika Sulistiani[3], Asih Fitriana Dewi[4]

Introduction

Utilizing environment around as a source of study, will improve learn connectivity, and become the arena of preserving the lofty local culture. Lampung is known to be rich in learning resources that have interesting local contents. So it is important to explore the surrounding resources as the knowledge to teach biology in schools and the wider community [1] . The concept of study by utilizing local resources is expected to increasse the knowledge of students in order to achieve learning goals including in the bioremediation course, namely: 1) Understanding the scope, development of bioremediation and its role in human life ; 2) Identifying various bioremediation methods and their applications in sustainable development ; 3) Able to analyze cases that occur in environmental pollution of water, soil, air, and the solution by means of bioremediation [2]. Also in the Environmental Chemistry course with the learning goals: mastering Chemical concepts in the environment that affect the life of living things, such as water chemistry, soil chemistry, cycles that occur in the environment, the influence of chemicals on living things, especially humans and environmental preservation efforts so that students are embedded in realizing the power of Allah SWT as a balance regulator environment and have the willingness to protect and preserve it [3].

[1] Pendidikan Biologi Pascasarjana, hwummetro@gmail.com
[2] Pendidikan Biologi Pascasarjana, sutanto11@gmail.com
[3] Pendidikan Biologi S1 FKIP Universitas Muhammadiyah Metro, widya.sulistiani@gmail.com
[4] Tadris Biologi IAIN Metro, fitriana3003@gmail.com

Pasir Sakti Lampung Timur, is one of the minapolitan areas, a fishery-based business area with marine products and the main commodity is vaname shrimp (*Litopenaeus vannamei*) , and has become a priority for the livelihoods of the surrounding residents. Non-cultivation product that abundant is mangrove crab (*Scylla serrata*). Pound is a downstream area that has the potential to collect waste, including heavy metals Cd, Pb from various industrial activities, agriculture, transportation, households, from upstream and surrounding areas. Therefore, cultivated seafood and ponds can be contaminated with Cd and Pb, accumulating in their body tissues, which will provide an opportunity to affect the nutritional content of their pond products, and have the potential to harm the health of their consumers.

Vaname shrimp (*Litopenaeus vannamei*) is widely cultivated because it is resistant to environmental conditions, so it is resistant to disease. Public Interest of vanname shrimp, and mangrove crab is very high, supported by the high content of main nutrients such as protein and Ca as well as an affordable price. Crustacean phylum of animals such as "crab, hermit crab , and shrimp is a type of carnivorous animals, and filter feeders in the sediments (filter deposit feeder) [4]". The characteristic of filter feeders causes heavy metals enter and accumulate in the body of the shrimp and crab, so they can became bioindicator of water pollution.

The vaname shrimp found in Pasir Sakti is cultivated in 3 types of ponds, namely traditional, semi- intensive, and intensive ponds; which is distinguished by the use of geomebran to coat the pool, aerator equipment, and feeds for shrimp. The cultivation that is mostly chosen by cultivators is intensive ponds cultivation, this is because the intensive ponds have been modified either in the form of feed or the manufacture of the ponds, so produce more shrimp and with a larger size. In the made of intensive shrimp ponds used urea fertilizer to enrich the soil for resulting many microorganisms as shrimp natural feeds. But "urea (TPS) contains phosphate 40-46%, NPK containing phosphate 15%, and Cd in fertilizer phosphate on average 138 mg Cd/kg [5] ". This also supports the accumulation of heavy metals in the shrimp body.

Mangrove crabs are found in mangrove areas near the sea. Naturally, mangrove is able to play a role in lowering pollutant of heavy metals because of its ability as heavy metal biofilter and bioremediator. Mangrove is kind of plant that have the biofilter ability, capable filtering pollution in nature and play a role in improving water quality. So that with the presence of mangroves, the possibility of Pb and Cd levels on a large scale that empties into the sea can be minimized [6].

The maximum levels of Cd in meat fish and fishery products such as crustaceans is 0.1 mg / kg, and 0.2 mg Pb / kg [7]. If you consume too often foods with Cd content in either small or large amounts, it will affect your health because it can accumulate in the body. Cd enter the human body through food will settle in the kidneys and interfere with kidney function and can attack and damage other organs in the body [8]. In addition, Pb content can cause poisoning and cause symptoms like: metallic taste in the mouth, black lines on the gums, GI disorders, anorexia, etc. How to process shrimp and crab must be considered, to minimize the danger of heavy metal contamination, especially when shrimp and crab are still fresh.

The processing of sea food product that done by local culture and wisdom to reduce the fishy/Rancid is by use natural acid such as *Averrhoa bilimbi*, lemon, etc., The use of regional spices are believed to remove fishy/rancid smells and make dishes more delicious. Will it only give a less fishy effect from the use of natural fruit acids and spices in cooking? It has been widely believed that spices and spices typical of the archipelago are known to contain many active antioxidant substances, which naturally will carry out an antioxidant mechanism, so that they can neutralize pollutants including heavy metals, especially in foodstuffs in an environment that is predicted to be polluted.

Discussion

Utilization of Natural Fruit Acids as Heavy Metal Reduction in Cd, Pb Contaminated Foodstuffs

Some Efforts have done to reduce levels of Cd, Pb in vaname prawns and crab by giving vinegar or natural fruit acids first before cooking to reduce the fishy / rancid aroma. Some studies show the results and the concept as follows.

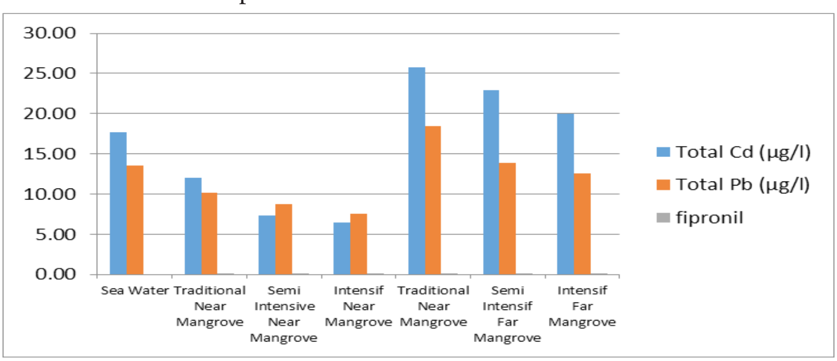

Figure 1. Uptake of Cd, Pb Heavy Metals in Shrimp with Different Habitat Areas

Figure 1 shows tha t there is a difference in the mean level s of heavy metal Cd, Pb by the influence of shrimp culture techniques Generally, shrimp pond near mangroves are low in absorbing Cd and Pb, while shrimp pound far from mangroves shows higher absorption of Cd and Pb. Traditionally pond have opportunities in high levels of Cd, Pb, compared semi intensive and intensive ponds.

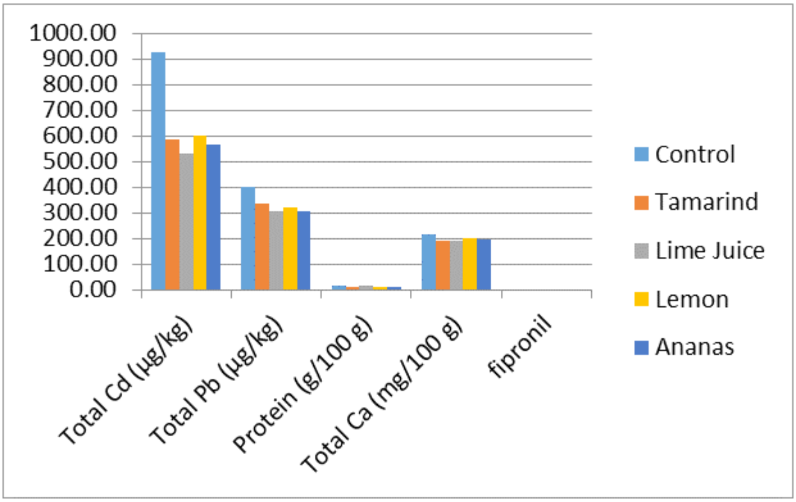

Figure 2. Comparison of Cd, Pb , Protein, and Ca Heavy Metal Levels by the Effect of Immersion in Natural Fruit Acids.

Figure 2 shows, without being given natural fruit acids (control), the levels of Cd and Pb were still high. The decreased level of 42.9% Cd, 24.33% Pb after immersion by using natural fruit acid. While protein and Ca relative still can be maintained, the levels are not decrease, after immersed by natural fruit acid. When research done, the pH of the water sea showed 7.2; traditional near mangrove 7; semi intensive near mangroves 7,2; intensive near mangroves 7,8; traditional far mangrove 8,9; semi intensive far mangrove 8,3; intensive far mangroves 8,9. Generally, ponds far mangrove shown the higher level of pH, so that the levels of Cd, Pb also higher than near the mangrove. Information is presenting assumptions, mainly mangrove became a key to maintaining the quality of the environment, the presence of mangroves on shrimp farms provide a positive impact to balancing the quality of the aquatic environment and neutralize the heavy metal content in the water. Mangroves are able to bind heavy metals in the sea, thereby reducing the heavy metal levels that enter the shrimp body [9] . However, there is still a risk of heavy metal contamination in shrimp from pond sediments and food sources that rely on natural food, the presence of ponds near and far from mangroves will affect the shrimp produced.

Decreased levels of Cd , Pb contained in the shrimp meat is caused by the presence of citric acid on the types of fruit used. Citric acid bound metals in form of complex compounds so that they can beat characteristic and evil influences of metal in the foodstuffs [10]. The use of this materials is choosen, so that marinated shrimp still pretend the condition in good nutrition, either calcium (Ca) or protein and easily found by the public at affordable prices, so they are still good for consumption, easy to obtain, and can reduce heavy metal levels.

The citric acid contained in the type of fruit used has 3 carboxyl groups that can react with metal ions and causes the decreased of heavy metals in shirmp. Metals such as Cd and Pb are bound in the protein of the organism's flesh to form metaloenzyme compounds in the presence of citric acid which has 4 free electrons given to metal ions, then Pb or Cd will be released and bind to OH- and COOH- ions present in citric acid and form Pb citrate compounds or Cd citrate ($C_{12}H_{10}Cd_3O_{14}$). Cd and Pb that accumulate in the shrimp body bind to the proteins in it, when metal binding agents enter, the protein content will be somewhat reduced [11].

The carboxyl group in citric acid can release protons in solution, protons in the form of H^+ ions act as proton donors to form neutral metals, namely Cd^{2+}, Pb^{2+} [12] . When shrimp meat containing Cd , Pb is marinated with natural acid containing citric acid, the ions released from the citric acid will react by binding the metal ions Cd , Pb so that the chelation process occurs. The reaction of carboxyl groups with Cd , Pb can be seen in Figure 3.

Figure 3. The reaction of carboxyl groups with Cd and Pb [12].

This chelation occurs due to the presence of a chelating agent, i.e citric acid which comes from a type of natural acid used, namely lime, lemon, tamarind, and pineapple. The chelation process causes the free metal to be bound by –COO- ions and form complex ions. Then there is a change in Cd, Pb to Cd, Pb citrate ($C_{12}H_{10}Cd_3O_{14}$). The reactions that occur cause Cd, Pb to lose their ionic properties and their toxicity and cause Cd levels to drop after immersion.

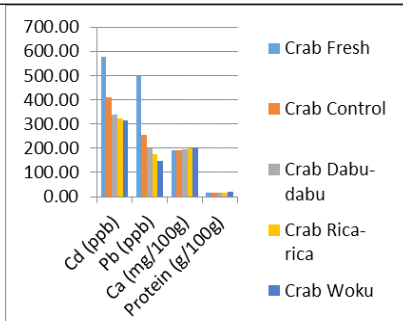

Figure 4a. Reduction of Cd and Pb in various Crab cuisine

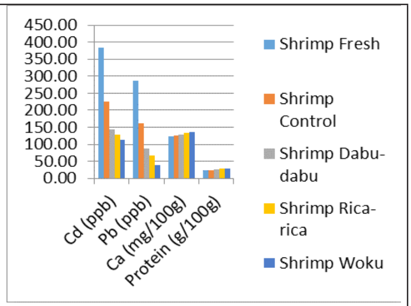

Figure 4b. Reduction of Cd and Pb in various Shirmp cuisine

The information obtained from Figure 4. shows that mangrove crab and shrimp have different Cd, Pb uptake. Mud crabs absorb more metals than shrimp; on Cd 576.42 absorption crab ; The absorption rate of Pb 497.51 ppb was much higher than that of shrimp, namely with the uptake of Cd 384.52; Pb 286.19 ppb. The type of shrimp movement that is relatively more active to avoid unfavorable environmental conditions, crab life that is less active in moving and exists in mud habitats with richer heavy metal sediments, will cause higher Cd and Pb uptake of crabs. The Characteristic of the crab as filter feeder allows heavy metals in the water to enter and accumulate in the crab body [13].

For the preparation , crabs and fresh shrimp marinated in lemon natural acids that in previous studies has high cappability to lower Cd, Pb. So when ready to process, crab Cd remains 411.74 ppb, and Pb 256.80 ppb. Meanwhile, fresh shrimp Cd ready to be processed contained only Cd 224.48 ppb , and Pb 162.47 ppb . Furthermore, when it is processed with different types of spices, the seasoning has decreased quite drastically, namely the processed type of woku has the greatest decrease in Cd, Pb, then rica-rica, and finally the processed dabu-dabu. So it has decreased respectively around 80.509% Cd and 92.073% Pb.

These 3 types of preparations are most popular in seafood restaurants and culinary delights. Dabu-Dabu least bit uses spices antioxidants, such as turmeric, coriander, cayenne and red, red onions, tomatoes greens, basil red, basil, and lemon, and give priority to the raw herb . Likewise with rica-rica , using scallions, basil, onions and white, red and bird's eye chilies, tomatoes, lemongrass, ginger, which are stir-fried. While woku uses a lot of antioxidant spices, namely tomatoes, leeks, basil, lime leaves, pandan leaves, lemongrass, red and white onions , hazelnut, red and cayenne pepper, and ginger so that the levels of Cd and Pb are the highest.

Indonesia is a country rich in spices. These spices can be used as a source of natural antioxidants which have many benefits for the body. Antioxidants can become molecules that can neutralize free radicals by accepting or giving away electrons to remove unpaired electrons to radicals. Antioxidant molecules can directly react with reactive radicals and destroy them, and turn into new free radicals with less reactivity and are safer than radicals that have been neutralized. Free radicals can also be neutralized by other antioxidants or mechanisms other [14].

The spices used such as turmeric are the spices that have the highest antioxidant activity. Turmeric has the most important compounds, namely curcuminoid components which have potential as natural antioxidants. Ginger contains gingerol, shogaol, and gingeron the antioxidant activity of its better than vitamin E . Nutmeg contains nutmeg essential oil of about 5-15% like eugenol that include in antioxidant compound. Some of the spices used in experiment also have the capability as antioxidant like Lemongrass contains high phenolic compounds, red galangal rhizome (*Alpinia* galanga) contains phenolic and flavonoid compounds. Garlic, shallots, and leeks used as the main spices have potential as a source of natural antioxidants because they contain antioxidant compounds such as quercetin, allin, allisin, phenolic, flavonoids, carotenoids, and vitamin C [15] . The combination of spices gives better results reinforcing the assumption that processed spices which are generally combined will also have a better chance of reducing free radicals including Cd, Pb pollutants. The presence of important nutrients in spices will also provide an opportunity to increase nutrients in processed food.

Nature presents many phytonutrients, which help people when living heed nature. Health will be maintained if people know that the natural surroundings provide extraordinary health benefits. One example is parts of plants have substances that are good for personal health, such as plants that contain antioxidants. Utilizing plant antioxidants indirectly has become a way of managing polluted environments in a sustainable manner.

Conclusion

Based on the reserach we can conclude that: 1) the different ofCultivation techniques and pond areas effects the absorption rate of Cd, Pb in marine products; 2) The use of various types of natural fruit acids and spices to process marine products has an effect on reducing levels of Cd, Pb by maintaining and even increasing levels of Ca nutrition and protein of marine products / ponds; 3) Lime has the best effect in reducing Cd, Pb of marine / pond products; 4) Prepared with a variety of spices, more likely to reduce Cd, Pb, and increase Ca and protein.

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The Rights of Children Victims of Sexual Violence in Indonesia's Criminal Justice System

Ika Dewi Sartika Saimima[1]

Introduction

Children are a vulnerable group and are often disadvantaged. In Article 5 paragraph (3) of Law Number 39 of 1999 concerning Human Rights, it is stated that "everyone belonging to a vulnerable group of people has the right to receive more treatment and protection concerning their specificity." As a person who has not matured physically, mentally, or psychologically, children are often unable to voice their rights until they end up being neglected, becoming victims of crime, being exploited economically, and even sexually exploited. Sexual harassment and violence are a serious threat to children. Serious treatment is needed for children who experience violence and become victims of sexual abuse to avoid becoming a second victim. From 2016 to 2020, the Indonesian Child Protection Commission received complaints of 1171 cases of child victims of sexual violence [3]. Details in the following table:

Child Protection

CHILD PROTECTION CASE	YEAR					TOTAL
	2016	2017	2018	2019	2020	
Children as a sexual violence victim (Rape/Molestation)	192	188	182	190	419	1171

Source: Indonesian Child Protection Commission, 2021

Based on these data, it can be seen that the number of cases of sexual violence increased in 2020. Meanwhile, according to the end of 2020, the National Commission for the Protection of Women [3] received 962 cases of sexual violence that occurred in the household. The cases of sexual violence occurred in girls, which consisted of 51% cases of obscenity/incest/

[1] Faculty of Law, Bhayangkara Jakarta Raya University

rape; 24% of cases of abuse, and the remaining 25% are a mixture of cases such as trafficking, revocation of children's rights, kidnapping of children, neglect and children not getting the right to vacation from school [3].

Children as a vulnerable group should have security in every activity. The fact that the high number of girls who are victims of sexual violence must receive special attention in handling their recovery. The child victims of sexual violence have not only suffered physical injuries but also mental wounds that must be treated and repaired to obtain justice [1].

The focus of this research is on children who are victims of criminal acts of sexual violence. Children who are victims of sexual violence crimes are the disadvantaged parties to get adequate attention regarding their rights. Punishment with severe sanctions is considered a form of fulfilling the needs of children who are victims of sexual violence. Another thing that must be considered is that sexual violence is not regulated in detail in Indonesian laws and regulations. Other obstacles are also encountered in handling child victims of sexual violence, namely the workings and perspectives of law enforcement officers, the non-integration of the criminal law system with the recovery system, and a culture that blames the victim [5].

Method

The method used in this paper is a normative juridical method. Juridically, this paper looks at the laws and regulations, and legal provisions that have the basic idea of providing legal protection for children who are victims of sexual violence. The specification in this paper is descriptive-analytical, which describes the social phenomenon of sexual violence that occurs in children. Secondary data is the supporting data in this paper, obtained through literature studies and document studies collected through searching reports, as well as news presented on official websites [2].

Child protection-based legal approach

In the criminal justice system, children in conflict with the law consist of children as perpetrators of criminal acts, children as witnesses of a crime, and children as victims of criminal acts. The three groups of children who conflict with the law should receive legal protection from the state. One aspect of the protection that children need is the right to obtain legal protection, because their interactions in social life, which include being perpetrators of criminal acts, witnesses, and victims are a predisposition for them to face the law [4].

Indonesian children are given legal protection through the Child Protection Act, the Witness, and Victim Protection Act, and the Child Criminal Justice System Act. Meanwhile, children who are victims of sexual violence are given protection through the provisions on sexual violence in the Criminal Code, namely about rape and obscenity. The limited types of sexual violence in the Criminal Code have resulted in cases of sexual violence not being processed, including because they do not contain articles on elements of threats or power relations [4].

Children as victims of sexual violence are often unable to do much because they are afraid of threats or the sense of power possessed by the perpetrator. To accommodate the perpetrators of acts of sexual violence receive severe sanctions, other legal regulations are needed that can complement the Criminal Code. The Draft Law on the Elimination of Sexual Violence (RUU PKS) expands the types of sexual violence into, sexual harassment, sexual exploitation, forced contraception, forced abortion, rape, forced marriage, forced prostitution, sexual slavery, and sexual torture. The expansion of the types of sexual violence in the PKS Bill is expected to help victims and provide legal protection for women and children from criminal acts of sexual violence. The punishment in the PKS Bill aims to prevent sexual violence and protect the public from losing their basic rights, preventing repeated crimes by the same perpetrators even against the same victims [5].

In Article 22 paragraph (1) of the PKS Bill, it is stated that victims have the right to receive treatment, protection, and recovery. Therefore, in the criminal justice system, victims who have an important role must be guaranteed to get treatment, legal protection starting from the investigation process, investigation to the examination process in court. Meanwhile, the recovery process for child victims of sexual violence must be carried out by the state, as well as compensation for material and immaterial losses which are the responsibility of the perpetrators of criminal acts.

Returning victims of sexual violence to their original condition should be a priority although it will not completely return to normal. Providing spiritual and physical recovery through reproductive health education, instilling religious and moral values to treatment for mental recovery for children who are victims of sexual violence must be a priority from the start of handling cases. The fulfillment of medical, psychological, psychological, and social needs will restore the dignity of the victim and the fulfillment of a sense of justice through the provision of appropriate compensation [2].

In addition to providing compensation, to fulfill a sense of justice for victims, Article 86 of the PKS Bill also mentions the criminal penalties that should be imposed on perpetrators of sexual violence. The criminal burden is imposed on the perpetrator by taking into account the condition of the victim, the relationship between the perpetrator and the victim; actors who are officials; actors who are figures and have influence in society. The condition of the victim of sexual violence in question is that the victim is a child, a person with a disability, a child with a disability, the victim is unconscious, helpless, or unable to give real consent, the victim experiences a severe mental shock, the victim suffers serious injuries, the victim experiences permanent disability. The victim dies, the victim is pregnant, the victim experiences pregnancy due to a crime, and the victim experiences health problems due to a crime.

Guidelines for the Protection of Children Victims of Sexual Violence

The criminal justice system must ensure that children in conflict with the law, especially those who are victims of criminal acts of sexual violence, have their rights fulfilled. Child victims of violence must receive friendly treatment in the trial process, the officers who examine them must also have empathy and be able to communicate in easy-to-understand language. Children also have the right to be free from discriminatory treatment and have the right to clear information about the case they are experiencing, including information about the right to receive compensation as well as restitution and legal assistance. Children also have the right to have their views and opinions heard if they are involved in the judicial process, especially those relating to their security about power relations with suspects or defendants [6].

A power relationship is a hierarchical relationship, inequality, or dependence on social, cultural, knowledge or educational, or economic nature that causes one party to have power over the other in the context of inter-gender relations and results in the loss of the other party whose position is lower. (Regulation of the Supreme Court of the Republic of Indonesia, 2017). Power relations in cases of sexual violence are carried out by someone who has a close relationship with the victim, such as biological father, stepfather, uncle, older brother. Stepbrothers, grandfathers, girlfriends, spouses, cousins, bosses, coworkers, to strangers. In conditions of other people's power, children who are already in a vulnerable position are increasingly cornered because they are afraid of other people who are more powerful than themselves.

Law enforcers who handle cases of child victims of sexual violence must be able to ensure respect and safety during the investigation process. In Article 58 paragraph (3) of the SPPA Law, it is stated that if a witness/victim is unable to attend to give testimony before a court hearing for any reason, he can provide information outside the court session through electronic recording carried out by the Community Counselor. Local authorities, in the presence of Investigators or Public Prosecutors and Advocates or other legal aid providers [4].

In the Law of the Republic of Indonesia Number 17 of 2016 concerning the Stipulation of Government Regulation instead of Law Number 1 of 2016 concerning the Second Amendment to Law Number 23 of 2002 concerning Child Protection into Law, additional criminal sanctions are regulated for perpetrators of sexual violence against children. . Perpetrators of sexual violence against children, in addition to being threatened with capital punishment and life imprisonment, are also subject to additional penalties in the form of announcing the identity of the perpetrator and provisions regarding actions in the form of chemical castration, installation of electronic detection devices, and rehabilitation. Regarding chemical castration, the implementation is still controversial. The severe criminal sanctions are expected to make the perpetrators think again and are afraid to commit a crime of sexual violence

Provision of Compensation

The problem of providing compensation is separate in the criminal justice process. Not all perpetrators have the economic capacity to pay compensation or restitution to victims, but not a few also refuse to pay compensation and choose to undergo criminal sanctions. This condition will certainly make the victim more disadvantaged. The basic principle of providing compensation to victims for repairing damage due to criminal acts. The compensation can also be used as a mitigating factor because of the good faith of the perpetrator [1].

Niken and Imam Prabowo in the conclusion of their research state that "The process of proposing and determining the rights of restitution for child victims of sexual violence in practice creates problems due to the lack of clarity and incomplete legal instruments regulating restitution rights at this time. These problems have not yet determined the appropriate standard of calculation to measure the number of immaterial losses for child victims. This is due to the differences in the understanding of procedural law and the mechanisms of applying restitution between courts, as well as a lack of knowledge and understanding by law enforcement officials in handling the process of submitting and determining restitution rights [6].

If in the implementation of the provision of restitution for children, difficulties are found due to unclear and incomplete legal regulations, it must be remembered about the concept of liability presented by Pound. Criminal liability in the concept of liability is reparation. This concept resulted in a shift in the meaning of the concept of liability from composition for vengeance to reparation for injury. The form of compensation by offering a sum of money as compensation as a substitute for punishment is the concept of liability or responsibility [2]. Liability is an obligation for the perpetrators to make several payments to the injured person. Therefore, for the legislation to run effectively and fulfill the interests of security, peace and order for the community, "retaliation" is used as a means of deterrence. The payment of "compensation" which was originally a "privilege" becomes an "obligation" that must be carried out by the perpetrator of a crime. The size of the compensation is not assessed as retaliation that must be purchased, but in terms of the loss or suffering caused by the perpetrator's actions [2]. This means that giving compensation to victims is not something that can be negotiated. The provision of legal compensation is a form of legal certainty for victims in obtaining justice and accountability for criminal acts to their victims.

Compensation can be done through mediation between the perpetrator and the victim and their family. In European Council Recommendation No. R. (99) 19 regarding Mediation in Penal Matters, it is mentioned about the victim offender mediation model, namely mediation which is carried out using all parties meeting to discuss the crime conflict and involving an appointed mediator. The appointed mediator can come from a formal official, an independent mediator or even a combination of the two. Mediation in this form can be carried out at the police policy stage, at the prosecution stage or even after sentencing [2].

Protecting Children in Procedural Judicial Process

In criminal procedural law, the criminal justice process must be fair. Children who are in criminal procedural processes must know their procedural rights to obtain substantive rights. Procedural rights for victims in criminal justice are to protect the interests of victims during the criminal justice process. In the provisions of the Law on the Protection of Witnesses and Victims, it is emphasized that victims of criminal acts have the right to provide information without pressure; entitled to an interpreter; the right to be free from ensnaring questions; has the right to obtain information regarding the progress of the case; has the right to obtain information regarding court decisions; has the right to know if the convict is released; has the right to obtain reimbursement of transportation costs as needed; and get legal advice.

Meanwhile, for children who are victims of violence in the criminal justice process, it is contained in the SPPA Law which includes the right to be accompanied by a parent or trusted person at every level of examination, the right to be examined without using official attributes, the right to be examined in a closed trial for child victims and children. witnesses, and the right of the victim's child to avoid meeting with the perpetrator [3].

Conclusion

1. Handling of child victims of sexual violence must be integrated into the Indonesian legal system. The challenge is that children who are victims of sexual violence must have all their rights fulfilled, including in the trial process, so that the main issue to provide legal protection to children who are victims of sexual violence is to immediately ratify the Bill on the Elimination of Sexual Violence.
2. Seek mediation by providing compensation in advance so that the physical and psychological condition of children who are victims of sexual violence can be immediately restored.

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Economy Problems During The Pandemic of Covid-19

Imam Sukwatus Suja'i[1]

Introduction

Coronavirus (Covid-19) which started in Wuhan, China, in December 2019 has spread to hundreds of countries in the world, including Indonesia. The impact of this virus has not only hit the health sector, but also the economic sector. It is apparent that Indonesia's economy was severely hit by the Covid-19 outbreak. Detik Finance stated that one year after the outbreak, several Indonesia's economic sector has been facing difficulties getting out of the recession. Bhima Yudhistira, an economist, stated that Indonesia's low economic activity has pressured people's purchasing power, which impacted lower manufacturing PMI from 52.2 in January 2021 to 50.9 in February 2021. It is obvious that Indonesia will experience a prolonged economic recession [1].

Indonesia's economy fell to the lowest level as conveyed by economist from the Center of Reform on Economics (CORE), Yusuf Rendy Manilet. He said that throughout 2020, the Indonesia's economy contracted up to 2% – the lowest growth in the last 20 years. Along with the coronavirus, the number of unemployed has also increased. Consequently, the number of poor people was increased by 1.13 million people. It went from 2.75 million people in March 2020 to 2.76 million people in September 2020 [2].

The increase in unemployment rates has highly disrupted value chain operations. This is because the Covid-19 pandemic threatens the sustainability of business operations in various sectors. Some of the worst-affected economic sectors were tourism and transportation, followed by manufacturing, trade and other sectors. Indonesian government is faced multiple challenges with limited choices and resolutions. This paper discusses these multiple economy issues caused by the pandemic.

1 Universitas Bhinneka PGRI

Discussion

The number of unemployment in Indonesia has significantly raised within a year from 6.93 million people in February 2020 to 8.75 million people in February 2021 [2]. The Minister of Human Resources, Ida Fauziyah, stated that the Ministry recorded a number of 2.14 million formal and informal workers affected by Covid-19. The details expand into 383,645 workers in the formal sector experienced layoffs, and 1.13 million from formal workers. Meanwhile, 630,905 informal workers lost their jobs or went bankrupt [3].

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The Existence of the "Naderes Utubah" Tradition as a Transmission Media of Islamic Teachings in the Fafanlap Village Community, South Misool, Raja Ampat

Indria Nur[1]

Introduction

Transmission is one way to maintain the continuity of an education and culture, not only the form of culture but also the moral values contained therein. Transmission is a learning process from parents to children, which will have implications for moral and cultural and religious actions. The transmission does not only take place casually but also requires guidance. M. Fortes [1] in his research in 1938 said that the uniqueness of the inheritance process that took place in the culture at the locus of research was that there were no institutions or institutions that specifically functioned to educate the younger generation, such as schools, ceremonies or age systems. However, the process of inheritance is through games and direct guidance and stimulation from the community, which takes place traditionally through the socialization process.[1].

Humans really need the transmission process, because it becomes a learning process for children to follow the behavior of parents or other adults[2] and as a place to instill and pass on cultural values, so that these values can last from generation to generation.

Transmission can be done in various ways, one of which is through rituals in local culture. Rituals that are continuously and routinely carried out can be a good medium in the transmission process[3]. The success of the transmission of Islam through a local cultural approach is widely recognized, because it is easier for people to understand Islamic teachings

[4]. This shows that the existence of traditions and habits carried out by the community traditionally is still relevant to be considered.

[1] Lecturer at IAIN Sorong West Papua.

Moreover, in the current progress of civilization, which demands the development of every sphere of life, as well as the educational system and process. The transformation of Islamic education is very much needed to find solutions to the crises and problems that arise[5]. There is a strategic need to produce superior and competent human resources for students, especially by strengthening technological skills[6], A system that leads to a better human civilization[7].

The strengthening of Islamic educational institutions requires more attention, in addition to strengthening management, reforming educational policies and patterns of inheritance of knowledge to create a complete generation and superior and competitive human resources with creativity, innovation, character, independence, nationality, and religion in the era of globalization. 4.0 because the expected human resources are humans who are fast, precise, effective, and efficient[5].

However, in the current global era, the negative impact of advances in science and technology is felt by society, especially with the emergence of various forms of moral decadence/human character, so that the traditional pattern of education is still relevant to be maintained[8].

Likewise in the Misool community, even though the conditions of the era have entered the industrial revolution 4.0 and even towards 5.0, they still preserve the concept of traditional education, namely the *naderes utubah* tradition.

The Misool Muslim community is still carrying out sermons using Arabic text, both at the time of the Friday prayer sermon and during the Eid al-Fitr and Eid al-Adha prayers[3]. Therefore, to become a preacher requires special requirements that must be lived and owned before being confirmed as a new preacher.

Naderes is a procession of learning Arabic sermon texts carried out by prospective preachers who will become preachers for the first time in an Islamic village located in Misool. For a whole month in the month of Ramadan, prospective preachers are fostered and guided in understanding and reciting the sermon text in Arabic.

This condition is one of the local wisdoms that still needs to be maintained, considering that legally the Friday sermon using Arabic is a requirement of Islamic sharia. So, even this condition can be used as a reference for the sustainability of traditional education in this era of disruption 4.0.

Discussion

Naderes Utubah Tradition

Anthropologist Robert Redfield, sees local culture and Islam into two concepts, namely *Great tradition* dan *little tradition.*[9] According to him, Great Tradition in a civilization is formed from a small number of reflective people, while Little Tradition comes from many people who are not reflective. Great traditions are formed in school institutions in the form of traditions of philosophers, theologians, and writers in the form of traditions that are developed and passed down consciously, so that they may have the opportunity to develop.

Little tradition theory occurs and persists in community life which is considered to have no education in rural community groups; and most of the traditions are taken for granted, so they are unable to develop because they are more dominant in accepting things as they are, and cannot expect many creative works to be born. And even this condition continues, because it is considered not worth repairing or updating so that it does not require a critical investigation[9].

The great tradition refers to religious practices and is closer to the tradition of origin of the religion that emerged, which makes the Qur'an, the Sunnah of the Prophet and the traditions of the Arab community the main sources of Islamic law and minor traditions as religious expressions that coexist with the local culture or traditions where the community is based. adherents of certain religions live, the diversity of which occurs in acculturative encounters with local traditions.

Islamic education cannot be separated from tradition, nor can it close itself to modernization. Tradition is not to be abandoned, the noble values of a historical heritage must be maintained, so that future generations do not lose their identity. On the other hand, tradition can be used as capital for the establishment of a new tradition. Traditions in Islamic education referred to here are scientific treasures inherited by previous scholars[10].

According to Pierre Bourdieu and Jean Claude, the education system legitimizes the transmission of power from one generation to another, because one of the functions of education is the transmission of culture. Through education a culture can be transmitted to the younger generation [11] Likewise, culture in its system of existence is not obtained instantaneously but through a long learning process. The learning process is not only accepted in the process of inheritance and transmission in the family environment and school educational institutions, but through interaction with the natural and social environment in people's lives[12].

Transmission of education and culture, can come from one's own culture or from other cultures, which will lead to a process of enculturation (civilization/inheritance), socialization (socialization/correctional), education and schooling institutions. According to Fortes in Tilaar [13], the transmission process can occur through the process of imitation, identification and socialization, and acculturation and resocialization[14].

Through education a culture can be transmitted to the younger generation. Not through an instant process, but through continuous learning consistently and continuously. The process of internalization is not only through inheritance in the family environment, but also in educational institutions, the community environment and interactions with the social and natural environment.

The culture that is still carried out by the Misool people to this day is the reading of sermons using Arabic texts, both during Friday prayers and sermons on Eid Al-Fitr and Eid Adha. This tradition is believed by the community that the sermon is invalid, especially during Friday prayers if it does not use Arabic, because it is the pillar of the khutbah, and that is the teaching they have received and inherited from their parents and ancestors, so as to change the tradition. very difficult to do especially in one of the oldest villages in the South Misool region, namely the Fafanlap village.

The people of Fafanlap village believe that the position and duty of the preacher is very sacred, so to get the task it is necessary to meet the requirements, namely: baligh, has gone through the process of khatam al-Qur'an which is legalized by the teacher to recite the Qur'an, the place where the prospective preacher learns the Qur'an, and has the blessing of the teacher Recite. After these conditions are met, the prospective khatib conveys his intention to carry out the sautubah process to the syara' judge, either through the Qur'an teacher, or his parents, or family members who are considered religious.

After receiving the blessing of the syara judge, the prospective preacher will undergo a "quarantine and coaching" procession. For those who want to give a sermon for the first time, they must go through coaching for a whole month during the month of Ramadan, which they call naderes utubah (learn the khutbah).

During the month of Ramadan, prospective preachers go through the educational process of naderes utubah, training themselves to read and memorize the text of the sermon. Reading the text of the sermon according to the rhythm and reading that is considered appropriate by the syara' judge. In addition, you will also learn the meaning of the text of the khutbah which will be read when you rise above the pulpit which will be guided by the syara judge, whether it is from the priest or the preacher of the syara' judge in the village.

In addition to the process related to the learning of *naderes utubah,* prospective khatib also need to obey the rules, including not being allowed to leave the fast of Ramadan, praying five times a day and praying the sunnah tarawih. In the quarantine process, naderes change at home to learn the art of reading the text of the sermon every day, and can only leave the house during congregational prayers at the mosque, and even then the position must be right behind the Imam, or parallel to the pulpit of the preacher.

Every day during Ramadan, the prospective preacher carries out naderes utubah, until the last week he will be guided and fostered by a syara judge / and invites several families, traditional leaders and community leaders to assess from the start.

When Eid al-Firi has arrived, the prospective new preacher must go through the pick-up process at the Imam's house to enter the mosque before the Eid prayers are performed. Prospective preachers are picked up accompanied by takbir until they enter the mosque. Furthermore, after the implementation of the id prayer. The new preacher was sent around the village as a form of information and joy for the village community. Even this delivery begins with reading a prayer first in the mosque, then leaving the mosque on foot, accompanied by hadrat music and tifa / tambourine blows. For some villages such as Usaha Jaya, Gamta, Yellu, Waigama accompanied by hadrat and dabus.

The procession of naderes utubah as part of the local cultural tradition of sa utubah, has become a medium of transmission of Islamic teachings for the Misool community. Because through learning Arabic text sermons, the prospective preacher understands the meanings contained in the sermon text even though it uses Arabic, and can pronounce the sermon text properly and correctly according to what is believed by the community.

Transmission of Islamic Teachings in the Tradition of Naderes Utubah

The media for transmitting Islamic teachings through local culture carried out by the Misool people are mostly non-formal sources, namely through families and communities. The first non-formal media is the family, where the role of the family is the smallest scope of a community group, which greatly determines the growth and development of children to adulthood. Especially in children is the basis of mental and moral formation that can be taught and instilled by their families in this case are parents.

The introduction of religious values, manners, and even cultural traditions can start from the family. Therefore, the family will have an important influence on the process of transmitting Islamic teachings because when the family does not introduce or prohibit children or family members from knowing the tradition, the transmission process will not run. The second non-formal media is the community that the most obvious supporters of cultural traditions are people who are either directly involved in the traditional process or all members of the community who live in the village.

Communication that occurs between generations will greatly support the smooth transmission process, even the willingness of the community without the element of coercion is also very influential. The interaction that exists between community members will greatly determine the survival of a culture and they can work hand in hand to maintain what has become a legacy from their ancestors as a cultural buffer.

The process of transmitting Islamic teachings to the local culture of Naderes Utubah occurs through the process of enculturation, socialization and internalization. Parents and family are the first environment to enculturate, cultivate and introduce cultural values and Islamic teachings, the first place for relationships and discipline to be introduced to a person or individual in social life, then continue to the natural and social environment of society.

The process of enculturation or civilizing is an effort to shape one's behavior and attitudes based on better knowledge and skills. The enculturation process found in the Misool community is illustrated when parents teach their descendants (their offspring) the cultural values of naderes utubah.

In the life of the people of Misool Island, every local cultural activity becomes a routine that is maintained every year. The socialization process is an effort to promote local cultural values and rituals so that they become known, understood, and internalized by the descendants of the younger generation and the local community. The younger generation can learn about their own culture through the family or in the community, in order to adjust their individual self to enter the social world, so that they can behave according to the standards of society and can be accepted in life

Socialization is carried out as a form of adjustment for each individual so that they can behave in accordance with the standards of the life of the surrounding community. This process is a provision for adapting, interacting and taking part in the community in a positive way. Therefore, the knowledge, attitudes, values that have been taught by parents in the family environment become the guideline for individuals to socialize in the community.

The process of internalizing Islamic teachings begins with the transformation of values and transaction processes. Meanwhile, transinternalization occurs after there is a desire from students to explore the essence of the process of local cultural traditions that are routinely carried out.

The procession of internalizing Islamic values in the naderes utubah procession in the community is a form of transmitting the values of Islamic teachings, most of which focus on the value of worship and morals, although it does not deny the value of aqidah that learning sermons is a form of faith in Allah swt. The process of inheriting Islamic teachings from the aspect of Aqidah (as a form of faith in Allah swt by carrying out Allah's commands and carrying out the pillars of Friday prayers using Arabic khutbah. In terms of worship, being a preacher is a form of worship to Allah swt, maintaining the quality and quantity of worship at the month of Ramadan, as well as the teachings of good morals related to *hablun minallah and hablun minannas* including glorifying and respecting the teacher of the Qur'an, maintaining morals, discipline and maintaining friendship.

The Misool people, especially in Fafanlap Village, hold fast to and respect their ancestors. This can be seen by how strongly they maintain the teachings that have been passed down from generation to generation, namely the tradition of Friday prayer sermons and holiday sermons using Arabic text. When Hakim Syara' in other villages had begun to make changes, by enforcing sermons using the Malay language, this was not the case in Fafanlap Village.

Conclusion

Based on the results of the study, it shows that although the development of civilization is increasingly advanced and modern, the Misool community, especially in the Fafanlap village, still maintains an educational pattern with traditional concepts in passing on Islamic teachings to the younger generation. The existence of naderes utubah education is one of the media for the inheritance of Islamic teachings which is still believed to be mandatory and needs to be passed by prospective preachers.

The existence of the naderes utubah education ritual as a cultural and religious form that exists in the Misool community shows the identity of their religious life as a religious society. The procession of inheritance of Islamic values can be seen in the behavior of cultural and religious rites that are routinely carried out every year. Through the process of enculturation, the socialization of Islamic values in every procession of cultural rituals and religious rituals on a regular basis, becomes an identity for the Misool community, this shows the strength of the internalization procession of Islamic teachings in the Misool community.

Therefore, it is not wrong if the culture of Naderes Utubah, which teaches people to maintain Islamic teachings on the pillars of Friday sermons by continuing to use Arabic texts, shows the respectability of the position of the Khatib so that it requires legality from the Koran teacher and mosque imam to qualify as a preacher, although not necessarily qualified academically, it can be used as a curriculum for Islamic religious education based on local culture in formal institutions

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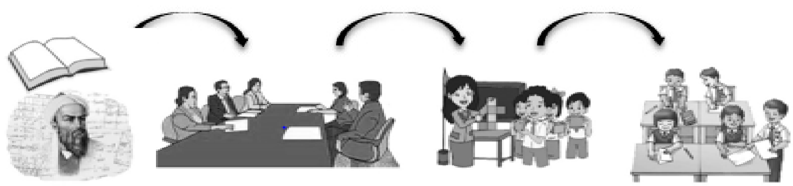
Phenomenology of Didactic Transposition on Division of Whole Number

Jamilah[1]

Introduction

Chevallard revealed that school mathematics basically evolved from mathematics produced by mathematicians [1]. This shows that the concept of mathematical knowledge taught in schools actually has been produced outside the school and transferred to the school with a series of adaptation processes before being accepted for teaching [2]. Adaptation in question is the rearrangement of mathematical knowledge learned from mathematicians into knowledge to be taught in schools after being adapted to the teaching environment.



Mathematicians (Scholarly Knowledge) Noosfer (Knowledge to be Taught) Teacher (Taught Knowledge) Students (Learnt Knowledge)

Figure 1. Ilustration of Knowledge Transposition

The division operation of whole number is one of the main points of knowledge taught in schools. This knowledge is one of the concept of numbers and is the basis for understanding other material, including the concept of comparison. In the 2013 curriculum, the basic competencies that elementary school students must have were explaining the meaning of whole numbers, performing division operations and their properties, explaining the meaning of fractions, performing fraction operations, and explaining the meaning of negative integers and performing operation of negative integers. All of these materials are arranged in sequence to be taught for six years, from grade one to sixth grade of elementary school.

[1] Departement of Mathematics Education, IKIP PGRI Pontianak

The concept of division operation of whole numbers that taught in school basically also comes from scientific mathematics produced by mathematicians. The process of adaptation to the transition of knowledge, by Chevallard is referred to as the didactic transposition process. This didactic transposition process is important because it is impossible to interpret school mathematics (mathematical knowledge taught in schools) without considering phenomena related to the reconstruction of school mathematics knowledge from scientific mathematical knowledge [3]. Through a well-done didactic transposition process, it is expected that a comprehensive mathematical education curriculum will be elaborated, mathematical textbooks that can be a means of delivering good knowledge, and the formation of appropriate learning situations. Thus, learning obstacles that might occur, can be anticipated or minimized, especially epistemological obstacle and didactic obstacle. Epistemological obstacle (epistemological obstacle) is an obstacle that comes from a person's understanding of a concept that is limited to a certain context, while the didactic obstacle is an obstacle that comes from a didactic situation related to the education and learning systems that are implemented, where learning takes place less attention to suitability according to the stage of thinking and knowledge hierarchy [4].

Research in mathematics education as an effort to improve learning, especially in the operation of numbers has been carried out by previous researchers, including Nurhamid & Suryadi who made didactic designs for mixed rational number [5] and Nopriana, et al who conducted research by making didactic design of the concept of addition and subtraction of integers [6]. However, unlike the previous research, this study aims to explain the didactic transposition process in division operation of whole number, namely the process of transitioning the concept of division operation of whole number starts from the concept produced by mathematicians, designed by the education system, taught by the teacher, until learned by students.

A Hermeneutic phenomenology study will be used as an approach of this reseach [7]. Reference model used to observe the phenomena that occur using the reference epistemological models, as shown in Figure 2 [8] and the analysis of didactic transposition processes using didactic anthropological theory (ATD), which is a model for describing mathematical knowledge from human mathematical activities through praxeology [9].

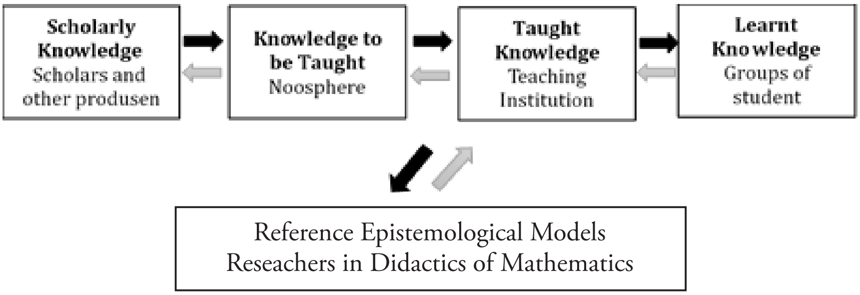


Figure 2. Reseacher's Outside Position

Discussion

The phenomenon of the didactic transposition process observed is illustrated in the following figure 2. A 2nd grade elementary school mathematics teacher in Bandung and eleven students of 2nd grade were participants in this study. The scientific mathematics textbooks, curriculum documents, and school mathematics textbooks, the results of teacher interviews, and the results of student assignments were the sources of data. The analysis of didactic transposition processes will be carried out by analyzing each type of praxeology, from regional praxeology to point praxeology.

Regional praxeology (scholarly knowledge)

The scientific knowledge in question is the mathematical knowledge produced by mathematicians. In this case the knowledge of the concept of division operation of whole number. The data source used to obtain information about how mathematicians build and define the concept is abstract algebra textbooks

The basic concept of operation of numbers is contained in the division algorithm. In some abstract algebra textbooks, the concept of division algorithms is in the introduction. The discussion of the distribution of variables is preceded by a discussion of the concept of set, direct products, relations and functions, and integers. In more detail discussed: the meaning of a set as a collection of a well-defined object; the definition of direct product as a set of sequential pairs (if A and B are two non-empty sets, then the set of all ordered pairs (x, y) such that $x \in A$ and $y \in B$ are called direct products, and are written with $A \times B = \{(x, y) | x \in A, y \in B\}$; function definition as a mapping from set A to set B, where for each member assembled A is mapped exactly one in member set B (If A and B are non-empty sets, function f from A to B written with $f : A \rightarrow B$), and integer properties to the discussion of the law of well ordering which states that:

each non-empty set of positive integers contains the smallest element (Gallian, 1990), or each non-empty subset S of $\mathbb{Z}^+$ *contains the smallest element (That is, an element of* $b \in S$*, such that* $\leq c$*,for each* $c \in S$*). In this section, 0 is the smallest number of* $\mathbb{Z}^+$. [10], [11], [11]

The division algorithm is the fundamental concept of integers which was built as the first application form of the Law of Well Ordering. The division algorithm is one of the most commonly used theorems.

The division algorithm theorem:

If $a, b \in \mathbb{Z}$*, with* $b \neq 0$*. Then there is* $q, r \in \mathbb{Z}$ *such that* $a = bq + r$*, where* $0 \leq r < |b|$. [10], [11], [12]

It can also be said that, if $a, b \in \mathbb{Z}$ such that $a = bq$ for some integer q, so b devide a (b devider from a). b devides a, it can be written $b|a$. If b doesn't divide a, it can be written $b \nmid a$. For example: for $a = 17$ dan $b = 5$. Division algorithm gives 17 = 5. 3 + 2. [10],[11]

Local praxeology (knowledge to be taught)

In the Primary School curriculum, the concept of numbers has been introduced since the first grade and is continuously taught to the sixth grade. Based on the 2013 curriculum, broadly the knowledge of mathematics taught in elementary schools includes the concept of whole numbers, fractions, negative integers, and prime numbers; flat plane and building space; measurement; and basic statistics. The concept of numbers which is first taught is whole numbers. Explanation starts from the meaning of a number as many members of a collection of objects, place values, and operations of whole numbers (addition, subtraction, multiplication, and division) using concrete objects. Submission of the concept of division operation of whole numbers is preceded by the delivery of the concept of addition and subtraction operations.

The concept of division operations of whole numbers from the curriculum is internalized into school mathematics textbooks. Based on the school mathematics textbook, planting the concept of division operation of whole number begins with giving problems in the form of story questions related to daily life, then the problem is expressed in the form of a number symbol.

As an example:

Teacher	*: how to divide 6 marbles to 3 students so that each student gets the same of marbles.*
Student	*: each student is given a marble. Then the rest of marbles is divided again to each student one by one until the marbles are gone.*

Figure 3. Examples of the division operations using story problems

Based on the completion of the story problem in Figure 3, the problem and the completion of the division operation are written in the form of numbers symbols. Division operations are expressed as repeated substraction. Where the results of the division of a number of objects in some people are considered as the number of substraction made.

Teacher	*: repeated substraction from 6 – 3 – 3 = 0 has the same meaning with 6 : 3 = 2. Because it's done twice repeated substraction, so each student gets 2 marbles.*

Figure 4. Example of division operation as repeated substraction

In the next section, each solution to the problem of division operations is always expressed as a repeat substraction. As an example:

Use the repeated substraction method to solve this problem!

1) *4 : 2 = ...-....-....=....*
2) *8 : 4 = ...-....-....=....*
3) *9 : 3 = ...-....-....-....=....*

Figure 5. Exercises [13]

Local praxeology (taught knowledge)

The concept of mathematical knowledge taught by teachers in class refers to the curriculum and school mathematics textbooks. There is no difference in terms of the order in which the material is delivered as stated in the curriculum. Likewise the concept of division operation of whole numbers is taught after achieving the concept of addition and subtracting numbers above 100 and multiplication of whole number.

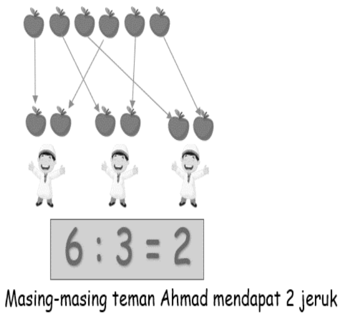
However, in the process of delivering concept of division operation of whole numbers, the teacher does not use the concept of repeat substraction. The teacher also does not introduce division as a repeat substraction. Planting the concept of division operation of whole numbers is done by presenting learning situations in accordance with the context of everyday life. The teacher invites students to demonstrate the concept of sharing in front of the class.

Learning begins with providing contextual problems in the form of stories and demonstrated in front of the class. As an example:

Martin has 6 oranges. Martin devide the oranges with 3 his friends. So, each of martin's friends will get ..... oranges

Figure 6. Example of a problem

Next, the teacher invites students to demonstrate or demonstrate the concept of division. The solution to the problem from the concrete is changed to semi-concrete in the form of a picture illustration as follows:



So, each of martin's friends will get 2 oranges

Figure 7. Solution of problem

To improve the understanding of concepts and train students' skills in carrying out division operation of whole numbers, the teacher gives problems in the form of practice questions.

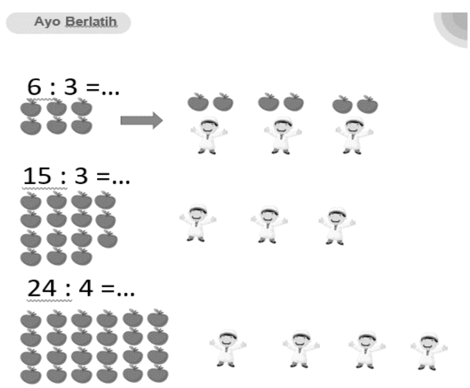


Figure 8. Exercises

In the learning process, the teacher does not introduce the concept of division as a repeat substraction. Based on the results of the interview, the teacher revealed that for several years teaching the concept of sharing numbers in elementary school students, the concept of repeat substraction as a solution to solving problems in numerical operations was considered difficult for students to understand, especially on the problems presented in story form. Because at age 7 (second grade elementary school), cognitive development is in the concrete operational stage. This means that students' thinking ability is only in a concrete context. In addition, by using the concept of repeat substraction, students are less able to grasp the meaning of division. Where the results of the division of a number of objects in several people must be interpreted as the number of objects owned by each person.

Point praxeology (learnt knowledge)

The results of the work done by the teacher to eleven students showed that 10 students (90.9%) were able to solve the problem well.

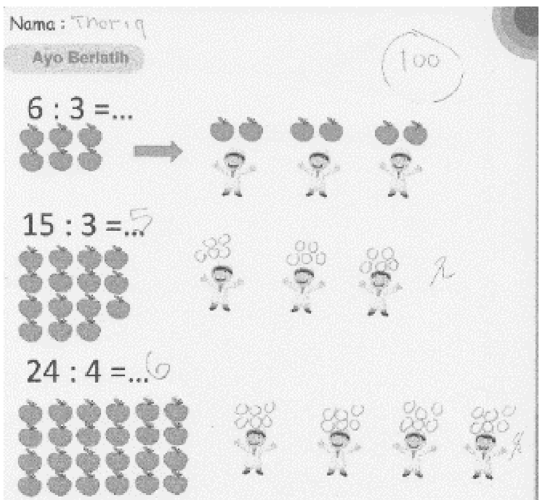


Figure 8. The Example of Student's Answer

Scientific mathematical knowledge of the concept of number division was built by mathematicians based on definitions and axioms around sets, relations, functions, and integers so as to produce a theorem about division algorithms. The division algorithm is a fundamental concept in the character of integers. This theorem is also often used in the application of mathematical knowledge. This theorem has also been proven by mathematicians.

The importance of the concept of number division, makes the noosphere (curriculum designer and textbook writer) design this concept as a concept that must be taught in school and present in school mathematics textbooks. The noosphere chooses to first introduce the concept of whole numbers as another form of positive integers and introduce the concept of operation of whole number before discussing negative integer operations. In the 2013 elementary school curriculum, the concept of negative integers will be introduced in the fourth grade. This is because, at the age of 7 (second grade), students have not been able to think about the concept of negative integers.

Furthermore, in the school mathematics textbook, the concept of division operation is expressed as the concept of repeat substraction. The concept of repeat subtraction is the technique used to solve division problems. Where through this concept, the division of a number of objects in some people is expressed as the number of substraction that occur so that a number of these objects are divided up. That is, the results of the division are expressed as a subtraction process.

The mathematical concepts taught by teachers in class different from the concepts designed by the curriculum. The concept of the division operation of whole numbers that taught in the class has undergone a rearrangement of the concept of produced by mathematicians and the noosphere. To solve problems related to the concepts of division operation of whole numbers, the teacher chooses to use different settlement techniques of completion offered by the school mathematics textbook. The teacher does not use the concept of repet substraction as a solution to solve the problem it, but demonstrates using real objects, then illustrates the process of solving the problem through images. Through this technique, the division of a number of objects in several people is expressed as the number of objects received or owned by each person. This problem solving technique was chosen because it adapts to the cognitive development of 7-year-old students. A theory put forward by Piaget states that the cognitive development of children aged 7 to 11 years is at the stage of concrete operations, where children depend on real things and concrete objects to solve the problem [14]. Piaget's theory became a theory that supports the techniques carried out by the teacher.

In solving the problem of division operation of whole numbers, the students using the technique taught by the teacher in the class. The use of concrete objects and illustrations through images makes it easy for students to understand and be able to complete the tasks given.

Conclusion

From the results of this discussion it can be concluded that the mathematical knowledge of the concept of division operation of whole number that taught in schools has transmitted from the concept of the division operation of whole numbers produced by mathematicians, without releasing the main elements that exist in scientific mathematics. In addition, the techniques used by the teacher in teaching the concept in class and the way students learn the concept are different from the techniques offered by school mathematics textbooks.

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ADDIE's Model of Indonesian Human Resources

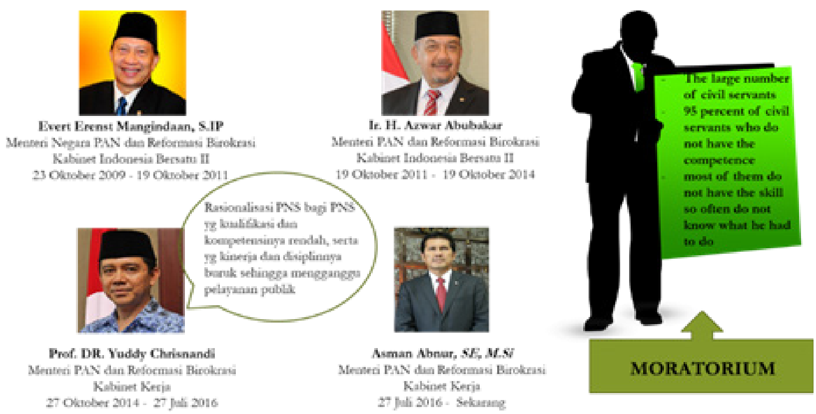
Lilis Aslihah Rakhman[1]

Introduction

Since the implementation of the Moratorium, namely the temporary suspension of the acceptance of Civil Servants through a Joint Decree of 3 (three) Ministers, in fact, the recruitment of Civil Servant in the era of President Joko Widodo is the starting point for a good quality improvement, because the moratorium in 2011 aims to improve the quality of superior Indonesian human resources by conducting mapping and assessment within the Civil Servant [1].

According to the Minister of State Apparatus Empowerment and Bureaucratic Reform, Azwar Abu Bakar, 2011, the termination of recruitment was due to 3 (three) major problems, namely [2]:

1. Too many civil servants but some of them do not have the skills and often do not know what to do.
2. Distribution of civil servants is uneven, piling up in urban areas
3. Poor recruitment process (contains elements of Corruption, Collusion and Nepotism)



[1] Universitas Islam Negeri Sultan Maulana Hasanuddin, Banten

The government is committed to fixing regulations related to personnel. The moratorium is valid for 16 months from the issuance of the decree. However, in reality, the government only conducted the recruitment of civil servants in 2014 with an assessment pattern. And during the leadership of Yudi Crisnandi (Minister of State Apparatus Empowerment and Bureaucratic Reform, Azwar Abu Bakar, 2015) again reviewed the system by re-imposing the moratorium until 2016 [6].

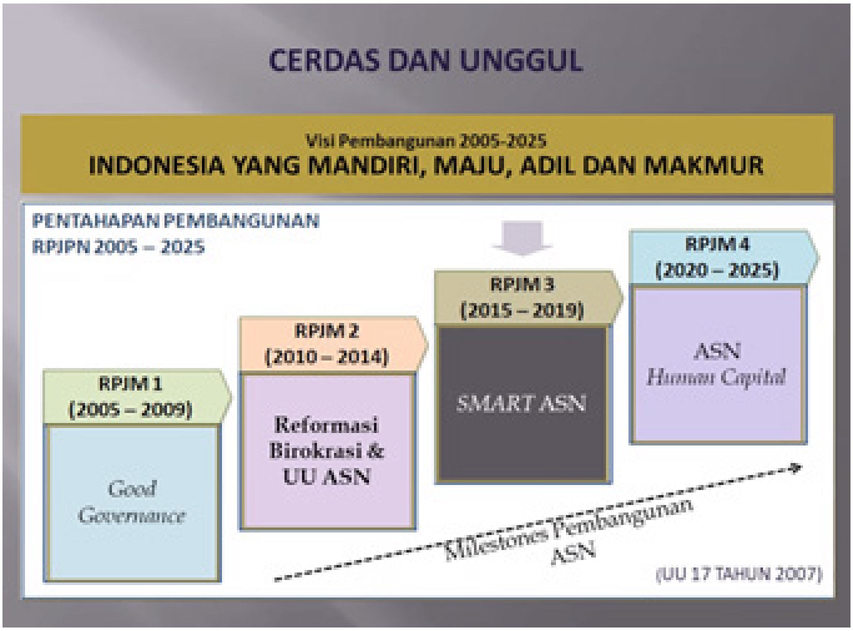
The reform of civil servant human resources was resulted with the issuance of PNS Management No. 11 of 2017, which regulates the management of civil servants to produce professional civil servants, having basic values, professional ethics, free from political intervention, clean from corrupt practices, collusion, and nepotism [12].

An in-depth evaluation of the regulation is needed in its implementation. Because, through his official speech commemorating the 74^{th} Independence Day of the Republic of Indonesia, the President of the Republic of Indonesia said that the priority of government would be focused on the development of Human Resources (HR), which previously - in the first period (2013- 2018) [21], focused on infrastructure development. According to Jokowi, the implementation of the acceleration of human resource development is by realizing the development of a strong cultural foundation, by leaving a colonial legacy, which makes the Indonesian nation a slave mentality, low self-esteem, loser and always pessimistic in seeing tomorrow [25]; [33].

Discussion

The 2005-2025 National Long-Term Development is a continuation of the previous development to achieve the development goals as mandated in the Preamble to the 1945 Constitution of the Republic of Indonesia. Therefore, in the next 20 years, it is very important and urgent for the Indonesian people to carry out realignment various steps, including in the field of natural resource management, human resources, the environment and its institutions so that the Indonesian nation can catch up and have an equal position and strong competitiveness in the association of the international community [32].

The period of the National Long Term Development Plan is 20 (twenty) years. The implementation of the National Long-Term Development Plan 2005-2025 is divided into stages of development planning in the 5 (five) year periodization of the national medium-term development plan, which is set forth in the National Long-Term Development Plan I Year 2005–2009, the National Long-Term Development Plan II 2010–2014, National Medium Term Development Plan III 2015–2019, and National Medium Term Development Plan IV Year 2020–2024 [22]; [30].



Milestone of Human Resources Development

Based on the current condition of the Indonesian nation, the challenges faced in the next 20 years by taking into account the basic capital owned by the Indonesian people and the development mandate stated in the Preamble to the 1945 Constitution of the Republic of Indonesia, the vision of national development for 2005-2025 [23] is: Independent, Advanced, Fair And Prosperous. The vision of national development for 2005–2025 leads to the achievement of national goals, as stated in the Preamble to the 1945 Constitution of the Republic of Indonesia [20]. The vision of national development must be measurable in order to determine the level of independence, progress, justice and prosperity to be achieved [29].

In fact, the more modern the world is, the more advanced civilization is [17]. The concept of a good system is the wider the range of policy affordability [13]. A simple analogy, when Indonesian Civil Servants have a stigma that only 5% of Civil Servants have skills and competencies

[10], through the gap that has been analyzed, the next policy direction is to improve the recruitment system and performance system (through mapping, improving the quality of Civil Servants, etc.) through the ideal system design process [18]. In this case, the start of the Cabinet Government in the First Year was with the slogan “AYO KERJA” (Let’s Work), which has the concept of a Mental Revolution in the context of Increasing the Productivity of Indonesian Human Resources which includes integrity, work ethic and mutual cooperation [16]. The Mental Revolution Movement is nothing new. It was the First President of the Republic of Indonesia, Soekarno who first conceptualized and initiated it in 1957 [15]. At that time the revolution was "stagnant" even though the goals of the revolution had not been achieved. Mental Revolution is a movement to galvanize Indonesian people to become new people, white-hearted, steel-willed, eagle-eagle spirited, fiery fire-spirited. So what is Mental Revolution? Mental revolution is a change in the way we think, act and work in certain situations. So it can be said that the Mental Revolution is a new life movement by changing the perspective, way of thinking and working [19].

Deputy for Human Resources at the Ministry State Apparatus Empowerment and Bureaucratic Reform, Setiawan Wangsaatmaja, said the government has a program which is included in the Human Capital Management Strategy. The program covers planning; recruitment and selection; capacity building; performance appraisal and rewards; promotions, rotations and careers; and increased welfare. "This is a strategy to prepare Civil Servant talent to face the digital era" [28].

Optimizing the strategy is the main way to achieve a world-class Indonesian bureaucracy. Setiawan emphasized that 2019 is the last year of the 3rd National Medium-Term Development Plan where the merit system is the focus of civil servant development. This means that every government agency is familiar with this system, and must really implement a merit system in every selection. Keep in mind, the merit system is a policy and human resource management of state apparatus based on qualifications, competence, and performance in a fair and reasonable manner. Fair and reasonable means regardless of political background, race, color, religion, origin, gender, marital status, age, or disability [27].

At the beginning of 2020, Indonesia entered the Grand Design for the Development of the State Civil Apparatus 2020-2024. The Ministry of State Apparatus Empowerment and Bureaucratic Reform is aggressively improving the performance of the State Civil Apparatus starting from the recruitment stage, which is now using a digital system. The hope is that with a recruitment system that is successful in reducing the number of frauds, the government can get elected people who will drive the Indonesian government system. Those who are elected with this system are expected to become Smart State Civil Apparatus in 2024 to bring Indonesia's bureaucracy to world class [24].

According to Prof. Dr. H. Yuddy Chrisnandi, ME, Professor of FISIP, University of Indonesia, "It is not easy to change the mindset and reform the culture of civil servants that has been entrenched for so long. For this reason, through the Civil Service Law, it is hoped that a state apparatus with integrity, professionalism, neutrality, is free from corruption, collusion and nepotism. In this regard, it is necessary to reform the Civil Servants [22]"

In the management of civil servants, reforming the state apparatus can be done through various efforts, including analysis of employee profiles related to organizational structure analysis; profile analysis of Civil Servants who have met the qualifications for promotion; inventory and analysis of employee competency development needs that need to be improved; distribution of employees through job rotation based on the demographic analysis of the organization; distribution of employees who do not have positions; and expansion of duties, functions and authorities through job enrichment. Thus, it is hoped that this arrangement can fill the gap towards the ideal profile of Civil Servants and can optimize the capacity of Civil Servants [9].

For this reason, as a step to accelerate the arrangement of civil servants, the implementation of comprehensive assessment to determine the capacity and competence of each state apparatus is considered important. The acceleration of reform of civil servants designed by the government is carried out by dividing all civil servants into 4 quadrants based on competence, qualifications, and performance. Quadrant 1, Civil Servants who have the appropriate competencies and qualifications, and perform well. Civil servants in this quadrant need to be maintained and ready to be promoted. Quadrant 2, Civil Servants who are less competent and less qualified, but perform well. Civil servants in this quadrant will carry out competency development through education and training. Quadrant 3, Civil Servants who have competence and suitability of qualifications but are unable to show performance [8]. The steps taken are to rotate or transfer, and are placed in accordance with their competence and qualifications. Quadrant 4, Civil Servants who do not have competence, do not match the qualifications, and do not have performance. Civil servants in this quadrant can be evaluated for rationalization [7].

Quadrant Map

Competency Qualification and Civil Servant Performance

	No Performing	Perform
Competency Qualification appropriate	3 Civil Servants who have competence and suitability of qualifications but are unable to show performance. The steps taken are to rotate or transfer, and are placed in accordance with their competence and qualifications	1 Civil Servants who have the appropriate competencies and qualifications, and perform well. Civil servants in this quadrant need to be maintained and ready to be promoted.
	Rotation/Mutation	Promotion
Competency Qualification Not Appropriate	4 Civil Servants who do not have competence, do not match the qualifications, and do not have performance. Civil servants in this quadrant can be evaluated for rationalization	2 Civil Servants who are less competent and less qualified, but perform well. Civil servants in this quadrant will carry out competency development through education and training
	Rasionalization	Training

Source: Prof. Dr. H. Yuddy Chrisnandi, ME, Guru Besar FISIP Universitas Indonesia

Planning for Civil Servants through e-formation has been carried out by the Ministry of State Apparatus Empowerment and Bureaucratic Reform in 2015 which describes the needs of Civil Servants based on job analysis and workload analysis, as well as types of priority position formations for the next 2-3 years in accordance with national development directions and Nawacita Procurement of Civil Servants through an IT-based selection known as the Computer Assisted Test (CAT) is one form of bureaucratic reform in the field of Apparatus HR. To develop the professionalism of civil servants, a training need assessment (TNA) is first carried out, namely capacity building/training to fill the competency gap between individual competencies and position competencies [14].

According to the Ministry of State Apparatus Empowerment and Bureaucratic Reform as of June 2020, 57 central agencies have submitted proposals for equalizing administrative positions to functional positions. This equalization is the implementation of the State Apparatus Empowerment and Bureaucratic Reform Ministerial Regulation number 28 of 2019 concerning the equalization of administrative positions to functional positions [3].

This equalization is one of the efforts to realize effective, efficient bureaucratic reform, and accelerate decision making by building a more functional mindset. This simplification of the bureaucracy is an important momentum for the government to accelerate the process of providing services to the community in various fields and developing human resources in facing the current global challenges. In addition, this equalization can be an instrument to ensure the continuity of career development and better welfare for administrative officials who experience equality. This process is in line with the Human Resources Development Roadmap as the main key in realizing "Indonesia Emas" 2045 towards a world-class bureaucracy by realizing SMART Civil Servants in 2024 [4].

It is not easy to change the mindset and reform the culture of civil servants that has been entrenched for so long. The sheer volume of information on social media that is so intense actually does not just become public consumption, given the existence of the ITE Law. There will be various responses and assumptions which, of course, will more or less make people have negative opinions. Our existence in the area of the industrial revolution and society 5.0 must be able to make us wise in sorting information if the government has not been able to make strict regulations regarding information on social media [5].

If there is a leader's role in the government in this case making established regulations, it will at least provide clear signs for the Indonesian people to act, then stop consuming invalid news so that there is no longer any stigma conveyed by the President regarding Indonesian people who have a negative mentality [26]. which makes the Indonesian people criticize each other, mock each other and slander each other [25].

A leader is someone whose leadership has the ability to influence the behavior of other people or groups to achieve predetermined goals [31]. Leaders with character not only create a comfortable environment, but also build a solid team to achieve common goals. Leaders who have character will be able to influence the behavior of other people or their groups in a better direction with the concept of integrity, namely consistency between speech and what is done with full awareness and responsibility. In building a leader with character it is not created immediately, but there is a process that makes a person able to create himself into a leader that is expected. With a strong self-integrity will make a person a leader with character. The process can start from oneself, a supportive family environment and the surrounding environment. Therefore, mental revolution training is very useful to strengthen oneself and train someone to become a leader with character [11].

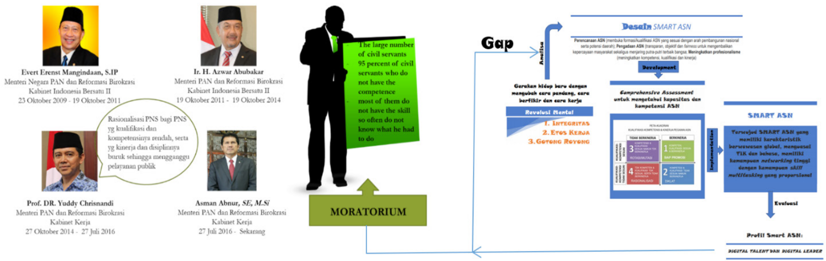
If we are able to take lessons, this pandemic era is actually nature's way of filtering the quality of human resources. Suddenly, teachers and lecturers must be able to operate distance learning applications, such as Google Meet, Zoom Meet, and so on. This will not have an impact if each institution, school or college already has an online learning application or Learning Management System.

Pandemic Era. Maybe that's the right sentence in measuring the quality of Human Resources. The ability to adapt to the impact caused by the presence of COVID-19, which does not feel like the first year has passed, provides another assessment, especially to the government. The era of the Industrial Revolution 4.0 and Society 5.0 can simply be implemented.

Conclusion

In this study, based on the speech of the President of the Republic of Indonesia for the Joko Widodo's Cabinet period from 2016 to 2020 and based on the Concept of Mental Revolution consisting of Integrity, Work Ethic and Mutual Cooperation. This finding shows that the desired quality of HR is competence (skill, knowledge and attitude). Thus, it is hoped that the government can get elected people who will drive the Indonesian government system. Those who are elected with this system, are expected to become Smart Civil Servants 2024 to bring Indonesia's bureaucracy to a world class, having a profile that is prepared to face the era of disruption and increasingly complex world challenges. As a step to accelerate the arrangement of the State Civil Apparatus, a comprehensive assessment was carried out to determine the capacity and competence of each state apparatus. The profile of Smart Civil Servant which includes integrity, nationalism, professionalism, global insight, mastering IT and foreign languages, has a hospitality spirit, has an entrepreneurial spirit, and has a wide network are the qualities identified as important as a result of this research. At the same time, the best practice of the HR development system identified from this research is Smart Civil Servant which has a new perspective (mindset), not technological stuttering, will lead the Indonesian government system to bureaucracy 4.0, which of course goes hand in hand with the industrial revolution 4.0. All types of public services organized by the government will be digital-based and integrated.

Based on the Speech of the President of the Republic of Indonesia on the 75th Independence Day of the Republic of Indonesia in 2020, where the Indonesian nation is struggling against COVID-19: *Our current target is not only to escape the pandemic, not only to get out of the crisis. Our step is to make a big leap to take advantage of the momentum of the crisis that is currently happening. The crisis provides momentum for us to catch up, to carry* *out major transformations, by implementing grand strategies. Let's solve the fundamental problem we are facing. We are taking big leaps for significant progress. We must take lessons from this crisis moment. We must simultaneously and simultaneously take advantage of this momentum. Making Indonesia equal with developed countries. Making Indonesia Advanced that we aspire to.*



This research is based on the statement of the Minister of State Apparatus Empowerment and Indonesian Bureaucratic Reform, the Concept of Mental Revolution and the perspective of the President of the Republic of Indonesia on the quality of Indonesian Human Resources since the beginning of his reign as President of the Republic of Indonesia and using the ADDIE model as an affirmation of the Government's seriousness in improving and developing potential of Human Resources.

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Covid-19 Vaccine Fatwa in Indonesia Religious Institutions, Independence and Rival Politics

M. Nurdin Zuhdi[1], Habib Shulton Asnawi[2], M. Anwar Nawawi[3]

Introduction

Religious institutions such as MUI, NU and Muhammadiyah have an important and very strategic role in helping the government to make the Covid-19 vaccination program a success. Because MUI, NU and Muhammadiyah are the "direction" of fatwas for the Muslim community in Indonesia.[1] The introduction of the Covid-19 vaccine from Astra Zaneca's products into Indonesia, which allegedly contains elements of pork, has urged the three religious institutions to issue a fatwa that can be used as a guide for the community. But what would happen if the fatwa that was issued actually caused pros and cons in the midst of society. The study aims to see why there are differences in the fatwa for the Covid-19 vaccine, especially related to the Astra Zaneca vaccine [2].

Since the issuance of the fatwa of the Indonesian Ulema Council (MUI) Number 14 of 2021 regarding the law for the use of the Covid-19 Vaccine product of Astra Zaneca which was set on March 16, 2021, agreement and disagreement have emerged in the community.[3] The conclusion of the MUI Fatwa on the Astra Zaneca vaccine is "haram-permissible". Haram because it contains elements of pork, but it is permissible (permissible) to use it when it is urgent (dharurat). The agreement and disagreement have not subsided because of the fatwa, there has been a "counterpoint" fatwa issued by the East Java Nahdlatul Ulama (PWNU) Regional Leader announced on March 21, 2021 which states that the Astra Zaneca vaccine is "halal-Pure". Halal and Pure because the final results obtained are not found unclean elements.

1 Universitas 'Aisyiyah Yogyakarta, m.nurdinzuhdi@uniayogya.ac.id
2 Institut Agama Islam Ma'arif NU (IAIMNU) Metro Lampung, habibshulton1708@gmail.com
3 Sekolah Tinggi Agama Islam (STAI) Tulang Bawang Lampung m.anwarnawawi61@gmail.com

To convince the public of the sanctity and halalness of the vaccine, the East Java PWNU became the pioneer in injecting the first Astra Zaneca vaccine nationally which was applied in East Java for the Kyai caregivers of Islamic boarding schools. Even the East Java PWNU fatwa is supported by the East Java MUI. The central government also gave maximum support with the presence of President Jokowi who witnessed the vaccination process in Jombang and Sidoarjo firsthand. Because of this, not a few have linked the East Java Fatwa and Jokowi's presence with the map of NU's political support in the 2019 presidential election. The difference between the central MUI fatwa and the East Java PWNU is certainly interesting to observe. For ordinary people, these two fatwas seem to clash and confuse.

What about Muhammadiyah? Officially, the Tarjih Council and Tajdid of the Muhammadiyah Central Executive have not yet taken a stand on the findings. However, Muhammadiyah is in principle in line with the attitude of the central MUI that the vaccine may still be used on an emergency basis as well as the rules of *ushul fiqh* and *maqashid sharia*.M Nurdin Zuhdi, 'Lembaga Keagamaan dan Vaksinasi Covid-19', 2021 <https://suaramerdekakedu.id/lembaga-keagamaan-dan-vaksinasi-covid-19-oleh-m-nurdin-zuhdi/>. Muhammadiyah firmly stated that it supports the implementation of the vaccination program as an effort to deal with the Covid-19 pandemic.[4] Observing the Covid-19 vaccine fatwa from the three religious institution authorities (MUI, NU and Muhammadiyah) is very important and interesting. Considering that the three are the "direction" of fatwas for Muslims in Indonesia. The question that arises is why there are differences in fatwas regarding the Astra Zaneca vaccine?

There have been many previous studies that raised the theme of the vaccine fatwa. However, there has been no comprehensive study on the comparison of fatwas between religious institutions. This research will also highlight from the perspective of institutional independence and the influence of politics on the emergence of fatwas. This research is a category of (*library research*). The fatwa of the MUI, NU and Muhammadiyah regarding the law on the Covid-19 vaccine, especially the Astra Zaneca vaccine, is used as library data in this study. This research uses explanative qualitative method. Using qualitative because all the data required involves matters of abstract quality. While the explanation is used to analyze why there are differences in the fatwas studied. The data were analyzed using the triangulation method, namely rational, objective and argumentative. The data are then presented with the descriptive strategy.

Discussion

According of PP Muhammadiyah and the central MUI are in line that the Astra Zaneca vaccine is illegal because of the presence of pigs, but it can still be used because of an emergency, namely the Covid-19 Pandemic which immediately requires national handling. Both adhere to the same fiqh rules, namely *la dharara wila dhirara*. Both of them are also based on the Qur'an letter Al-Baqarah [2]: 168 concerning the prohibition of plunging into destruction.[5]

The emergency law held by the Central MUI and Muhammadiyah is only temporary, until there is a new vaccine with halal and *tayyib.* The difference between the East Java PWNU fatwa and the Central MUI lies in the *intifa'* (utilization) with najis (pork) for purposes that have an impact on benefit. The need referred to in this case is pig trypsin as a medium for making vaccines. Trypsin is a material used to separate viral host cells from viral *micro carriers*.

The central MUI is of the opinion that the substance from the pig used as an intermediary does not lose its najis status, even though it has gone through the sterilization process (*tathhir*). MUI uses Imam Syafii's opinion which states that the *intifa'* with pork and its derivation is haram. Meanwhile, the East Java PWNU is of the opinion that najis from pork that has been processed in such a way and has changed its substance is considered sacred. This opinion is supported by the opinion of the Hanafi and Maliki. The fiqh provisions quoted are *nahnu nahkumu bid dlawahir wa Allah yatawalla bis sara-ir.* Shari'a does not demand to investigate more deeply and detail how the origin and process are important in the end result. If the final result does not contain unclean and haram elements, then the law is holy and lawful.[6]

From the discussion above, the following results were found:

1. The central MUI prioritized the process, while the East Java PWNU emphasized the final result;
2. The difference between the two fatwas lies in the reasons (*istidlal*) of the law and the process of extracting (*istinbath*) the law that is carried out by the two;
3. The verses of the Qur'an quoted by the two are also different. Central MUI quoted Al-Baqarah [2]: 168 while the East Java PWNU quoted An-Nisa's letter [4]: 71;
4. The opinions of scholars and the reference sources used greatly affect the final fatwa. The Central MUI used Imam Syafi's opinion, which is known to be more cautious. Meanwhile, the East Java PWNU used the

opinion of the Hanafi and Maliki.
5. The scientific background and religious experience of each institution greatly influence the fatwa issued. The mujtahids from the Central MUI are more heterogeneous (plural), including Muhammadiyah in it which is known to be quite careful in matters of texts, but in matters of worldly decision (Ijtihad) Muhammadiyah is known to be progressive *(burhani*). Meanwhile, the East Java PWNU is only from the Nahdliyin, which is known to be more traditionalist.
6. The dialogue between religion and science also greatly influences the outcome of the fatwa. The Central MUI seems to have more in-depth considerations related to the analysis in terms of health sciences. Meanwhile, the East Java PWNU also conducted expert dialogue in this regard, but the opinion of the ulama was more dominant in influencing the final result of the fatwa.
7. The East Java PWNU fatwa can be categorized as *bayani-irfani*. Meanwhile, the central MUI fatwa tends to be more *bayani-burhani*.

Conclusion

The existence of differences in the fatwa is a form of decision (Ijtihad) dynamics that naturally occurs. Astra Zaneca's vaccine fatwa is the result of institutional-collective decision (Ijtihad). Because the fatwa is a product of decision (Ijtihad), the resulting legal truth is independent. If there are different and contradictory decision (Ijtihad) decisions on the same issue, all of them are judged to be correct according to the beliefs of their respective mujtahids. What's more, the legal provisions of the Astra Zaneca vaccine fatwa are not binding. People are given the freedom to choose between the two which is the most believed and the best. What else is there a rule stating that *al-ijtihadu La yunqadlu bil ijtihad,* that the results of decision (Ijtihad) cannot invalidate the results of other decision (Ijtihad). After all, the final conclusion of both fatwas is the same, namely "may''. Religious institutions play a very important role in assisting the government in the success of the vaccination program in Indonesia. However, religious institutions are required to remain independent and not trapped in political interests so that the results of their decision (Ijtihad) can bring benefits.

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The ability of "HOTS" mathematics with an Islamic context in Madrasah Tsanawiyah Students based on TIMSS design

Maifalinda Fatra,[1] M. Anang Jatmiko[2]

Introduction

Mathematics as part of the basic education curriculum plays a strategic role in improving the quality of Indonesian human resources. The ability to think mathematically, especially high-level mathematical thinking, is very necessary for students, related to the need for students to solve the problems they face in their daily lives. Some of the thinking skills that can improve processing intelligence are critical thinking skills, creative thinking skills, brain organizing skills, and analytical skills. Mathematics learning is usually done partially, not an integrated part of other subjects, including with Islamic Religious Education. As a result, mathematics learning becomes rigid, seems difficult, does not match the realities of life and eventually tends to become a scourge. Mathematics contributes less to character formation and is less able to provide planting of Islamic values. On the other hand students' math achievement tends to be low.

The TIMSS survey, conducted by the Amsterdam-based International Association for the Evaluation of Educational Achievement (IAE), takes a focus on the domain of math content and students' cognitive abilities. Domain content includes Numbers, Algebra, Geometry, Data and Opportunity, while cognitive domains include knowledge, application, and reasoning [1]. The survey conducted every 4 (four) years conducted starting in 1999 placed Indonesia in 34th out of 48 countries, in 2003 at 35th out of 46 countries, in 2007 at 36th out of 49 countries, in 2011 at 40th out of 45 countries, and in 2015 at 45th out of 50 countries. Indonesia's involvement in the Trend in International Mathematics and Science Study (TIMSS) program is one of the efforts to see the extent of the success of Indonesia's education program compared to other countries in the world as well as an effort to catch up with other more developed

1 UIN Syarif Hidayatullah Jakarta
2 UIN Syarif Hidayatullah Jakarta

countries. However, in reality Indonesia has a low mathematical ability compared to other countries.

Indonesian students still experience difficulties in dealing with math problems, especially math problems with the TIMSS model. As the results of Jailani and Wulandari's research show that the mean ability of students in solving TIMSS model questions is 22.30 from the highest ideal score of 52 and the lowest ideal score of 0. Of the 400 students who were the research sample, 3% of students had the ability to solve the TIMSS model questions. which are included in the very high category, 22% high category, 28% medium category, 28% low category, and 20% very low category [3]. [4] also found almost similar results where the study showed that 22.6% of students were categorized as having high or good ability to solve the TIMSS model questions. With these difficulties, students need to be trained in working on TIMSS model questions.

TIMSS questions not only demand ability in applying concepts, but also how the concept is applied in various conditions, students' ability to think critically and argue about how the problem can be solved. In solving similar problems TIMSS requires critical thinking from students. Critical thinking is the ability to think at a complex level and use an analysis and evaluation process. Critical thinking involves inductive thinking skills such as recognizing relationships, analyses open problems (with many possible solutions), determining cause and effect, making conclusions and taking into account relevant data [2, p. 177].

In the TIMSS assessment framework [5], it is divided into two dimensions, namely the content dimension that determines the subject matter and the cognitive dimension determines the thought process that learners use when it comes to content. Mathematical studies in eighth grade for content dimensions there are four domains: Numbers, Algebra, Geometry, and Data and Opportunities with percentages of 30%, 30%, 20%, and 20% respectively. While the cognitive domain is knowledge, application and reasoning with consecutive percentages of 35%, 40% and 25% respectively. The instrument form used in TIMSS is multiple choice and description. Valuations for multiple-choice items are worth one, while for instrument form descriptions are generally worth one or two poin. These multiple choice questions include analyses, generalize, integrated, justifying and solving non-routine problems. In addition, TIMSS-like questions not only use formulas but also require students to use critical thinking skills in the completion process, requiring students to write a description of the answer before selecting the option provided.

This is in accordance with those presented by and cognitive domains in Trend in International Mathematics and Science Study (TIMSS) have emphasised on breaking the problem so that it can be used as a mould to summarize the questions of measuring the level of cognitive domain. Therefore, Trend in International Mathematics and Science Study (TIMSS) is used as a mould in the development of questions on the materietical questions of Trend in International Mathematics and Science Study (TIMSS) almost all found on the curriculum in Indonesia. Likewise, the cognitive aspects that are the target of learning mathematics in accordance with the content standards. [6]. Formulate content standards in the mathematics curriculum for junior high school education units covering cognitive abilities up to a high level or up to a high order thinking skill level.

These high order thinking skills include problem-solving skills, creative thinking skills, critical thinking, argumentation skills, and decision-making abilities. According to King, high order thinking skills include critical, logical, reflective, metacognitive, and creative thinking, while according to Newman and Wehlage [7], with high order thinking students will be able to distinguish ideas or ideas clearly, argue well, able to solve problems, be able to construct explanations, able to hypothesize and understand complex matters more clearly. According to Vui [8] high order thinking skills will occur when someone associates new information with information that is already stored in his / her memory. The ability of students at this level is still very low as the results of the study [9] show that around 14% of students do proportional reasoning by giving consideration and only 1% of students do proportional reasoning with some considerations built on an adequate mathematical basis

As an Islamic educational institution, Madrasahs have distinctive features compared to other schools. The distinctive feature of these madrasas is that they contain Islamic education materials which include Al Quran Hadith, Fiqh, Akidah Akhlak and Islamic Cultural History (SKI). The material in these subjects is presented partially without seeing the connection with the natural sciences such as science, mathematics, social sciences and other sciences. Therefore, to avoid the scientific dichotomy between the religious sciences (Qauliyah) and the world sciences (Kauniyah), it is necessary to make connections and integrate these sciences. Mulyadi [10], explained that scientific integration is a process of linking a person to the principle of tawhid. in this case, the object of the integration of knowledge is not science itself but someone who seeks knowledge. Meanwhile Ali defines scientific integration as: "Integration of sciences means the recognition that all true knowledge is from Allah and all sciences should be treated with equal respect whether it is scientific or revealed". The essence of the above definition is that all true knowledge comes from Allah. In the Koran, it says "the truth comes from Allah, and you should never doubt it," therefore Muslim scientists agree that Allah is the original source of knowledge, the truth. [11].

One form of scientific connection can be done by familiarizing students with solving math problems related to the material of the Al-Quran, Hadith, Fiqh, Akidah and Islamic Cultural History. This is as stated by Ma'rif that it is necessary to continuously develop the analysis of mathematical material by linking it with the verses of the Al-Quran [12]. The process of linking Islamic and mathematical contexts has been carried out by many teachers in learning mathematics at Madrasah. For this reason, a study of the mathematical HOTS abilities of madrasah students in Indonesia is needed which is integrated with the Islamic context.

This study uses a type of survey research, aimed at generalizing the population based on sample data so that temporary conclusions can be made about the characteristics, behaviors or attitudes of the population. The survey method was chosen to facilitate the obtaining of mathematical HOTS capability data with TIMSS design and Islamic context of Madrasah Tsanawiyah students (Madrasah Tsanawiyah (MTs) in Jakarta area, and Madrasah Tsanawiyah (MTs) in Bandung area. The population in this study were all students of Madrasah Tsanawiyah in DKI Jakarta and West Java. The sample consisted of 141 students of Madrasah Tsanawiyah DKI Jakarta and 166 students of Madrasah Tsanawiyah Bandung, which were taken from all participants of the mathematics olympiade which was held by students of the UIN Jakarta Mathematics Education Departement. The data were collected using a HOTS ability test using the TIMSS design and Islamic context. Mathematical HOTS ability test with the TIMSS design and the Islamic context of Madrasah Tsanawiyah students (MTs) which was given consisted of 10 questions with the subject of Numbers, Algebra, Geometry, Data and Opportunities that had previously been tested for validity and reliability. Data obtained from the test results given to students of Madrasah Tsanawiyah (MTs) who were then analyses using descriptive statistics and hypothesis testing with the One-way ANOVA test and continued with the Scheffe test.

Discussion

The research was conducted in DKI Jakarta and Bandung, aims to analysis and find out the differences in mathematical HOTS ability with

TIMSS design and Islamic context of Madrasah Tsanawiyah students by taking some samples of some madrasah Tsanawiyah students in both regions. To find out and see the difference in the ability of HOTS mathematically given a description test consisting of 10 points of question. The test has been tested on Madrasah Aliyah students and analysis its characteristics in the form of validity test, reality test, difficulty level test and problem differentiating power test.

Based on the results of the mathematical HOTS ability test with TIMSS design and Islamic context of Madrasah Tsanawiyah students, there are differences in average, median, mode, variance, standard deviation, slope level and sharpness. A description of data comparing mathematical HOTS capabilities with TIMSS design and Islamic context is presented in the following table:

Table 1. Comparison of Mathematical HOTS Capabilities With TIMSS Design And the Context of Islam

	MTS JAKARTA	MTS BANDUNG
N	141	166
Mean	58.48	58.83
Std. Error of Mean	1.330	1.168
Median	58.00	60.00
Mode	48	55
Std. Deviation	15.793	15.045
Variance	249.408	226.339
Skewness	.044	.004
Std. Error of Skewness	.204	.188
Kurtosis	-.448	-.303
Std. Error of Kurtosis	.406	.375
Range	70	70
Minimum	23	23
Maximum	93	93
Sum	8245	9765

Data of HOTS ability test results mathematically with TIMSS design and Islamic context of Madrasah Tsanawiyah students in DKI Jakarta area with the highest score of 93 and the lowest score of 23. For the average score of hots test results mathematically with TIMSS design and Islamic context of Madrasah Tsanawiyah students in DKI Jakarta area of 58.48. Standard error of mean reflects the accuracy of the sample selected against the population, seen the standard value of error of mean of 1.33 is fairly small. This indicates that the average obtained can be said to be representative or can represent well the average value of the population. The median value obtained is 58, the mode is 48, and has a slope /skewness value of 0.044 (positive), meaning the curve has a positive model. This illustrates that the data spreads to below-average values. So that students of Madrasah Tsanawiyah in dki Jakarta area who get below average grades more than students who get above average grades. While sharpness or kurtosis of -0.448 which means pointed curve or leptokurtis.

For Bandung area, data of HOTS ability test results are mathematical with TIMSS design and Islamic context of Madrasah Tsanawiyah students in Bandung area with the highest score of 93 and lowest score of 23. This data shows the range of HOT abilities of students from these two regions is the same. The average score of a mathematical HOTS capability test with TIMSS design and Islamic context is 58.83. Standard error of mean reflects the accuracy of the sample we choose against the population, seen the standard value of error of mean of 1,168 is fairly small. This indicates that the average obtained can be said to be representative or can represent well the average value of the population. The median value obtained is 60, the mode is 55, and has a slope value of /skewness of 0.004 (positive), meaning that the curve has a positive model that is the tail extending to the right. This illustrates that the data spreads to below-average values. So that students of Madrasah Tsanawiyah in Bandung area who get below average grades more than students who get above average grades. While sharpness or kurtosis of -0.303 which means pointed curve or leptokurtis.

To find out the difference in the average mathematical HOTS ability with the TIMSS design and the Islamic context of Madrasah Tsanawiyah students in these 2 areas, the hypothesis will be significantly tested. The results of hypothesis testing can be seen by looking at the significance value obtained. If the significance value > 0.05 then Ho is accepted. The significance value is 0.549 > 0.05. So it can be concluded that there is no difference in mathematical HOTS abilities with the TIMSS design and the Islamic context of Madrasah Tsanawiyah students in DKI Jakarta and Bandung.

The results of the research that have been described above show the low mathematical HOTS skills of Madrasah Tsanwiyah students in the DKI Jakarta and Bandung areas using the TIMSS framework. This can be seen from the average score of 58.48 for MTs DKI Jakarta students and 58.83 for MTs students in Bandung from a score range of 0-100. The questions given consist of applying and reasoning aspects in accordance with the TIMSS domain whose content is related to the Islamic context. The material for Islam referred to in this case includes material on the Qur'an, Hadith, Jurisprudence, Akidah Morals and the History of Islamic culture. Students' mistakes in solving the questions here are not in the aspects of Islamic material but in their mathematical abilities. The results of this study are in line with the findings [9] which state that the ability to give considerations or reasons is still very low. Besides that, the results of this study are also supported by findings [3] and [4] which state that students' ability to solve TIMSS questions is still low.

Conclusion

Based on the results of research and discussion of mathematical HOTS abilities with the TIMSS design and the Islamic context of Madrasah Tsanawiyah students in Indonesia, the following conclusions can be drawn: (1) Mathematical HOTS abilities in the aspects of analysis and evaluation with the TIMSS design of applaying and reasoning indicators and the Islamic context of Students Madrasah Tsanawiyah Jakarta and Bandung are still low and the abilities of students in both regions are almost the same. (2) There is no difference in the mathematical HOTS ability of the TIMSS design and the Islamic context of Madrasah Tsanawiyah students in DKI Jakarta and Bandung. The test results show the significance value of the mathematical HOTS ability with the TIMSS design and the Islamic context of 0.549> 0.05. This shows that there is no difference in the mathematical ability of HOTS with the TIMSS design and the Islamic context of Madrasah Tsanawiyah students in DKI Jakarta and Bandung.

Based on the results of research and discussion of mathematical HOTS abilities with the TIMSS design and the Islamic context of Madrasah Tsanawiyah students in Indonesia, the following conclusions can be drawn: (1) Mathematical HOTS abilities in the aspects of analysis and evaluation with the TIMSS design of applaying and reasoning indicators and the Islamic context of Students Madrasah Tsanawiyah Jakarta and Bandung are still low and the abilities of students in both regions are almost the same. (2) There is no difference in the mathematical HOTS ability of the TIMSS design and the Islamic context of Madrasah Tsanawiyah students in DKI Jakarta and Bandung. The test results show the significance value of the mathematical HOTS ability with the TIMSS design and the Islamic context of 0.549> 0.05. This shows that there is no difference in the mathematical ability of HOTS with the TIMSS design and the Islamic context of Madrasah Tsanawiyah students in DKI Jakarta and Bandung.

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Framing The Language And Literature Of The Archipelago's Manuscripts: Analysis Of The Tuhfat Al-Nafis Manuscript By Raja Ali Haji

Makmur Harun[1]

Introduction

Almost all of the archipelago's manuscripts were written using Jawi script, the language and literature also used Malay as the language of communication used by the population and society. Manuscripts written in Jawi or Malay Arabic script is the richness of Archipelago which has many references in various fields including the field of history [1]. This prompted the past intellectuals and scholars to compile various manuscripts to be a reference for later generations. There are several Malay manuscripts that mostly studied the history and one of them is Tuhfat al-Nafis that being referred to as history guidance as well as purpose studied, read, understood, expressed, learned, and so on [3].

This manuscript was written by the great figures in the Malay Realm that proving authorship of the Malays can be on par with other nations in the world until his work was still to be seen, studied, review, deepened and learned until today [5]. Tuhfat al-Nafis Manuscript by Raja Ali Haji is an expression of historical texts that are familiar to the Malays, particularly among historians' researchers Johor-Riau-Lingga Sultanate and the Malaya. This manuscript is the most important book in the history of Malay literature after the Sulalat al-Salatin by Bendahara Tun Sri Lanang a Johor dignitary around 1612 [7] . At that time, Johore was ruled by Sultan Alauddin Shah Mahmud II (1597-1615). The realization of the text of these two manuscripts was produced more advanced than other texts of its contemporaries and its application is so long that it can be felt until now [2].

[1] Lecturer in Islamic art, history and civilization at the Faculty of Language and Communication, Sultan Idris Education University (UPSI), 35900 Tanjong Malim, Perak, Darul Ridzuan, Malaysia. Email: makmur@fbk.upsi.edu.my, Telephone: +6016 365 6350.

There are various manuscripts found in the Archipelago as a wealth of invaluable treasures for the Malays inherited from one generation to the next and many of the references in the various fields of science, including history. This encourages previous writers to compile various manuscripts to serve as important references for the next generation. Usually, as for writing style decorated with classical patterned of Malay literature history. Therefore, history is conveyed through literary writing and enriched with facts such as the names of the actors, the background of the place, and the background of an event, so the work of such a manuscript is often referred to as historical factual literature [4].

The results of writing manuscripts that are historical literature consist of two forms, namely poetry and prose. *Poetry* is used to tell events that are momentary in nature, and have nothing to do with palace or state affairs. *Prose* is also used by the author to describe the state of the country. Historical literary manuscripts in the form of poetry include *Syair Raja Ali Haji, Syair Singapura Terbakar,* and *Syair Siak War [6].* Five historical literary texts in the form of prose that have received a lot of attention from researchers, especially historians who want to study histiography, namely *Hikayat Kings of Pasai, Sulalat al-Salatin (Malay History), Hikayat Merong Mahawangsa, Misa Melayu,* and *Tuhfat al-Nafis.* So among these historical literary works there is the manuscript of *Tuhfat al-Nafis [9]*.

Tuhfat al-Nafis manuscript many referred to instructions that tell the history of a nation state in the Malay world during the past. This manuscript was written by influential figures and writers in the Archipelago who proved that the authorship of the Nusantara community at that time was so great that it could be compared to other nations in the world so that his works can still be seen, studied, researched, and studied until today [8]. *Tuhfat al-Nafis* is a work by Raja Ali Haji that tells the story of the history of the Bugis in Malacca, Johor and Riau. Raja Ali Haji emphasizes the concept of historiography on the subject of the Bugis in colonization and conquest containing stout series of wars between the Raja and the Raja of Bugis Malay. The manuscript is a note from Raja Haji Ahmad, father to Raja Ali Haji but after his death then the next writing task was continued by his son [11].

The realization of the text of the *Tuhfat al-Nafis* manuscript was produced more advanced than other texts of his contemporaries and its application is very long so that it can be felt until now. In addition to the works contained in the manuscript include elements of humor and romance stories as well as genealogies of Kings who have conveyed his message to the reader through a rich image of imagination, his paintings are accurate and sharp. The author also managed to show his mastery in various foreign languages such as Arabic, English, Bugis and Javanese. The beautiful style of the Malay language use has become suitable for all time writing guides [10]. Through the work of the manuscript, it can be proved that Raja Ali Haji is a linguist, politician as well as historians who lived in an atmosphere of political turbulence in Malaya at that time that can shape the environment and his interest in reading copies of literature and the history of the oldest contributed to the idea of authorship [13].

Now, hundreds of poems, dramas, rhymes, gurindam, films, paintings, essays and historical works are inspired by the *Tuhfat al-Nafis* manuscript which has also been widely translated into various other foreign languages such as German, Arabic, Dutch, Russian and English. Therefore, the study of the manuscript, both its strengths and weaknesses, is very important so that it can be useful as teaching and learning material in the future, especially in the field of history of a country in the Archipelago as well as the disclosure of historical facts that have been described in depth by the author of the manuscript as fundamental proof of the importance of old manuscripts to be studied [12]. Then it is also hoped that it can become a separate level and identity for the people of the Archipelago through their acceptance of various manuscripts that are inherited by their nation.

Discussion

Summary of Tuhfat al-Nafis Manuscript as a Great Work

Tuhfat al-Nafis manuscript begins with a summary that taken from the Sulalat al-Salatin (Malay Historical), and then telling in more detail about the history of the Sultanate of Johor-Riau [15]. The dynamic figures in Tuhfat al-Nafis are the Bugis princes who with their military and diplomatic efficiency managed to achieve important positions in the states of the Sultanate of Riau, Selangor, Sambas and Matan-Sukadana. And recurring theme in the first half Tuhfat al-Nafis is a conflict between the Minangkabau people of Siak and alliance forces of Bugis and Malay. This conflict occurs both in the Riau region and in Kedah, Selangor, Siak and Kalimantan. The second half covers the mid-18th century until 1864 A.D. that tells the growing hostility between the Bugis and Malays in Riau, and two raids led by the Bugis against the Dutch in Malacca in 1756 and 1784 A.D [17]. This last attack ended when the Dutch signed an agreement with the Sultan of Riau stating that his kingdom was only a subordinate (fief) of the Dutch East Indies Trade Union (VOC). Although centered on the history of Riau and Johor, Tuhfat al-Nafis also continue to integrate its history of various other Malay states like Siak, Kedah, Selangor, Kelantan and west Kalimantan [17].

In addition, the contents of the Tuhfat al-Nafis manuscript in which Raja Ali Haji inserts many historical elements that record events and calendars are very accurate. Because of he himself is of Bugis descent, his more objective writing style elevates the dignity and greatness of the Bugis [12]. In fact, in each chapter, he details in depth about the kinship and events that elevated the Bugis as the government in the Sultanate of Johor which expanded its governing power through adventure, voyage and series war from one war to another. Later, the manuscript review is also telling a lot of the application of the Islamization in the Malaya after the arrival of Arab traders from Jeddah and Yemen on account of trading property in Johor. At the beginning, the author tells the story of the collapse of the empire in Malacca and cruelty of Malay Kings who kill each other to get the throne by using the wrong way to dominant in the government [19].

Authorship of the Tuhfat al-Nafis Manuscript

Manuscript Tuhfat al-Nafis was written by influential figures in the Archipelago that proves the greatness of the authorship of the Malays then until his work was still able to influence the world of Archipelago authorship to this day. Tuhfat al-Nafis is the work of Raja Ali Haji which tells the story of the history of the Bugis in Malacca, Johor and Riau [14]. Raja Ali Haji emphasizes the concept of historiography on the subject of the Bugis in colonization and conquest containing lots series of wars between the King of Malay and the King of Bugis. The manuscript is a short note version starting from Raja Haji Ahmad, father of Raja Ali Haji but after his death then the writing task was continued by Raja Ali Haji in the form of longer writing version [21].

At the beginning of this Tuhfat al-Nafis text, the reader can examine how biased Raja Ali Haji was in writing his manuscript. This can be proven by revealing matters relating to Raja Kecil and the Five Brothers of Opu Bugis. As is well known, Raja Kecil is the main enemy of the Five Brothers of Opu Bugis. Therefore, it is understandable that Raja Ali Haji could possibly give a negative picture of Raja Kecil. This case can be examined through the passages that Raja Ali Haji wrote about in this text, for example, "It was Mr. Pong who was worn by the King, it was said. When he died, the people were arguing about him [16]. So Pong was run away by the Independent Commander, below him to Pagar Ruyung, to Puteri Janilan, then Encik Pong gave birth there, a man ... "

At a glance, the above quotation does not have much negative impact on the Raja Kecil. Thus, it can be understood to achieve his motives, Raja Ali Haji tried to give the next picture of the origin of the Raja Kecil in a worse situation. Then at the same time, Raja Ali Haji's tendency can be clearly seen, when he describes the background of Five Brothers of Opu Bugis [23]. This situation aims to give the reader an idea that Five Bothers of Opu Bugis are descended from a good lineage compared to the Raja Kecil. In this way, Raja Ali Haji hopes that readers will give a positive perception to the Bugis [18].

Biography of Raja Ali Haji as Author of Tuhfat al-Nafis

Raja Ali Haji bin Raja Haji Ahmad or simply by his nickname Raja Ali Haji, was born in Selangor in 1808 A.D. or 1809 A. D. (still debated) and died in Penyengat Island, Riau Islands, in 1873 A.D. He was called *Engku Haji Tua* after doing pilgrimage to Mecca. He was the grandson of Raja Ali Haji Fii Sabilillah (brother of Raja Lumu, the first Sultan of Selangor). Fii Sabilillah is a descendant of the Riau royal family descended from Bugis soldiers who came to the area in the 18th century. He is the second descendant (grandson) of Raja Haji Fii Sabilillah, Yang Dipertuan Muda IV of the Lingga-Riau Sultanate who is also a Bugis nobleman. Her mother, Pn Hamidah binti Malik is a cousin of her father and also of Bugis descent [25]. Raji Ali Haji was transferred by his family to Penyengat Island when he was still a baby, then he was raised and received an education in the island [20].

He was a scholar, historian, linguist, poet and culturalist of Archipelago in the 19th century. He is best known as the first registrar basics of English grammar through his *Pedoman Bahasa* and *also Bustanul Katibin*; books that became standard language of the Archipelago. Malay standard that is in the Indonesian Youth Congress, October 28, 1928 is designated as the national language, Bahasa Indonesia. In addition, he was also designated by the government of the Republic of Indonesia as a National Hero on November 5, 2004. Meanwhile, Raja Ali Haji's masterpiece, *Gurindam Dua Belas* (1847 A.D.), became a literary reformer in his time. His book entitled *Pengetahuan Bahasa* which is *Dictionary's dialect of Malay-Pahang-Johor-Riau-Lingga* first term, is the first monolingual dictionary in Southeast Asia. He also wrote *Syair Siti Shianah, Syair Suluh Pegawai, Syair Hukum Nikah,* and *Syair Sultan Abdul Muluk*, and others [27].

Raja Ali Haji grew up on Penyengat Island, a small island in the Riau Islands, which at that time were the centre of Malay culture and the centre of Islamic knowledge in the Archipelago. As the son of the Riau nobility, he has held various important positions in the Riau-Johor Kingdom [22]. He is knowledgeable about Islam and the science of government. He obtained deep religious knowledge from local and foreign scholars. He is a religious teacher and teaches Arabic as well as Arabic Malay writing. He is also educated in other disciplines, and has produced work in a wide variety of fields, including language, religion, literature, history and law [29]. He also became a religious teacher who taught grammar, jurisprudence and Sufism. In the field of language, he has produced two works which are very important in the development of the Malay language, namely *Bustan al-Katibin* (1850 A.D.) and *Pengetahuan Bahasa* (1859 A.D) [24].

Raja Ali Haji felt deeply how the influence of Western culture and its intensive interaction with Eastern culture in the Archipelago posed many challenges that were difficult to avoid [42]. He believes that any change will inevitably have many unwanted consequences, because Western culture is in many ways contrary to the traditional customs of the East and also Islam. The great noble values of Islamic culture can be eroded due to the repeated slander waged by the West, especially through the propaganda of the orientalists, which corrupts almost all aspects of Asian culture, especially Islamic society [26]. The damage to Islamic culture due to the influence of Western culture is very clear through the destruction of the Malay language which was carried out for the sake of renewal or modernization in all fields [31].

According to Virginia Matheson (1999), "Raja Ali Haji considers that serious attention to grammar is essential for obtaining precise speech and subtle expressions [40]. Imam al-Ghazali in writing the Book of Knowledge felt the need to deepen his expertise in the field of linguistics, as a complementary discipline and how to add knowledge and get closer to Allah SWT ... 'Imam al-Ghazali's view was what inspired Raja Ali Haji in writing his books, because the manifestation of damage in the field of language is a sign of a decline in values in life and a setback in the thinking of a nation, because a great nation is a nation that wants to dignify its language and writing [33].

Form of Content of Tuhfat al-Nafis

There is no doubt that one of Raja Ali Haji's great works is the *Tuhfat al-Nafis* (precious gift). Even though it was his father Raja Ahmad who started writing this book, Raja Ali Haji composed, remodelled, completed and was responsible for the overall completion of the writing. This book can be classified as a historical work of literary and manners in style, that is, although it presents historical facts and events, it is far more important that the outline wants to be emphasized on literary issues [38]. Historical facts and events that involve humans as the main actors, especially Kings, political leaders, socio-religious figures and royal officials, are seen by the authors from the point of view of Sufism. Then it is presented as if it is a reflection so that the reader sees how faith, morals, endeavours and reason play an important role in determining the fate and dignity of a people, nation or society in the future [35].

The more comprehensive and detailed historical book is *Tuhfat al-Nafis* which was first written in 1885 A.D. This two part book discusses the history of Singapore, Malacca, Johor, and the story of the Bugis Kings [36]. Raja Ali Haji's love for literature, especially poetry has been expressed through his historical writings which are often embroidered with poems, verses and gurindam and there are also several verses of poetry in his *Pengetahuan Bahasa* book. Most of his literary works, especially poetry, also describe religious matters, such as *Syair Jatuhnya Negeri Johor, Syair Gurindam Dua Belas, Syair Taman Pertama, Syair Abdul Muluk, Syair Siti Sianah,* and *Syair Hukum Nikah*. In addition, Raja Ali Haji also produced two law works, namely *Thamarat al-Muhamed… Ahli al -Mahkamah* (1896 A.D.) and *Mukaddimah fii Intizam al-Wazaif al-Malik* (1857 A.D.) [37]. Indeed, Raja Ali Haji was a great author in the middle of the 19th century A.D. With his great talent and love of knowledge, language and civilization, he emerged as a versatile Archipelago scholar and has produced works in various fields. He can be considered one of the great thinkers in the world of Archipelago civilization, especially in the fields of religion, history, language and literature. Therefore, through what has been displayed above about so many works of Raja Ali Haji, we can be concluded that there are at least three relevant things can be learn through the manuscript [28] ; [34].

Firstly, threat from within in the form of disputes between races or tribes, as well as the negligence of carrying out religious orders and not maintaining a culture that is well established as a source of identity and coming out of reform and innovation will result in setbacks. Community leaders should also feel realize to improve the quality of language teaching and composing lessons [30]. Nusantara Malay literature and other major of Nusantara literature should be well taught in schools [39]. ***Secondly***, the threat from outside which is the rapid influence of foreign culture that enters almost all aspects of the life of its people. Unfortunately, the incoming foreign culture, especially Western culture, takes only negative but not positive aspects. Therefore, Raja Ali Haji also reminded the factors that cause a race or nation to be destroyed are inter-ethnic and tribal disputes, divisions among leaders, opposition to religion and culture, and the *demoralization* process designed by other nations to control the economy, politics and the nature of our nation's mind [41].

And ***thirdly***, the decline of a people also stems from the umara's ignorance of the people's welfare, state security and the quality of education. Raja Ali Haji and his relatives in Penyengat Island, Riau Archipelago in the 19th century A.D. have provided good role models, not only for the Malay community in Riau, but also for all nations and citizens of the Archipelago as a whole. The nation and the people of the Archipelago are indebted especially for his services in developing the Malay language as an intellectual and cultural language through which the language of the good Archipelago can be transformed and developed in today's modern world [32].

Findings

Tuhfat al-Nafis manuscript revealer of history that is familiar especially among historians concerning the Johor-Riau-Lingga Sultanate and the Sultanate of Malaya. Although it is a work of history, elements of myth, fairy tales and legends still influence this work. However, the mythical elements contained in this work are not many because Raja Ali Haji is more concerned with truth than falsehood. In the early part of this work, he has narrated the advantages, greatness and miracles that occur regarding the birth or origin of the lineage of the Kings. While Sulalat al-Salatin also known as Sejarah Melayu which was a history work of the rise, glory and fall of the Malay Malacca Sultanate era that written by several authors. However, there are opinions that claim when (Portuguese) conquered Malacca, a copy of this historical manuscript is said to have been brought to Goa, South Sulawesi, Indonesia to be immortalized.

This work of Tuhfat al-Nafis is the work and thought of Raja Ali Haji which is considered a pro-Bugis historical literature which story revolves around the lineage of the Malay and Bugis Kings, the arrival of the Bugis people to the Malay world and important events involving the Bugis community in the politics arena in Malay Realm. In general, Raja Ali Haji's work is full of various aspects that make it a unique historical work including the aspects of establish the identity of a nation, society establishment, education patterns, forms of thought, social criticism and the role of women. In most situations and conditions, the Bugis try to be seen as a strong and successful nation in the past, apart from influencing many cases and decisions in the Archipelago. The thought of Raja Ali Haji in his writing is different from the writing of the previous saga, in fact it is full of philosophy which is full of battle.

Although the purpose of Tuhfat al-Nafis writing was still centered on the genealogy of the Malay and Bugis Kings, but his writings in describing events that have occurred are written with more focus because as a result of an event that occurred. In addition, to ensure that his writing is considered true and accurate, Raja Ali Haji is also seen trying to keep the use of dates in the events recorded in his work. Based on the text of Tuhfat al-Nafis manuscripts, most Riau dignitaries including their Sultans are those who are inclined to Islamic thought such as Yamtuan Raja Ali Kelana (the last Young Yamtuan) and Sultan Abdul Rahman I. The Islamic thought of Riau dignitaries is described in Tuhfat al-Nafis when they seen more inclined to Islamic scholarly activities, besides always getting closer to Allah SWT and always remembering death and the hereafter.

In addition, the contents of the Tuhfat al-Nafis manuscript tell many of a great empire in Sumatra and the Malaya. According to Mohd. Rashid et.al (2014), the manusript is a text that consists of experiences from other countries. Apart from that, the text of this manuscript also records the events of the marriage of the Riau aristocracy with the Kingdom of Siak, Terengganu, Perak, Kedah, Selangor, Brunei and West Kalimantan. Riau Malay aristocracy have family ties with the Sultanate of Pahang and Terengganu while the Bugis Riau has lineage relationship with the Sultanate of Kalimantan, Johor, Perak, Kedah and Selangor.

In addition, in the beginning, Raja Ali Haji has highlighted the greatness of Bugis descent by stating about the dream that became the impetus for the children of Bugis King in traveling to the 'Land of the west'. Opu Daeng Menambung dreams supposedly a sign and prophecy of domination and greatness to be achieved by the Bugis family of five brothers in Malaya in future. Next, Raja Ali Haji also highlighted the greatness of the Bugis lineage by describing the fine about the background of Opu Bugis Five Brothers. This is shown in his story about the appearance of them as in the passage of the manuscript: “It is his son (Tendari Burung Daeng Ralaka) whose five people are fine in appearance, and with the attitude of a hero. However, Opu Daeng Celak, who is the best in appearance, gives women the passion to look at him …”(TN, 47).

The writing of Raja Ali Haji is also very concerned about the importance of writing the date in narrating the events that have taken place. In Tuhfat al-Nafis the use of date uses the term ‘not long’ or ‘not long between them’. In addition, in the context of the work of Tuhfat al-Nafis, mythical elements are also some of the significant features, especially in the early part of the text. The existence of the mythical elements in the text is closely related to the reality of life in the community at that time that still in the sphere of strong influence of Hinduism, Buddhism and Animism. Among the myths that can be known in the work of Tuhfat al-Nafis is that the author uses elements of myth that can prove the occurrence of the events of Badang who became strong after eating ghost vomit. His body has gained tremendous strength and power after consuming ghost vomit. The reliability of Si Badang who can pull out trees that is two or three of human hugs because he eaten ghost vomit.

Thus the discussion of the Tuhfat al-Nafis manuscript that has been recognized as one of the richest and most complete sources that tell about the history of Malay and Bugis nations in the Archipelago. This work includes great works that need to be preserved from generation to generation so that the stories of history and genealogy of the Kings who have ruled in the past can be known by readers through the rich, accurate and sharp imagination of the author. Although the manuscript is using old Malay language but the author still writes the narration with beautiful language and suitable as a guide to writing all the time until the author of this work can prove that the historical writing become a record that can be remembered through the ages.

Conclusion

As a conclusion, Tuhfat al-Nafis is a masterpiece produced by Raja Ali Haji as a continuation of the writings of his father Raja Haji Ahmad based on the knowledge he has acquired since childhood. His books are very suitable to be used as a guide and endeavor by today's society in living daily life. It is hoped that all the good works of Raja Ali Haji like this will be preserved and can be used as a reference for future generations. This work is a hitoriography describing the history of the Bugis kingdom in Johor-Riau-Lingga and Malaya. The author is a Buginese person who is seen as very biased in his writing, so that all objects in the Malay realm to be said originated from Bugis. However, in this work the values, cultural values, views of life and atmosphere of the community at that time were highlighted. However, these values and views of life are not clearly stated, but they need to be reexamined.

Raja Ali Haji can be said as a great master figure who has contributed a lot to the world of writing. He has written many works in various fields such as religion, literature, language, history and constitution. Other than Tuhfat al-Nafis, he also wrote other works such as the Bustan al-Katibin, Gurindam Dua Belas, Salsilah Melayu-Bugis, Kitab Pengetahuan Bahasa and many more. The existence of Tuhfat al-Nafis from its origins until 1865 AD is one of the most important historical works about the history of the Malay kingdoms to Singapore. The manuscript took some revolutionary in classical Malay literature with the author's name and the date. Although not entirely bring new revolution, Raja Ali Haji can be considered to bring progress due to his better educational background than other previous writers.

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Psychological Aspects of The Covid-19 Vaccine

Mamnuah[1]

Introduction

Corona Virus Disease-19 (COVID-19) was first discovered in Wuhan, China at the end of 2019 [1]. COVID-19 spreads so fast around the world that the World Health Organization (WHO) declared COVID-19 a pandemic on March 12, 2020 [2]. The number of confirmed positive COVID-19 patients in the world on June 2, 2021, has reached 170,812,850 with 3,557,586 of them dying [3]. In Indonesia, COVID-19 cases are a major concern because cases have continued to increase since the first COVID-19 cases appeared in Indonesia on March 2, 2020. The data on the total number of confirmed cases in Indonesia on June 2, 2021, had reached 1,831,773 and 50,908 of them died [4].

The high rate of transmission of COVID-19 requires various strategies to reduce the transmission of COVID-19. Strategies to suppress the spread of COVID-19 by making social distancing rules [5]. Other strategies include wearing masks, washing hands, avoiding crowds, and reducing mobilization. Another effort to reduce the spread of COVID-19 infection is through vaccines. The COVID-19 vaccine is expected to prevent transmission and reduce morbidity and mortality due to COVID-19.

Several studies on vaccines such as that conducted by [6] explain that a candidate for a coronavirus 2 (SARS-CoV-2) vaccine candidate for the severe acute respiratory syndrome is being evaluated. Vaccine efficacy depends not only on the vaccine but also on the characteristics of the vaccinated. A series of 30 years of vaccine research has documented the impact of psychological factors on the immune system's vaccine response. Stress, depression, loneliness, and poor health behaviors can impair the immune system's response to vaccines, and these effects may be greatest in vulnerable groups such as the elderly. Psychological factors are also implicated in the prevalence and severity of vaccine-related side effects. The findings are expected to be relevant to the SARS-CoV-2 vaccine.

[1] Mamnuah, School of Nursing, Faculty of Health Sciences, Universitas 'Aisyiyah Yogyakarta, Yogyakarta, Indonesia. mamnuah@unisayogya.ac.id

Psychological and behavioral interventions are expected to increase vaccine efficacy and reduce side effects.

A systematic search of the literature survey until December 25, 2020, conducted by [7] found that the acceptance rate of the COVID-19 vaccine from 33 different countries in the general population found that the highest rate of acceptance of the COVID-19 vaccine was found in Ecuador (97.0%), Malaysia (94.3%), Indonesia (93.3%) and China (91.3%). However, the lowest rates of acceptance of the COVID-19 vaccine were found in Kuwait (23.6%), Jordan (28.4%), Italy (53.7), Russia (54.9%), Poland (56.3%), USA (56.9%), and France. (58.9%). Only eight surveys among health workers (doctors and nurses) were found, with vaccine acceptance rates ranging from 27.7% in the Democratic Republic of the Congo to 78.1% in Israel. Acceptance of the COVID-19 vaccination in the general population shows a rate of 70%.

Research on students' willingness to be vaccinated showed that 735 students showed that 633 (86.1%) students reported that they would choose to be vaccinated against the COVID-19 coronavirus; on the other hand, 102 (13.9%) students reported that they would not or were unsure about the vaccine (low intention to vaccinate). This means that more than one in 10 students show a low intention to vaccinate (vaccine doubt) [8]. This article will describe the psychological aspects of the COVID-19 vaccine in terms of people's perceptions of the COVID-19 vaccine, the reasons for being vaccinated, the reasons for refusing the vaccine, and the efforts made to assist the uptake of the COVID-19 vaccine.

Discussion

The psychological aspect of the COVID-19 vaccine is closely related to the perceptions held by respondents. Perceptions about the COVID-19 vaccine will affect a person's willingness and refusal. The following is an explanation of the psychological aspects related to the COVID-19 vaccine.

Perceptions about the COVID-19 vaccine

There are three groups of people's perceptions of the COVID-19 vaccine, namely, people who are willing to have a COVID-19 vaccine, people who are hesitant, and people who refuse to have a COVID-19 vaccine. Research [9] explains that about 16% of participants expressed a high level of distrust with a very negative attitude on at least one of the four dimensions of doubt. The four dimensions of doubt include concerns about vaccine safety (16.3%), preference for natural immunity (6.6%), concerns about commercial advantages (5.8%), and general distrust of vaccine benefits (5.3%). More than a third of participants reported reluctance or uncertainty regarding COVID-19 vaccination. According to [10] from January 19 to February 5, 2021, from 15,014 respondents, data was obtained that respondents who were hesitant about the COVID-19 vaccine had decreased from 26.9% in the previous year to 16.9%. Recruitment of respondents was extended to February 18 to recruit 3,841 adults who are unsure of the vaccine. The results were 12,463 (66.1%) participants who were willing to be vaccinated, 2,932 (15.6%) participants who were hesitant to be vaccinated, and 3460 (18.4%) participants who were very hesitant (that is, respondents would avoid vaccination may or will never be vaccinated). In Ireland (N = 1041) and the United Kingdom (UK; N = 2025), it was found that vaccine doubt/resistance was evident for 35% and 31% of this population, respectively [11].

The study on vaccine acceptance in China obtained results from 2,058 participants surveyed, 1879 (91.3%) stated that they would receive a COVID-19 vaccination once the vaccine became available, of whom 980 (52.2%) wanted to be vaccinated as soon as possible, while those others (47.8%) would delay vaccination until vaccine safety was confirmed. Participants preferred routine immunization schedule (49.4%) to emergency vaccination (9.0%) or one of them (41.6%) [12].

Research in Australia, respondents generally have a positive view of vaccination. Eighty percent (n = 1143) agreed with the statement that vaccinating yourself for COVID-19 would be a good way to protect yourself from infection. Women (n = 614, 83%) were more likely to agree with the statement than men (n = 529, 78%) (aOR = (91.4 (95% CI: 1.1–1.8); P =3)0.03), while 91% of those aged 70 years and over agreed compared with 76% of 18–29 years (aOR = 2.3 (95% CI:1.2–4.1); P = 0.008). Agreements were also higher for those with self-reported chronic disease (aOR = 1.4 (95% CI: 1.1–2.0); P = 0.04) and among those holding private health insurance (aOR = 1.7 (95% CI: 1.3 – 2.3); P < 0.001). Beyond individual perceptions, 78% stated that their decision to vaccinate would be supported by family and friends [13].

Research [14] shows that 66.1% of parents are reluctant to receive foreign COVID-19 vaccines, only 37.4% are reluctant to receive domestic COVID-19 vaccines. Participants' preference for domestic vaccines was significantly higher for themselves and their children (P < 0.05). Women were less likely to accept foreign vaccines than men (P < 0.05). As education levels increase, fewer parents choose domestic vaccines for themselves (P = 0.046) and their children (P = 0.005). Domestic and foreign vaccine acceptance for parents and their children was higher among parents with high levels of anxiety about COVID-19 infection ($P < 0.05$).

Reasons for being willing to get a COVID-19 vaccine

The results of a literature search said that the reasons respondents were willing to get vaccinated were for various reasons, namely: believing in the safety of the COVID-19 vaccine, the perception of COVID-19 as a dangerous disease, and the desire to protect friends and family. In accordance with the results of the study [15] that the reason participants wanted to be vaccinated was that they had the perception that the COVID-19 vaccine was safe and considered COVID-19 as a serious disease and needed to be vaccinated. COVID-19 is considered a more threatening disease than influenza and measles. The strongest predictor of COVID-19 vaccination intent is trust in vaccine safety. Those who perceive COVID-19 as a severe disease are also slightly more likely to use a COVID-19 vaccine. According to [16] of 421 dentists, more than 82% stated their intention to be vaccinated against the coronavirus. The reason dentists want to get vaccinated is that they want to protect their family and friends from COVID-19 (87%). Research [17] describes vaccine acceptance as related to several psychological factors, particularly the perceived effectiveness of the COVID-19 vaccine, and willingness to protect others. This suggests that perceptions of vaccine effectiveness and willingness to protect others have an important role in the acceptance of the COVID-19 vaccine.

Respondents who will soon receive the COVID-19 vaccine are respondents who are male, married, feel a high risk of infection, were vaccinated against influenza in the last season, and believe in the efficacy of COVID-19 vaccination, or respect doctor's recommendations [12]. This study explains that 69% of participants are willing to get the COVID-19 vaccine. Participants were willing to be vaccinated if their health care provider would recommend vaccination [18].

Reasons for refusing to get a COVID-19 vaccine

Respondents who refused to be vaccinated had three reasons, namely: lack of information, vaccine safety, and considering vaccines as conspiracy theories. As research [19] reasons for vaccine doubt and rejection fall into three categories: fear that vaccines are unsafe, misinformed ideas, and agreement with conspiracy theorists. It is these psychological factors that underlie vaccine doubts and refusals which should be the basis for countering facts and persuasion. According to [16] the reason for not being vaccinated was due to the lack of information about the vaccine. Other studies also say that misinformation will reduce vaccine intentions [20]. In the UK and Ireland, it was also found that those who were resistant to the COVID-19 vaccine were less likely to get information about the pandemic from traditional and authoritative sources and had the same level of distrust in these sources as respondents who received the vaccine [11].

Vaccine uptake is lower among women, respondents living with children, and low-income earners [9]. Other studies have also shown that vaccine acceptance is lower among some sociodemographic groups, such as women, adults aged 20-49 years, and those with low incomes [17].

Respondents who have confirmed or suspected cases in their local area, assessing the convenience of vaccination or the price of vaccines in decision making may deter participants from vaccinating immediately [12]. Another study found that the most common reasons for refusal were anxiety about vaccine side effects, lack of knowledge about vaccine effectiveness, and distrust of vaccines from abroad [14].

Efforts to increase uptake of COVID-19 vaccine

Various efforts have been made to help increase the uptake of the COVID-19 vaccine. There are two ways, namely: presenting information about the effectiveness and safety of the COVID-19 vaccine on the website and coordinating with various parties involved in the program to make the COVID-19 vaccine a success from the center to the grassroots. According to the research results [9] to improve the COVID-19 vaccine requires coordinated efforts from doctors, policymakers, health departments, and vaccine makers at the national and grassroots levels to take advantage of this. Resources will be key to achieving the UK's COVID-19 vaccination goals. Another way that has been done to support the uptake of vaccines is through the disclosure of information relating to the effectiveness and safety of vaccines on websites. This is consistent with research [15] on other ways to improve vaccines by informing the public about the safety of the COVID-19 vaccine.

The strong demand and high acceptance of COVID-19 vaccination by the Chinese population greatly help vaccination coverage and concerns about vaccine safety may hinder the promotion of vaccine use. To expand vaccination coverage, immunization programs should be designed to remove barriers in terms of vaccine price and ease of vaccination, and health education and communication from authorized sources are important ways to reduce public concerns about vaccine safety [12].

To support vaccine uptake, it is necessary to conduct an initial study of public perceptions of the COVID-19 vaccine in the future and become a starting point for mapping vaccine perceptions. To support the launch of this new effective vaccine, governments need to understand community concerns and identify strategies that will support engagement [13]. Many adults are willing to get a COVID-19 vaccine, although acceptance should be monitored as vaccine development continues. These findings could help guide future efforts to increase the acceptability of the COVID-19 vaccine (and uptake if a vaccine is available) [18]. Most of the participants were undecided about the COVID-19 vaccine. Trust in vaccines inside is higher than vaccines from outside. For this reason, one of the efforts to increase vaccine uptake can be done by considering a higher preference for domestic vaccines [14].

Conclusion

The COVID-19 vaccination is greatly influenced by one's perception. There are three perceptions about vaccines, namely people who are willing to have a COVID-19 vaccine, people who are hesitant, and people who refuse to have a COVID-19 vaccine. Respondents who are willing to get vaccinated are for various reasons, namely: believing in the safety of the COVID-19 vaccine, perception of COVID-19 as a dangerous disease, and a desire to protect friends and family. Respondents who reject vaccines on the grounds of lack of information, vaccine safety, and regard vaccines as conspiracy theories. The COVID-19 vaccine is expected to be well absorbed by the community so that the transmission of COVID-19 can be controlled. There are two ways to increase uptake of the COVID-19 vaccine, namely: presenting information about the effectiveness and safety of the COVID-19 vaccine on the website and coordinating with various parties involved in the program to make the COVID-19 vaccine successful from upstream to downstream.

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Covid-19, Knowledge System and Womenpreneurship

Misbah Zulfa Elizabeth[1]

Introduction

The Covid-19 pandemic has changed people way of life. Even though the original problem was a health problem [13], because the spread and "hitting" power of this virus was so "terrible" it resulted in massive and large human casualties. The impact of human casualties which are very heavy both qualitatively and quantitatively that has resulted in various changes in human life. In social life, changes in behavior appear in the relationships between members of society. No shake-hand, work-from-home are two of many terms came out from the condition [6].

Studies on COVID-19, women and economics have been carried out by many experts. These studies can be grouped into three, namely studies that focus on macro-economics, dynamics of micro economics and health. Studies related to Covid pandemic and economics for example done by [1], [20], [2] who focused on the impact of pandemic on macro economis aspect in many different contexts. Study of [5] and [4] are more focused on economic and environment. Meanwhile the study of [19], [15], and [9] focused of the efforts of micro-economics in facing the pandemic, and the research on impact of pandemic on health aspects, for example, are carried out [16]; and [3].

Based on the research done by many experts above, it seemed that all researchers payed their attention on any focus as the victim, and there is no space for fighting. This research will comply with the lack of the researches. With the assumption that there are much effort done by community members, included women in facing the pandemic, this research will focus on the effort done by women in midst of pandemic in order to have the activities of business as well as helping the others. Therefore, the problems that will be addressed in this study are: first, how women form initiatives to work during a pandemic; second, what women do at work; third what is the impact of the work done by women.

[1] zulfa_elizabeth@walisongo.ac.id

There are three concept which became the basic of analytic in this research. Firstly, Covid-19. The corona virus disease (COVID-19) first reported in Wuhan, China on December 31, 2019 has spread in more than 210 countries. The researchers, doctors, and virologists across the globe are continuously working to decode the disease pattern, identify potential treatments, therapies, and develop vaccines. The genetic mutation of the virus over time has increased challenge on scientists to come out with a concrete result. Despite the availability of advanced health care systems, there has been an escalation in the number of deaths. Also, the roles of doctors and nurses have become riskier as the probability to get infected has increased while treating patients. The COVID-19 has not only affected people but also has resulted in cessation of trade, business, and economic activities.Secondly, Knowledge System. Knowledge system is a systematic structure of knowledge within concept belong to community members within a cultural entity [11] knowledge system is formed along with the life history of a community [12]. With this knowledge system, community members determine the strategy and planning of their social life [14]. With the knowledge system community members also discover new programs and new ways for resolving problems [17]. Thirdly, Womenpreneurship. Womenpreneurship has a close relation to women-entrepreneurs which referred to those women who think of a business enterprise, initiate it, organise and combine factors of production, operate the enterprise and undertake risks and handle economic uncertainty involved in running it [8]. Womenpreneurship is a phenomena depicting the activities of women entrepreneur in running their business [10]. What is interested in the phenomena of womenprenership is that not all the business run by women is the household-appliances business, but covered any other items [7].

This study focuses on changes in the knowledge system due to the Covid-19 pandemic, which then gave rise the phenomena of womenpreneurship. With a focus on this theme, this research focuses on women who as a result of the Covid-19 pandemic have formed a knowledge system which is then used as a source of economic activity, while maintaining health protocols can help others. For this purpose, the research was conducted in the Ngaliyan Semarang area with female informants who made economic efforts during the Covid-19 pandemic [18]. Data obtained by means of observation, interviews, and documentation of virtual data used by traders and community memberss to make transactions. The data is then analyzed with an analysis of knowledge systems and gender in the context of womenpreneurship so that proven that women with their knowledge systems are able to bring up entrepreneurial initiatives that benefit these women and the communities they serve.

Results and Discussion

Initiatives of business in pandemic time

Of eight informants four informants stated that the business idea carried out during the pandemic was based on the previous experience as small business women, as Fafa (not a real name) who are selling basic need such as rice, sugar, oil, and wheat flour; Bu Tini with some cooking-ingredients like onion, pepper, and salt; Sani with many kinds of fruits and cooked foods; and Rita who are selling cooked-food for breakfast and lunch. So their initiative to develop their business because of their experiences in running their business. They also realized that community members need their business related to the pandemic.

Three other informants, namely Mrs. Prima, Mrs. Seny, and Mrs. Esi have the initiative after the break of the pandemic. They are realized that all community members are aware about the danger of the virus spreading, and they chose to work from home, and they are aware of the opportunity for having business in pandemic time. The three women do not regularly offer their food or any other item that they sell. For example, Mrs. Prima, who is known by community members to have the ability to cook, any time Mrs. Prima is cooking certain dishes, or planning to cook certain dishes, Mrs. Prima will inform the community members, so that interested community memberss will order. Bu Seny also has the ability to produce specific foods, such as vegetable salads, fruit salads, puddings, and bubble drinks. Therefore, every time Mrs. Seny produces the products, she will offer them to the community members. Mrs. Esi, whose merchandises are frozen foods, only offers her merchandise once and then will only respond to the virtual community market if someone asks about the availability of her merchandise.

Referring to the data described above, the responsivity of women in responding pandemic situation [12]. Women have the sensitivity toward the community needs. Based on their knowledge system, women understand the family needs of their community members, as well as how afraid they are of Covid-19. Therefore, direct-market business is a formula developed based on a knowledge system, both regarding the type of goods, how to transact, and the business model.

Media Social Usage as Business Media

Community members where this research was conducted have been connected in a communication scheme of WhatsApp Group platform. All social information in that area is put together in that communication medium. Information about government programs, such as vaccine registration, recommendations for implementing health protocols including information on the development of COVID-19 in various regions is disseminated through this media. The news about the community members is also disseminated through this media, for example announcements of religious meetings, mosque and community activities. With a group membership of 139 accounts, and connected to all neighborhood surroundings, almost all members take advantage of this media. These are some of the examples about the ways of the business run

Some examples of daily offer by women who run bussiness

Source: Primary data

It can be seen that the business carried out by utilizing the communication platform used by community members is a strategic effort done by women. As depicted in some countries women sometimes came out as a very diligent person [8].

This kind of business is very important and can be further developed. This is related to the tendency of community members who are increasingly inclined to be served [7].

Impact of Womenpreneurship

The spread of Covid-19, which has been going on for more than a year, has not shown a significant decrease until this research was conducted. There are even indications that every time there is a long holiday, the number of Covid 19 sufferers will increase again (Bisnis.com, 1 June 2021. The impact of economic activity that has been running along the pandemic time has shaped a pandemic lifestyle. The pandemic lifestyle that is the focus of attention in this study is the phenomenon of womenpreneurship. Womenpreneurship is a phenomenon when women are motivated to do independent businesses by carrying out economic activities that are in accordance with the abilities of these women and with an orientation to meet the needs of community members.

There are three impacts of the emergence of womenpreneurship due to the Covid-19 pandemic. The first is food-production revved. Farmer, market-traders, and food producers may sell their products because of new agents, some women who become delivery traders. One informant stated that at the beginning of the pandemic many fruit owners left their fruit on the trees due to the low purchasing rate of the community members. This is happened on any other kind commodity. The present of some women who open sales services by utilizing community communication networks is very helpful in.

Second, the rise of the economic life of women who open new direct-market business to community-members. These women offering and selling as well as delivering. With the sequence of activities, these women benefit both economics and satisfaction because they can serve the needs of the community. One of the informants, Mrs. Tini, stated that as a seller she had calculated the proper profit that could be obtained from her business. Therefore, the opening of a direct-market business for selling goods during the pandemic has revived the economy of the women traders' families. Another informant stated that with the sales service activity he was able to buy some household equipment he needed and was able to help his relatives in need.

Third, serving the needs of citizens. With the fear of being exposed to the Corona virus, the direct-market business run by these women have made community members feel safer. This serenity is related to the fulfillment of daily needs in the household, as well as the serenity of avoiding the crowded environment that they have to face when they go to the market or other shopping places. One community members stated: "The services provided by these women in the midst of a pandemic like this are invaluable. Household needs are met, and concerns about contracting Covid-19 as a result of being involved in the market crowd can be avoided. I'm happy that everyone is here. Want ready-to-eat food, frozen-food, ask to be spent at the market, if there is a sudden need because soap, sugar, tea run out, all can be resolved by sending a WA message only." Other community-members stated that not only was this advantage, but a sense of trust in the quality of their merchandises was also another advantage because traders were the community-members themselves.

Conclusion

Initiatives among women for involving in marketing during a pandemic constituted the economic and humanitarian initiatives. Economic initiatives arise because of opportunities for business due to the pandemic.

On the basis that the needs of human life must be met while in a pandemic condition, there are many restrictions on life in order to maintain health and prevent the spread of the Covid-19 virus, women took the initiative to offer various needs of citizens. In addition, humanitarian initiatives arise because of imagining the difficulties experienced by community memberss due to the pandemic. By helping to meet household needs, women feel that what they are trying to do is beneficial

The use of communication media that has been used by community memberss to communicate as a medium for offering goods is a creative effort. With almost complete citizen coverage, it ensures that messages conveyed as product offerings can be read widely. The wide scope of the offer, with the intent to meet the needs of the community and responsive response from the citizens have made the entrepreneurial efforts developed. Dialogue about offers, conveying needs, ordering, and expressing gratitude from members of the community indicates that a new market design has been formed in the form of a virtual market using virtual communication media that is utilized by community memberss

The Covid-19 pandemic has had a broad impact, including within the framework of independent economic development. The economic spirit accompanied with the efforts to maintain health, anticipate the spread of the Covid-19 virus, and the spirit to help has initiated a creative economic movement for women.

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Refusing Covid-19 Vaccination Based On Islamic Criminal Law Perspective

Moh. Makmun[1]

Introduction

Indonesia has held The COVID-19 vaccination program on January 13, 2021 and President Joko Widodo was the first to be vaccinated, followed by state officials, religious leaders, professional organizations and community representatives. In preventing the spread of COVID-19, the Government has launched a COVID-19 vaccination program for 181 million Indonesians. Beginning on June 3, 2021, the Indonesia Government has vaccinated the first dose for 17,148,821 people and vaccinated the second dose for 11,003,152 people. The aim of this vaccination is the Indonesian people can rapidly achieve herd immunity and suppress the COVID-19 pandemic.

Furthermore, in COVID-19 vaccination program, Indonesia government has set vaccine recipient. Those who refuse this program, the government provide sanctions in term of revocation of social assistance participation. The sanctions are registered in Presidential Regulation Number 14 of 2021 concerning Amendments to Presidential Regulation Number 99 of 2020 concerning Vaccine Procurement and Vaccination Implementation in the Context of preventing the 2019 Corona Virus Disease Pandemic on February 9, 2021[1].

Based on the results of the SehatQ survey of 797 respondents, it was found that, there were 88% willing to be vaccinated and 12% refused [2]. Meanwhile, the results of the Saiful Mujani Research and Consulting (SMRC) survey stated that 49% of residents were willing to be vaccinated and 29% refused. Moreover,, Commissioner of the Indonesian Child Protection Commission (KPAI) Retno Listyarti explained that the rejection case was in Bengkulu. So far, about 50% of teachers have received doses of the COVID-19 virus vaccine in Bengkulu.[3]

There is a motive to reject COVID-19 vaccination program, rather seeing negative cases after injecting the vaccine. Some of vaccine effects are

1 University of Pesantren Tinggi Darul Ulum Jombang, makmun@fai.unipdu.ac.id

arm pain, fever, fatigue, headache, nausea, muscle aches, Swollen lymph nodes. For some people, there are very rare side effects may also occur after receiving a second dose of the Covid-19 vaccine, including: Allergic reactions, rare blood clots, and myocarditis.[4]

The Head of the National Commission for Post-Immunization Adverse Events (KIPI), Hindra Irawan Satari explained that there were 211 serious adverse event in which 27 died after they got Sinovac vaccine. In detail, the 27 people died consists of 10 people being infected with COVID-19, 14 people due to heart and blood vessel disease, 1 person due to sudden kidney function disorders, 2 people with diabetes mellitus, and uncontrolled hypertension. However, there have been three cases of death after having AstraZeneca vaccination. They are 21 years old of young man, 60 years old of elderly, and online motorcycle taxi-driver who died after after having AstraZeneca vaccination[5]. Not merely causing loss of life after vaccination, COVID-19 vaccination also cause paralyzed. It has been experienced by a 31-year-old honorary teacher named Susan Antela, a resident of Sukabumi, West Java.[6]

Based on above problems, this study will examine the perspective of Islamic Criminal Law on refusing the COVID-19 vaccination.

Problem Formulation

1. Is Refusing the COVID-19 Vaccination involved as an act of breaching the perspective of Islamic Criminal Law?
2. How is the law of refusing COVID-19 vaccination based on the perspective of Islamic Criminal Law?
3. How is the legal sanctions for refusing the COVID-19 vaccination based on the perspective of Islamic Criminal Law

Discussion

Islam is a religion, which provide teaching about various aspects of human life. It aims to protect religion, life, property, honor and reason (intelligence), where all of these are then formulated into rules forbidding committing *jinayah* (criminal acts).

Islamic law strongly adheres to the principles of justice ('is), compassion, and maslahah, so that every rule of law that deviates from these principles is essentially not part of Islamic law, even though it is justified or rationalized (*ta'wil*) to make it a part of it.[7]

An act is considered as a crime has the following elements: First, there is a text that prohibits it, accompanied by sanctions. The term law is called *al-rukn al-shar'i* (formal element) *jarimah*.[8]

Second, there are actions in the form of *jarimah*, either in the form of actions or attitudes of not doing, is called *al-rukn al-madi* (material elements) jarimah. This element is usually considered to be against the law, meaning that someone's actions form a finger, either with an attitude of doing or not doing. [9]

Third, there are perpetrators of criminal acts who are already in the category of *mukallaf* (legally competent). This is called *al-rukn al-adabi* (moral element). The crazy people, children and not forcing to commit a crime or because they who defend themselves are not involved asas perrpetrators of criminal acts.; The three elements above are a unified, and they cannot be separated. If one of the three elements is not present, then a person who commits criminal act cannot be subject to legal sanctions.

In addition, there are also special elements that apply to *jarimah* and they are different to special elements in other *jarimah*. For example, taking other people's property secretly is a special element in robbery, namely taking other people's property openly. The existence of legal sanctions due to criminal acts. Therfore, the purpose of criminalizing an act in the opinion of Islamic jurists is because the act is detrimental to the social system, beliefs, property, good name, honor, soul, etc. protected, respected and protected.

The Act of Refusing The Covid-19 Vaccination Based on The Perspective Of Islamic Criminal Law

One of the effective steps in preventing and tackling the spread of COVID-19 is vaccination. Vaccination as a way to provide immunity against disease. While many people are being immune to the virus, it is hoped that in the future herd immunity[10] will be existed. However, the government's national vaccination program did not run smoothly due to the rejection from some Indonesia citizen. There are some parties who refuse for certain reasons.

The refusal of the COVID-19 vaccination itself, must be distinguished based on different reasons. Basically, vaccination refusal can be divided into two different aspects, namely: First is blatant refusal, which is done by using both online media and offline model. The second is them who secretly refused to be vaccinated for themselves.

Furthermore, those who reject vaccination openly and publicly must be investigated properly that their motive for their refusal is to influence other people not to get vaccinate. Moreover, they also intend to opposing the government to make chaos in the society and to show that theyhave different opinion with the government. Then this act is already involved as *jarimah* or crime.

It is involved to be a criminal act (*jarimah*) due to elements of *jarimah*: First, there are texts that prohibit, as in the Qur'an al-Nisa': 49. Also the *hadith* of the Prophet Muhammad SAW.,: "A Muslim is obligated to listen and obey in matters that he likes or hates as long as he is not ordered to commit a sin. If he is ordered to commit a sin, then there is no obligation to listen and obey." (Narrated by Bukhari).

In addition to the above verse, there is also a hadith which reads:

> "Abu Hunaidah (wail) bin Hudjur said: Salamah bint Yazid Al Ju'fi asked the Messenger of Allah,: O Messenger of Allah, what if heads were raised above us who were only good at demanding their rights and withholding our rights, then how would you order the we ? At first he ignored the question, until he was asked a second or third time, then the Messenger of Allah, took al-Asy'ats bin Qois and said: Listen and obey all of you (to them), then indeed above them is a responsibility. responsibility / obligation on themselves and for you there is a separate responsibility." (HR. Muslim).

Second, there is an act in the form of *jarimah* in the form of a statement regarding the refusal of vaccination, both online and offline. Third, the existence of *jarimah* perpetrators who are already *mukallaf* (legally competent).

The types of *jarimah* include *jarimah* with legal sanctions in the form of *ta'zir* (there is a prohibition in the text (*nass*) but is not followed by clear legal sanctions). In addition, this finger of rejection of vaccination is included in the category of political finger.

It is called a *jarimah* act because it harms the social system, causes noise and panic in the society, and causes an increase in the spread of COVID-19 in the society. Keeping the soul is one of the things that must be nurtured and protected in Islam. Also the existence of Islamic criminal law is in the context of making protection to the community (social defense).

While the second group who refused vaccines covertly, means that someone did not intend to be vaccinated for reasons of his health, he did not issue a statement to the public that he did not receive the vaccine, and had no intention of provoking others. This group cannot be considered as a *jarimah*. Because it does not meet the elements of an act of *jarimah*. In addition, this group also did not meet the vaccination requirements as stated in the Decree of the Director General of Disease Prevention and

Control of the Indonesian Ministry of Health No. HK.02.02/4/1/2021 regarding technical instructions for the implementation of vaccinations in the context of dealing with the COVID-19 pandemic regarding the requirements for receiving the COVID-19 vaccine.

Those who refuse vaccines because of health factors in Islam are justified. This is in accordance with the fiqh rules which read "to gain benefits and leave harms"[11] and "rejecting harm takes precedence over taking benefits". This means that if a person has a health disorder in him, then following the vaccine can actually worsen his health, then this is permissible.

In addition, the Decree of the Director General of Disease Prevention and Control of the Indonesian Ministry of Health No. HK.02.02/4/1/2021 is correct. This is based on the rules of fiqh which reads the rules of تصَرّفُ الامَامِ عَلَى الرّعِيَةِ مَنُوطٌ بِالمصْلَحَةِ (The leader's policy towards the people depends on the standard of benefit)[12]. This means that it only applies to those whose physical condition is healthy or does not have a history of dangerous diseases. And also according to the rules "Actions include the interests of others are more important than being limited to their own interests."[13]

On the other hand, people who refuse vaccines for reasons of health considerations and they do not participate in provoking or issuing anti-vaccine statements and prefer to remain silent, in fact they are also in accordance with the fiqh siyasah rules which read "Getting out of disagreement is being liked[13]"

The Law for Those Whom Rejects the COVID-19 Vaccination Based on Perspective of Islamic Criminal Law

There are two different things regarding them who refused COVID-19 vaccination. First is blatant refusal, which is done by using both online media and offline model. This act is considered a criminal act, and then the law aboout refusing vaccination is *haram*. This action is forbidden because it contains elements of opposing the government, causing social unrest, and threatening the public good, whereas in Islam the people are required to obey the leader, as stated in the letter al-Nisa ': 59. and Muhammad SAW, the Messenger of Allah, once said:

لَزَوَالُ الدُّنْيَا أَهْوَنُ عَلَى اللهِ مِنْ قَتْلِ رَجُلٍ مُسْلِمٍ

"The destruction of this world is lighter (sin) than the killing of a Muslim." (HR. Tirmidhi)

The prohibition of this action is not only based on *nass*, it is also based on the consideration that many people refuse vaccination because of provocation and misleading information from them who refused vaccination progra. Therefore, it impacts on the spread of COVID-19 easily. Furthermore, the act of refusing national vaccination program, by provocation, is very dangerous to human health and life. Although Islam toughly emphasizes its adherents to always keep their lives (*hifdz al-nafs*).

Second, it is permissible to refuse national vaccination by considering individual health. This ability is strengthened by the Decree of the Director General of Disease Prevention and Control of the Indonesian Ministry of Health No. HK.02.02/4/1/2021, which is also based on benefit and harm. In addition, mutual understanding between the government and the societyy is the implementation of principles:

> "For them there are rights like the rights that we have and they are burdened with obligations like the burden of obligations to us"[14]

This means that the government and society both have rights and obligations. In terms of national vaccination, the government has the right to require vaccines, and the government has the obligation to protect the health and lives of the people from the COVID-19 pandemic. Therefore, the government requires vaccination merely for people whose bodies are suitable for receiving vaccines, while people whose health conditions do not allow them to receive vaccines, then the government cannot force them. Meanwhile, the community or society has an obligation to obey the leader in carrying out the national vaccination program for the public good. Meanwhile, they have a right not to receive the vaccine if their health condition makes it impossible to receive the vaccine.

Legal sanctions for those whom rejecting Covid-19 vaccination, based on the perspective of Islamic Criminal Law

They whom rejecting the COVID-19 vaccination, are classified into two kinds. First is blatant refusal, which is done by using both online media and offline model. This act is considered a criminal act, and it is unlawful. The legal sanctions is called *ta'zir* in which the sanctions depends on the impact.[15] The *ta'zir* legal sanction was imposed due to several elements such as: violating the Qur'an surah al-Nisa' verse 59, violating the *hadith* of the Prophet Muhammad, provocations and disturbing public order, and causing the easy spread of COVID -19 in the society.

The severity or lightness of the *ta'zir* legal sanction is in the government's decision, referring to the impact caused by the act of refusing vaccination. The existence of *jinayah ta'zir* implies that the government provides freedom to determine legal sanctions against criminal acts that are not explicitly regulated in the Qur'an and Hadith. This is in accordance with the rules of *fiqh jinayah* :

> “the *ta'zir* sanction is decided by the *imam* (government/judge) in accordance with committed crime".[14]

> "The leader's policy towards the people depends on the standard of benefit."[14]

Crime is a demand for justice, punishment provide a logical necessity as a consequence of crime, because crime is a denial of law and order in the state which is the embodiment of moral ideals.

The second is silent refusal. It done by refusing to vaccinate only for themselves. This is not involved *jarimah* and the law is permissible. Moreover, them who conduct this act, cannot be subject to legal sanctions by the government Because the elements to be referred to as misconduct are not fulfilled, besides that this group is included in the group that is excluded from the vaccination obligation as stated in the Decree of the Director General of Disease Prevention and Control of the Indonesian Ministry of Health No. HK.02.02/4/1/2021.

Conclusion

There are two kinds of acts of refusing the COVID-19 vaccination. First is blatant refusal, which is done by using both online media and offline model. This act is considered a criminal act, and it is unlawful. The legal sanctions is called *ta'zir* in which the sanctions depends on the impact. The second is silent refusal. It done by refusing to vaccinate only for themselves. This is not involved jarimah and the law is permissible. Moreover, them who conduct this act, cannot be subject to legal sanctions by the government.

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Teacher Decision Making Using Resources in Providing Explanation of Materials in Mathematics Learning

Muchtadi[1], Usmiyati[2], Fitri Nur Isnaniyah Rahaju[3]

Introduction

Appropriate and conscious decision-making by the teacher can implement learning by the expected goals. This makes decision making an important priority in learning [1] because it can promote student development, and focus on developing the professional abilities of teachers [2]. Likewise, how teachers make decisions is very important [3] because it can be the basis for describing the important role and key factors of teachers in helping the achievement of student learning goals. For this reason, teacher decision making is an important aspect for the development of mathematics education, which is related to mathematics teacher research [4]. Among them, how to see and interpret events related to action, adapt and shape classroom situations, and make choices when options are available.

In addition, research on teacher decision-making is important because it provides efficient implications that can reveal the inner world of successful teachers [5]. This shows that teacher decision-making is a very essential study and has been studied from various perspectives. First, about the components used in decision making by teachers [6]; second, pedagogic decisions in mathematics learning [7], [8]; third, interaction decisions during classroom learning [9]. This study investigates the teacher's role in applying ways of thinking to behaving and acting that are based on the components of teaching decision-making in classroom interactions.

Various actions taken by the teacher during teaching are a form of decision making [10]. Teaching is a complex cognitive skill, so it requires the right decision making [11] including when the teacher decides to give

[1] IKIP PGRI Pontianak
[2] IKIP PGRI Pontianak
[3] IKIP PGRI Pontianak

an instructional explanation [12]. Instructional explanations carried out by the teacher are intended to help communicate the subject matter to students, namely facilitating the understanding of ideas that were previously inaccessible [13]. For example, the use of several appropriate actions in providing instructional explanations. This action, in the implementation of learning, is the application of decision making. The instructional explanation is a very powerful, unique and important moment in learning mathematics[14].

Through instructional explanations, teachers help students gain an understanding of rules, mathematical concepts [15], and if implemented in quality and complex manner, will result in meaningful learning for students [16]. Instructional explanations also help students correct errors regarding skills, concepts, principles and procedures when studying on their own [17]. However, research evidence is still needed on the implementation of instructional explanations with a certain orientation that can help students understand mathematical material [18]; and make instructional explanations effective in learning mathematics [19], [20].

The quality of instructional explanations can be improved by linking various actions taken by the teacher with learning as a form of teacher decision making [1]. This needs to be done because a quality explanation is influenced by the teacher's decision-making ability [21]. Actions at certain moments due to the teacher's decision making, always include the components of resources, goals, orientation, and are closely related to the teacher's thinking ability [22], [23]. Based on this, the teacher's actions at the moment of providing material explanations to students are very worthy of study or research considering that there is very little research on teacher thinking in carrying out learning [24]. So the important role of the teacher in helping students understand the concept, in this case, the teacher's decision making using resources needs serious attention.

The implementation of the teacher's actions to provide instructional explanations, in this case, the explanation of mathematical material when learning in class, can be process or product-oriented [25]. Process-oriented means that the explanation of the material is given a step-by-step procedure, equipped with supporting concept information to help students' conceptual understanding according to the material being discussed [26]. While the explanation of product-oriented mathematical material means that the explanation of the material provided by the teacher has been described in such a way so that the teacher does not invite students to find the procedure used or just mention it again [27]. If it is related to the totality of teachers in carrying out instructional material explanations, the teacher's behaviour in providing product-oriented material explanations is not carried out optimally and is inversely proportional to teachers who carry out process orientation. For the successful implementation of the explanation of the material, the teacher must be able to decide when to carry out the explanation of the process or product-oriented material. For this reason, it is necessary to complete the repertoire of research on various teachers delivering explanations of their subject matter, so through this paper, the researchers try to describe some of the techniques for delivering material explanations by teachers, in learning mathematics, especially during the Covid-19 pandemic which began in December 2020.

Discussion

Learning activities during the Covid-19 pandemic are directed so that the learning community in schools and the environment where they interact does not occur interpersonal contact. This is to prevent the spread of the Covid-19 virus. One way is to use the internet network. However, as we all know, not all areas have internet networks available in Indonesia. And not all of our society can provide internet facilities for their children to learn. Based on this, two learning techniques may be carried out by the school community based on the availability of the internet, online learning or offline learning [28]. In the following, we will discuss the two technicalities of learning mathematics, namely online and offline.

Learning Mathematics Online

Online learning means that students learn and teachers teach or teacher and student interactions when discussing subject matter occur using additional equipment such as cellphones or laptops that are connected to the internet network [29]. So, teachers and students do not do face-to-face activities. This means that teachers and students are in different places. The software that can be accessed by teachers and students can be in the form of WA or WhatsApp, Youtube, or various web addresses that support the online learning process. Through WA, teachers provide mathematics learning in the form of video voice notes created by the teacher himself or include various material links that can be accessed by students. Of course, what the teacher has to think about is whether the decision to ask students to access the content of the material is appropriate or not with the material being studied. Other media related to the internet, cellphones and laptops, can be in the form of software zoom, google meet, google classroom, or google form, and others. The more diverse media that can be used by teachers and students to carry out mathematics learning, of course, can provide certain conveniences. However, the various software's that have been written above, not all students can access them easily, especially those whose internet is weak or not smooth. And again, some of this software can be called greedy for data. So, for teachers and students who have little data availability, it can be difficult to implement learning.

Another problem that also arises is, naturally, the name of the student must require an explanation from the teacher in advance, especially the initial material [17]. This is because students need a material explanation guide given a step-by-step procedure, equipped with supporting concept information to help students' conceptual understanding according to the material being discussed [30]. In addition to the difficulty of internet data problems, some things might be avoided by carrying out online learning, if the review is related to the problem of the Covid-19 Pandemic. Because there is no face-to-face interaction between teachers and students, the possibility of the virus spreading can be avoided.

Learning Mathematics Offline

The implementation of offline learning means that there are meetings between teachers and students. there is an interaction between the two. This atmosphere inevitably has to happen and be implemented, considering the learning process must continue to be implemented. For certain areas, an internet connection may be available. Then the school, especially the teacher, is ready with all the tools that support the readiness for the implementation of online mathematics learning, but the students with parents who have mediocre income, of course, it is difficult to carry out the procurement of equipment needed for their children to learn online. Based on this, of course, the school in this case the teachers cannot force the will, that the implementation of learning must be online. Schools need to make the right decisions. Decisions that may be taken and implemented by teachers are to collect and prepare teaching materials for each subject matter. Then make a resume of teaching materials following the syllabus and stages of the learning implementation plan. What should not be forgotten is to complete the resume with appropriate examples and evaluation questions. Then the resume also includes instructions for students to read, study, try, understand, and work on evaluation questions neatly to then be collected by the teacher as a basis for assessment according to the material being studied.

After the resume is ready and has been duplicated according to the number of students, the next decision, the teacher can group the student's residence position, perhaps based on a particular village. After that, the teacher's visit to the student's place is set, according to the intended village. For example, Monday, in the material section, then Saturday, the teacher comes to take the students' work. And so on, the following Monday, the material and the results of the evaluation questions were also given to students, perhaps with the hope that students understood whether the questions they had worked on were correct or not. Returning the evaluation results that have been assessed, is the feedback that can be a good motivation for all students. In addition to only delivering material and giving assignments to be made by students, another form of decision that can be made and implemented by teachers is to visit students' homes and carry out learning like in class. However, this form of decision is only suitable for low or early grades, with not many classes and few students. Teachers must be painstaking and tireless.

Based on the two types of learning, namely online and offline, many changes occur and must be done by teachers. These changes must be in the interests of students. whether learning is carried out online or offline, decision making must remain to carry out a series of processes as they should. For example, there must be a preparation process to describe the material explanation. So, the description of the explanation of material must remain, because it is very helpful for students. Students should not only be given assignments. Then the return is not given. In addition, teachers must also be able to work with parents. At least, parents are expected to be teachers at home to help their sons and daughters to study.

Conclusion

The implementation of the mathematics learning process during the Covid-19 pandemic was carried out online and offline. The implementation of online learning has changed teachers, from not being accustomed to using gadgets connected to the internet, to being accustomed. Teachers inevitably have to learn to make interactive learning videos or can use communication via voice notes, like when interacting in ordinary classes. Offline, teachers must be able to create resumes and evaluation questions that students can use to learn new concepts and to get grades according to the material being tested. And what should not be forgotten is that teachers should not forget the rights of students in learning.

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Model of Empowerment of Breastfeeding in Young Mothers in Indonesia

Mufdlilah[1]

Introduction

Breastfeeding provides various benefits for mothers and babies and strengthens the bond between mothers and babies [1]. Breastfeeding can be done by every woman who has children regardless of young age or old age. Young mothers are more prone to stop breastfeeding [2]. This is due to various reasons, such as a little milk comes out; the child is still hungry; and the intention of the mother in stopping breastfeeding [3]. Breast milk is the main nutrient for babies which contains fat, carbohydrates, protein, vitamins, and minerals [4]. Breast milk can increase the baby's immunity against infection. In addition, breast milk also has a biocative component for growth and development [5].

Problems that occur during breastfeeding are initiating and maintaining breastfeeding. In adolescent mothers the challenges in breastfeeding are heavier, and negative thoughts and practices in breastfeeding often occur [6]. In addition, the absence of the ability of mothers and their partners to obtain correct information, feelings of shame and doubt, confusion about whom to ask, reluctant to come to health services, and a special group of breastfeeding mothers. This is because there is no mental readiness to face this situation. As a result, mothers are easily influenced in making decisions to breastfeed their babies; making decisions are still the responsibility of their husbands or elders.

Negative pressure and stigma are often experienced by breastfeeding mothers at a young age. This is because the view of society is that at a young age, they should still be in the stage of searching for identity, getting to know many people, learning and playing with peers not to take care of children and husbands. This feeling creates a sense of shame which can be bad for the psychology of young mothers because of feelings of depression. This situation can affect breast milk production and even

[1] Master of Midwifery Universitas 'Aisyiyah Yogyakarta

change the mother's mindset. The mother does not want to breastfeed her child and prefers a family to care for her child. In addition, several factors that influence young mothers to breastfeed include role, place, stigma, and support [7].

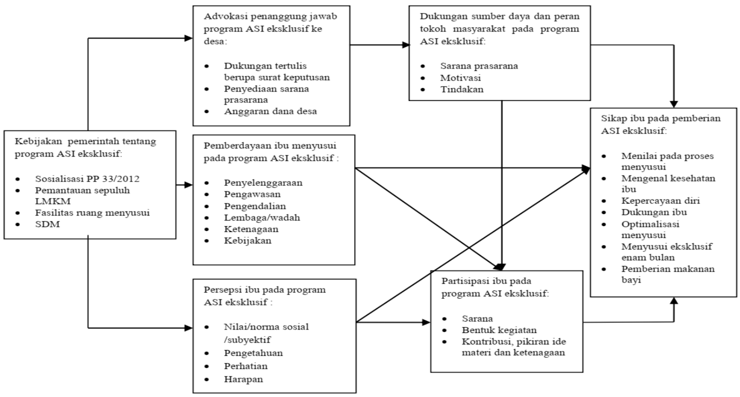
In addition, other things that can influence breastfeeding for mothers are the impact of breastfeeding on social and intimate relationships, the availability of social support, the physical demands of breastfeeding, the mother's knowledge of the practice and benefits of breastfeeding, and the perception of a mother's comfort in breastfeeding [8]. In addition, the mother's intention to breastfeed can be a supporting and encouraging factor; if the mother does not have the intention to breastfeed her baby, breastfeeding failure can occur [9]. Breastfeeding skills in young mothers are inadequate, such as incorrect breastfeeding techniques [10]. The experience of breastfeeding, especially primiparous mothers, is still lacking. In addition, psychological and biological problems experienced. This situation can be the cause of the mother to stop breastfeeding her baby [11].

There needs to be a policy and program that aims to increase and retain mothers to breastfeed. The breastfeeding empowerment model can be a solution in overcoming the problems that occur. The empowerment model is an effort in problem solving, participation development, and solutions. Empowerment of breastfeeding becomes an intervention in an effort to help and solve breastfeeding problems [12]. Breastfeeding empowerment programs have an influence in increasing self-confidence, adaptation, and continuity in breastfeeding for primiparous mothers [13]. Kang et al, states that breastfeeding empowerment program is effective in increasing breastfeeding [12].

Empowerment is carried out continuously in helping individuals change from not knowing to knowing, from knowing to being willing (attitude), from being willing to being able (practice). Empowerment is carried out through individuals, families, groups and communities. Community empowerment is an effort that aims to foster awareness, knowledge, understanding in individual groups and communities to generate a willingness to take an action or attitude in improving their health so to increase the community's ability to support the realization of healthy action or behavior. Efforts to improve nutrition improvement are a way to achieve empowerment goals.

Discussion

Breastfeeding empowerment model for young mothers as a community-based program to help increasing awareness and attitudes of mothers in breastfeeding. Breastfeeding empowerment models in young mothers include government policies on exclusive breastfeeding, advocacy for the person in charge of the exclusive breastfeeding program, support for resources and the role of community leaders, empowerment of breastfeeding mothers, perceptions, participation, and attitudes.



Breastfeeding empowerment model for young mothers

Government Policy on Exclusive Breastfeeding

Every baby should get exclusive breastfeeding from birth during the first six months of birth, except for medical indications. During breastfeeding, the family, government, local government and the community must fully support the mother and baby by providing special time and facilities. Provision of facilities such as workplaces and public facilities has been legally stated in law number 36 of 2009 concerning health article 128, paragraphs one and two. In addition, Article 129 paragraph one states that the government is responsible for establishing policies in order to guarantee the right of infants to receive breast milk exclusively [14]

The government has established a national policy regarding the exclusive breastfeeding program which becomes one of the responsibilities of the government in the exclusive breastfeeding program. The objectives of the arrangement of exclusive breastfeeding are to ensure the fulfillment of the baby's rights, provide protection to mothers, and increase the role and support of families, communities, and government for breastfeeding [15]. Empowerment contributes to policy development and effective implementation in promoting breastfeeding [16]. Efforts to promote breastfeeding include introducing 10 steps to successful breastfeeding [17]. This is a policy undertaken by the government to increase breastfeeding.

Policies related to facilities that support breastfeeding is in the form of providing breastfeeding rooms in offices, schools, shopping centers, places of worship, and other public places. This really helps mothers to achieve successful breastfeeding, and there is no excuse for mothers not to breastfeed their babies. Baswori et al, states that the importance of breastfeeding facilities at work is still ignored; it is showed that some office areas or public places do not have the breastfeeding facilities. This problem must be addressed immediately with the existence of a legal policy from the government regarding the existence of facilities for breastfeeding mothers as stated in law number 36 of 2009 concerning health, article 128 paragraphs one and two and article 129 paragraph one.

Advocacy of the Person in Charge for the Exclusive Breastfeeding Program

Advocacy is a form of planned, organized and systematic activities that can influence policy. Advocacy of the person in charge of the exclusive breastfeeding program is carried out through a motivational and coaching approach. Activities carried out as a strategic and planned effort to obtain written support, procurement of facilities and infrastructure, and funds. Support obtained from various parties can be in the form of facilities and infrastructure, motivation, and action. Comprehensive support can facilitate breastfeeding empowerment [18]. Advocacy and socialization of exclusive breastfeeding programs are included in the government's responsibility in exclusive breastfeeding [15]. Government policies on maternity leave and breastfeeding include advocacy for the person in charge of the exclusive breastfeeding program.

Based on the Manpower Act No. 13 pasa 83 of 2003, pregnant women get three months of maternity leave and 3 months of breastfeeding leave. In fact, the recommendation for breastfeeding is six months, and this is actually a problem for mothers, especially working mothers, because they have to divide their time with work and the need for babies to get breast milk. In fact, the baby still gets breast milk, but not directly from the mother. In addition, this situation can also affect milk production due to feelings of fatigue, unpreparedness, and lack of facilities in the workplace environment. Therefore, empowering breastfeeding mothers must be done properly so that mothers can overcome their own problems and do not influence mothers to breastfeed.

Resource Support and the Role of Community Leaders

Support has an effect on improving maternal attitudes in breastfeeding [19]. Support for mothers in breastfeeding is lacking [10]. This is due to inadequate support for facilities, families, health workers and community leaders, low maternal motivation, and inappropriate maternal actions. Motivation is an encouragement to do something in order to achieve goals, as well as motivation is an indicator in the empowerment model of young breastfeeding mothers. If the mother has good motivation to breastfeed and has a strong urge, the milk that comes out will be smooth and the problem of breastfeeding can be resolved properly. Pinto et, al, motivation as a motivation for mothers to breastfeed [20].

Support from health workers is the spearhead for mothers to choose to breastfeed their children and can overcome problems during breastfeeding. Health workers must support mothers by accompanying them, jointly addressing breastfeeding problems that mothers experience through motivation, promotion, and peer counselors [21]. This can affect the mother's actions such as the mother will be more confident to start breastfeeding since Early Breastfeeding Initiation, understand how to breastfeed properly and correctly, and how to solve problems during breastfeeding. Support from health workers also influences breastfeeding practice, what health workers can do is to help teenage mothers to give breast milk to their babies that can be done from the beginning of labor even during early pregnancy and promote the benefits of breastfeeding [22].

Social support from those closest to adolescent mothers is very important in helping adolescent mothers in overcoming breastfeeding-related problems that can affect the behavior of mothers in breastfeeding because mothers are more likely to stop breastfeeding when they have problems while breastfeeding [23]. Adolescent mothers should receive effective breastfeeding preparation from pregnancy, willingness of family members to participate in programs to support breastfeeding, planning breastfeeding, skills to negotiate positively [24].

Support from husbands, family, facilities and infrastructure can influence mothers in breastfeeding so that mothers need to ask for opinions from various views, not just accept or agree without knowing the advantages or disadvantages [25]. The place of service is included in the support of infrastructure. Health care providers play an important role in supporting breastfeeding for mothers and providing care by initiating infant-friendly hospitals including ten steps to successful breastfeeding and not providing gift packages containing formula milk [26].

The role of local community leaders can be role models that can support mothers to breastfeed their babies. Young mothers do not have experience in breastfeeding, especially primiparous mothers. Apart from support from health workers and families, the role of community leaders is also important because they become a model for part of the community and their trust in them. Teenage mothers are more likely to be easily influenced by the others because there is no role model for teenage mothers themselves in breastfeeding if their own families do not support the mother in breastfeeding [25].

Empowerment of Breastfeeding Mothers

Empowerment is participation consisting of supervision, control, institutions, facilities and very important thoughts / ideas. Empowerment is needed in providing information, mentoring, preventing and overcoming health problems to help individuals, families and groups through the stages of knowing, wanting and being able. Empowerment of breastfeeding mothers is an effort that aims to raise awareness, increase knowledge, understanding of individuals, groups and communities to change attitudes in improving the health of breastfeeding mothers. Efforts to protect, support and promote exclusive breastfeeding need to be done by increasing empowerment.

Empowerment of breastfeeding in adolescent mothers is poorly applied. This is due to the absence of special implementation of empowerment programs for adolescents as well as institutions that support them. So far, only information is given to all breastfeeding mothers and most of those who come or get information are mothers with reproductive age over 25 years. Positive feedback from health workers and families in supporting breastfeeding is a factor that can influence empowerment in breastfeeding [27].

Perception

Perception is a response through motivational stimulation, information, socialization, and intention. Mother's perceptions about breastfeeding can influence the mother to start, continue, or stop breastfeeding. Negative maternal perceptions can be a factor influencing breastfeeding practice for mothers [28]. Therefore, building positive perceptions can have a positive impact on thoughts and actions. Heidari, et al. states that formulated five perceptions of mothers in breastfeeding, namely empowerment in breastfeeding, namely sufficient knowledge and skills in breastfeeding, overcoming breastfeeding problems, the value of confidence in breastfeeding, and understanding comprehensive support in breastfeeding [27].

There are five factors that can influence a mother's perception of breastfeeding, namely experience, knowledge, motivation, expectations, and culture [29]. Indicators of maternal perceptions in breastfeeding consist of values or norms, knowledge, concerns, and expectations. The value in question is in the form of a person's belief in breastfeeding from a religious aspect. Religious belief in breastfeeding can be an effective factor in empowering breastfeeding mothers. As the Islamic religious belief in Surah Al-Baqorah verse 233, it is recommended that mothers breastfeed their children for 2 full years.

Sufficient knowledge and skills in breastfeeding are the main factors for empowerment in breastfeeding. Knowledge gained from a variety of adequate information and practical skills in breastfeeding such as correct breastfeeding techniques are aspects of breastfeeding. In addition, the ability to assess breastfeeding status is also important for mothers to know because it can help mothers find solutions to improve breastfeeding [27]. The knowledge and skills of adolescent mothers about breastfeeding can be supported by promoting the duration of breastfeeding, pain management during breastfeeding, and how to recognize baby cues with more babies such as cues when the baby is thirsty. This can improve breastfeeding behavior in teenage mothers [30].

Poor knowledge about the basics of breastfeeding and infant development can lead to thoughts of mothers to stop breastfeeding and even refuse to not breastfeed their babies [11]. Mother's knowledge about the benefits of breastfeeding and awareness of mothers to give breast milk to their children have an influence in breastfeeding practice [2]

In addition, the mother's lack of confidence in the fulfillment of infant nutrition can be a factor affecting empowerment in breastfeeding. So that the mother must be given certainty about the benefits of breastfeeding for the growth and health of the baby [27]. This can be a hope for mothers to give breast milk to their babies.

Participation

The participation of mothers to participate in exclusive breastfeeding programs must be supported by good infrastructure, various forms of activities regarding exclusive breastfeeding programs, and contributions. The fact is that there is a lack of participation in infrastructure, there are no nursing room facilities in offices or public places and others. Activities that support exclusive breastfeeding programs that have not been running well, such as Breastfeeding Support Groups or other activities. Participation in maternal support groups is still felt to be uneven in society. The activities of mother support groups have not been used properly by mothers and their families. The participation of breastfeeding mothers in the exclusive breastfeeding program in participating in maternal support group activities is still lacking.

There are several aspects that need to be considered in empowerment efforts, among others: efforts, optimization, community potential, partnerships, development growth, regulation, independence, sustainability, and cadre development. Mothers are less interested in contributing to activities such as seminars, training, promotions, and other contributions that support breastfeeding for mothers, especially young mothers. This lack of participation can be caused because the mother feels embarrassed to participate in these activities, lack of support, motivation, and intention.

Attitude

The human attitude is a state of balance between the driving force and the holding force. Attitudes can change when there is balance. Three main factors contribute to changes in attitude, goals, and expectations. In addition, the partner's attitude must be considered because it can influence the mother in breastfeeding [31]. Therefore, it is not only mothers who must support breastfeeding, but partner attitudes must be considered such as providing breastfeeding facilities while the mother is at home, accompanying mothers while breastfeeding, jointly caring for babies, and not being selfish in managing the household.

Inadequate support can affect the attitude of the mother in breastfeeding even though the mother's knowledge is good [32]. Knowledge, attitudes and practices of breastfeeding influence the success of breastfeeding for adolescent mothers and health education activities should be promoted since the prenatal period [33]. Therefore, it is necessary to introduce a breastfeeding empowerment model as an effort to overcome and find solutions to problems during breastfeeding.

Conclusion

The breastfeeding empowerment model for young mothers can be applied as an effort to overcome and find solutions to breastfeeding problems. In addition, this model is a community-based program to help increase mother's awareness of breastfeeding. There are 7 formulations of breastfeeding empowerment models for young mothers, namely government policies, advocacy for the person in charge of the exclusive breastfeeding program, support, empowerment of breastfeeding mothers, perceptions, participation, and attitudes.

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Learning Strategies at Pesantren During The Covid-19 Pandemic

Muh. Mustakim[1]

Introduction

Pesantren is Islamic educational institution has been developing in Indonesia for a long time. One of the uniqueness of pesantren requires students to live in dormitories that have been provided in the pesantren. In addition, the pesantren is led by a caregiver or council, has its worship facilities and study rooms in the pesantren, and has curriculum which usually studies the "yellow book" or books by ulama from the past to the present. These five things are the main characteristics of pesantren, namely the existence of Kyai, santri, yellow books, mosques, and dormitories. The existence of a complete set of Islamic boarding school facilities is a prerequisite for boarding schools. Although simple, all these devices are always held in the pesantren. Naturally, if the pesantren requires students to live in dormitories that have been provided by the pesantren. Pesantren as part of the Indonesian nation and even the world's Islamic educational institutions cannot escape the existing and developing situations and conditions in the global world, especially in the archipelago [1].

It has been more than a year since the world has faced a long-lasting "as if never-ending" pandemic COVID-19 virus. This virus has been designated by the world health organization as a global pandemic that affects the majority of the world's population. In Indonesia, the COVID-19 pandemic has also become a serious problem affecting various sectors of life such as the economy, society, education, and other sectors. Until July 2021, almost two million Indonesians were affected by COVID-19, even in the last few days, more than 1000 people died every day, until health facilities became overcrowded treating Covid-19 patients. So that the government has decided on various policies since the beginning of the pandemic for the prevention and control of COVID-19. The policy of working from home and studying from home is a choice that must be decided by the government

1 Universitas Alma Ata, Yogyakarta, Indonesia, email: muh.mustakim@almaata.ac.id

The online learning policy has become a decision of the Indonesian government in the past year. What about pesantren, can pesantren adapt to this policy to minimize the spread of COVID-19. Although it is not an easy choice, pesantren must be wise and wise in responding to the existing situation and conditions. This paper discusses the learning carried out in Islamic boarding schools during the COVID-19 pandemic. This paper study uses a qualitative method by making the learning process in Islamic boarding schools during the pandemic the main object of research. Data collection comes from research results that have been published in various research journal publications and other research reports. In addition, the authors also collected data by interviewing several pesantren managers, guardians of santri, and santri. This paper seeks to answer how the learning innovations by Islamic boarding schools (pesantren) in dealing covid -19 pandemic.

Learning Strategies in Islamic Boarding Schools during a Pandemic

Nurcholis Madjid has a prediction that if Indonesia had not been colonized, it would be very possible for Indonesia's higher education model to be pesantren such as the 'universities' of Tremas, Krapyak, Tebuireng, Bangkalan, Lasem, and others. This is based on the fact that many Western higher education systems grew out of the forerunners of religiously oriented universities [2]. Cak Nur's assumption is reinforced by the statement of Martin van Bruinessen who argues that pesantren is a great tradition. Islamic boarding schools have a special contribution in transmitting traditional Islam through teaching or studying ancient books written several centuries earlier or better known as the yellow book *(kitab kuning)* [3]. Traditions that are unique in this special boarding school deserve appreciation, even if they need to be sserved. Among the uniqueness of pesantren learning is the division of learning classes oriented to mastery and understanding rather than age.

Learning in pesantren – generally – learns the yellow book, Santri listens to oral readings by Kyai (ajengan, ustāż or master teacher). while the santri give harakat to the yellow book they are holding as read by the kyai and record the explanation, both in lugawi (language) and ma'nawi (meaning). The learning system carried out in pesantren is a bandongan system or collective service, sorogan or individual service, and memorization (tahfiz) and discussion systems (musyāwarah / mużākarah / munādarah). Learning strategies and learning methods include lectures, tadris wa ta'lim, assignments, simulations, practice (demonstrations), discussions, and muhādarah 'āmmah (general stage). Bandongan is a teaching method with a lecture system where the kyai reads part of the book in front of a large number of students (usually advanced level) at certain times. Sorogan is a form of teaching and learning in which the kyai only faces a student or a small group of students who are still at the elementary level. The technique of learning is that the santri thrusts a book in front of the kyai then the kyai reads part of the book and then the Santri repeats the reading under the demands of the kyai[5].

The learning approach in Islamic boarding schools is holistic because the learning process and the totality of daily activities become a single unit, becoming an integral part of everyday life in the pesantren as a whole. The education developed by pesantren aims to make students maintain religion and develop values. Mastuhu suggests learning in Islamic boarding schools at least through *sorogan, bandongan, halaqah*, and rote [6]. Sorogan comes from the Javanese word sorog which means to thrust, a santri thrusts his book to the kyai to ask to be taught. The learning process is carried out individually with a student reading and translating the yellow book to a teacher so that there is an intensive interaction between the two. After the santri finish reading under the guidance of the kyai, they get a diploma (which is usually given orally) and after that, they can move to another pesantren to study other books. This learning system by Sabarudin is identified with individual service-learning. Therefore, students must prepare themselves before learning[4].

Dian Nafi identified the *sorogan* method as identical with an indirect learning strategy with an active learning model in which the kyai acts as a facilitator as well as a guide, students are expected to be able to apply 'tool science' such as *nahwu* (Arabic grammar), *sharf* (morphology) and other sciences that they have learned independently. theory in pesantren so far, therefore the cognitive aspect becomes dominant [7]. More than, sorogan can also be categorized as an experimental learning strategy, where students try to understand and translate the books they study and then submit them to their kyai or ustadz. In another perspective, sorogan can be categorized as an interactive learning strategy because when students submit readings and translations of the selected 'yellow' book, of course there will be interaction, it could even be a discussion between the santri and the kyai or ustad. Sutedjo Bradjanagara calls it an individual system (hoofdelijk or individueel). This system also applies in Europe until the 18th century or the beginning of the 19th century, where the learning school of students advances one by one before the teacher to get teaching, followed by others in sequence[8].

Sorogan system contains the principles of a module system, individual learning, complete learning and continuous progress. Therefore he categorizes this system as a modern learning model. The purpose of sorogan learning is so that students have a deep understanding in mastering the 'way' of reading the yellow book in Arabic and its meaning. Usually, the meaning uses the Javanese language written using Arabic pegon writing. This process is not easy, of course, because the Arabic text that is read (in a bare book) without arakat (vocal letters) so to be able to read it must have the ability to translate words and grammatical arrangements. Santri are expected to be able to apply 'tool science' such as nahwu (Arabic grammar), sharaf (morphology), and others that they have learned theoretically in pesantren so far, therefore the cognitive aspect becomes dominant. In its development, Ali Anwar provided a different field of study with sorogan, namely in learning the Qur'an. The sorogan system learning is used in Al-Qur'an learning in all Lirboyo Islamic boarding schools where a student comes forward to his teacher to listen to the reading of the Qur'an according to the rules and laws of tajwid or to deposit the memorization. Then in the field of yellow book study, in lirboyo the sorogan system is intended for students who experience delays in understanding [11].

Sorogan system uses indirect learning strategies, direct learning strategies, empirical (experimental) learning strategies and interactive learning strategies. The four strategies are possible in the sorogan learning system. Indirect learning strategy because students choose the book they want to study and explore it then they learn to understand and analyze sentence structure building (nahwu-sorf) and then translate it so that problem solving skills and students' inquiry experience will be needed in this method. This sorogan learning can also use an experimental learning strategy, where students try to understand and translate the book they are studying and then submit it to their kyai or usta. The interactive learning strategy can also be considered because when depositing readings and translations of the selected 'yellow' book, of course there will be interaction, it could even be a discussion between the students and the teacher. Sorogan demands a deep understanding of the students of the yellow book that is being their subject, in the bandongan system, students do not have to show that they understand the lesson they are taking.

Bandongan's learning system is teacher-centered and deductive, including the collective learning process teaching method with the lecture method. Direct learning strategies tend to dominate for this learning succession because understanding this book requires a comprehensive understanding, therefore the kyai with his scientific authority becomes the main focus of this learning[5]. Martin van Bruinessen has criticized this learning system because kyai rarely give explanations of the book that are related to concrete things and contemporary situations [4]. However, in its development Bruinessen's criticism has been refuted, the kyai who have extensive knowledge and a lot of life experience can contextualize the explanation of the contents of the book and can describe their studies with the current situation and contemporary developments that are very dynamic and fast. Kyai often relates the explanation of the book he reads and explains with contemporary reality, although it depends on the taste, competence, and experience of the Kyai himself so that there are differences between one kyai and another. In implementing the bandongan's system, translators must have an understanding of Arabic grammar, literature, and other scientific branches [12].

Those who have experience and those who are willing to contextualize will be more broadly described than those who tend to limit themselves to contemporary developments that are very dynamic and fast. In today's era, many kyai and ustāż are not only proficient in mastering ulūm syar'i but they are also college alumni and have a fairly broad association. Therefore contextualization in the bandongan method is a necessity. Learning strategies that are suitable in the bandongan system are direct-learning. The teacher reads the yellow book text then interprets and explains the meaning it contains to contextualize it with current conditions directly in front of many students who have flocked to take part in this study. In the modern context, the bandongan system is identical to the general stadium where the audience listens and pays close attention to what the speaker is saying, in this case, the kyai. However, what makes the difference is that in the audience's sorogan – in this case – the santri listen and give harakat on the book they are holding and is the same as the book described by the kyai, while the general stage is usually more on a particular theme area.

The next learning system is rote. Mastuhu more often termed it lalaran, Ali Anwar referred to it as muhafazah as in the Liroboyo Islamic boarding school in Kediri. Meanwhile, Sabarudin uses the term tahfiz when he describes learning at the Islamic boarding school of Tarjih Muhammadiyah clerics in Yogyakarta. In principle and the learning process is relatively the same. Lalaran is individual learning where students memorize independently, usually done anywhere such as in mosques, near tombs, mosque porches, room porches, and other places to then be deposited to the ustad or kyai [6]. Although often criticized, this rote learning system is still widely practiced in many Islamic boarding schools. For example, when Azyumardi Azra was interviewed by Ulil Abshar Abdalla on the Islamic study of timber forests as quoted by Ali Anwar, Azra had the opinion that the emphasis on memorization should be avoided, but memorization turned out to be the main method of learning in Islamic boarding schools, in Lirboyo and others, to pesantren at the local level memorization students are also still applied. Memorizing has a long history in Islamic education. Since the beginning of the emergence of Islam, memorization has become the main learning in maintaining the authenticity of the Qur'an, followed by hadith. More than, the power of memorization has become the main value of one's Islamic scientific authority. It is natural that George Makdisi quoted Ibn al-Najjar's verse which means "if you do not have a strong memorization, then your efforts to collect books are useless. So do you have the courage to speak in forums while your knowledge is left at your home"[11].

In addition to the four learning systems (*sorogan, bandongan, halaqah* and rote/*lalaran*) there is also development of *musyawarah*, muhādarah and *muhādasah*. *Musyawarah* are carried out by grouping small groups of students between three to five people discussing the books that have been studied, usually many pesantren focus on deliberation in the field of *fiqh*. Perhaps among the fields that will become a lot of demands in the community in religion, many revolve around this field. Some pesantren categorize deliberation for elementary level students by discussing the book of *taqrib* and *bahsul masāil* for the higher level usually reviewing the book of al-māhālli, fathul Qarib and taqrib such as learning activities at the Lirboyo boarding school [11]. Learning strategies in the deliberation system tend to be independent learning strategies or interactive learning strategies where students are active in the dynamics of discussion in their groups to discuss a theme area being studied. Usually in this deliberation, students are grouped into several groups and each group is accompanied directly or under the guidance of senior santri or ustadz. The students have the freedom of opinion and argument on what they understand to their fellow members of the musyawarah. Muhadasah comes from the Arabic adasa which means conversation, dialogue, or speaking. Learning means conversation or dialogue between students using Arabic to equip Arabic linguistic competence, especially speaking in Arabic and getting used to it. Muhadasah is widely developed in Islamic boarding schools that have an active (foreign; Arabic/English) language tendency, such as the Gontor Islamic Boarding School and other modern pesantren [13].

The learning strategy used is usually an interactive learning strategy, between one student speaking a foreign language (Arabic / English) actively at a certain time with a certain theme or vocabulary given by the ustāż or senior santri who serves as a companion (rijālul lugah). The position of the ustad or senior santri is more of an observer as well as a mediator of conversation between these students. There are times when they correct when something is wrong or help when needed. Another form of learning in Islamic boarding schools develops muhadarah as a means of preparing students' provisions later when mingling with the community. Muhādarah system is student-based learning using independent learning strategies, where students practice lectures, learn to speak in public (other students). Learning in pesantren continues to develop over time and the needs that exist adjust the characteristics of each pesantren. Sabarudin suggested various learning methods in the Tarjih Muhammadiyah Islamic boarding school, for example, using developing learning methods of lectures-dialogue, tadris wa ta'lim, assignments, simulations, practice (demonstrations), discussions, and muhādarah 'ammah / general stadium. [5].

The description of the results of the study related to the approaches and learning strategies above leads to an understanding that pesantren use teacher-centers learning than student centers. In author's opinion, the choice of approach becomes natural because the main orientation of pesantren's education prioritizes mastery and comprehensive understanding of the yellow book. Therefore, the role of kyai, ustadz (teacher) of pesantren becomes very important. The teacher center approach is widely used in the *sorogan, halaqah/lalaran*, and *bandongan* learning systems. However, the student center learning approach is also used in the pesantren education system such as *musyawarah, muhadlarah*, and *muhadasah*. Although the last three are not the main learning systems of the pesantren, many pesantren hold these activities. While the pesantren learning strategy uses all learning strategies that have been developed previously such as direct learning strategies on sorogan and bandongan, although sorogan learning also includes indirect learning strategies at some stages. Empirical learning strategies are also used in some sorogan learning systems. While interactive learning strategies are widely used in the bandongan education system, deliberation, *muhadlarah*, and *muhadatsah*. The independent learning strategies used in the pesantren education system are lalaran, deliberation, *muhadlarah*, and *muhadatsah*.

Learning strategies above are still being developed in Islamic boarding schools to this day. However, during the COVID-19 pandemic, Islamic boarding schools must comply with government policies to enforce health protocols in the learning process. The results of the author's observations and searches by conducting interviews with several pesantren caregivers and santri show that the learning strategies used during the pandemic are more direct learning either through online or offline systems. Online learning is carried out as an anticipation of the spread COVID-19 virus as well as following government policies. Even though the students live in the cottage after going through a series of health protocols such as being required to have a covid-free test, quarantine for two weeks in the dormitory that has been provided and not accepting goods / shipments from outside or meeting guests from outside the cottage.

Conclusion

The study of this paper shows that learning strategies in Islamic boarding schools during the COVID-19 pandemic generally run as usual. However, there are adjustments to government policies to enforce health protocols during learning such as wearing masks / face shields and so on. Learning strategies are implemented directly or indirectly. The results of this study indicate that pesantren can adapt to the existing situation. In addition, this proves the existence of learning innovations in Islamic boarding schools even though there are certain limitations according to the values and policies of the leaders.

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Virtual-Based Language Learning Management (Problematics and Solutions)

Muhammad Ihsan Dacholfany[1]

Introduction

On December 31, 2019, a virus known as The Corona Virus Disease 2019 (COVID-19) was reported by the WHO China office as an epidemic in the city of Wuhan, China. The virus, which is known to have a very high transmission rate, spreads rapidly to several countries in almost all parts of the world. Until March 11, 2020, WHO declared COVID-19 a global pandemic. The COVID-19 pandemic has infected more than 4,248,389 people with 294,046 confirmed deaths in 202 countries as of May 14, 2020 [15].

This disease spreads rapidly throughout the world because of the unique nature of the virus, which is to have extraordinary genetic diversity, is highly contagious, easy to spread, and is relatively unaffected by climatic variations [8]. As a result, several countries then implemented a 'lockdown' to break the chain of the spread of COVID-19. This pandemic has destroyed social life and forced billions of people to stay in their homes. The COVID-19 pandemic has disrupted all areas of life, including education at all levels [3]. In Indonesia, the government made a sudden decision by closing all types of activities in schools including learning activities, and moving them to learn at home through distance learning which is usually done virtually.

In modern times, distance education is becoming a more popular and accepted approach in education [14]. In addition, today digital technology has become an inseparable part of the world of education, as well as learning in the network can be developed as a learning medium that can connect da lam networking between educators and students in a classroom virtual (virtual classroom) without having in one room physically [4]. Learning da lam network can be done with a virtual classroom, which is a learning experience in an environment that is synchronous or asynchronous use

[1] University of Muhammadiyah Metro, mihsandacholfany@yahoo.com

various tools (such as laptops or smartphones) with internet access [16], the different platforms used to help facilitate the learning process which serves as a medium to convey the material, assessments, or to collect assignments, platform-platform among these Whatsapp groups, Zoom Cloud Meeting, Google Classroom, Google Meet, Google Forms, e-mail, and ain forth.

Thus Learning da lam network can be done with the virtual is a learning experience in an environment that is synchronous or asynchronous use various tools (such as laptops or smartphones) with internet access [16], the hope of his learning in virtual can be useful both learners as well as education personnel, so that model virtual learning can enable learners (students/students) can set the location when learning and speed of learning, which are not found in traditional learning methods or face to face.

So far, the face-to-face learning system in educational institutions, both on campus and in schools, is the most dominant system implemented in most countries in the world before finally having to undergo drastic changes since the outbreak of the COVID-19 pandemic. voluntarily or forced, virtual learning must still be carried out.

To avoid and control its spread covid 19, the government takes immediate measures, including in the field of education by issuing specific regulations related to the implementation of teaching and learning in educational institutions, such as the sample taken by the Indonesian government through the Minister of Education with the issuance of Circular No. 4 concerning the Implementation of Education Policies in the Emergency Period for the Spread of Corona Virus Disease (Covid-19) in which one of the points is the recommendation to study from home. Related policies-based learning virtual which then simultaneously be used as a system learning teachings bu him to appear without problem, the consequences for the state which less ready by this system, is certainly going to face a lot of problems, especially for education personnel and learners.

Improving the quality of education is not a simple effort, but a dynamic and challenging activity. Education is always changing with the times, therefore, education always requires effort and quality improvement in line with the increasing needs and demands of public life , as in Indonesia that the concept of educational goals is the human form fully reflected in faith and piety, personality, intelligent, healthy and responsible, then education in practice needs to apply appropriate principles.

Problems of language learning based virtual course to face the problems, which of course emotion s in good governance, from planning, organizing, implementation, evaluation, and supervision or control is good and right so that the learning can be implemented in line with expectations, but it also must support by the ability of educators and educational staff, institutions (schools/campuses) and parents/guardians/companions as well as the fulfillment of adequate infrastructure to be able to overcome the problems of virtual learning, especially in language learning to be able to provide the best educational services, however, there must be there are some problems that cannot be faced alone, so joint efforts are needed in finding solutions so that virtual learning can be carried out.

In this case, the author tries to explore how the management of language learning in virtual and find a solution in resolving the problem which potentially hinders the understanding of the student or students for studying virtually, where the need for further discussion so that practical, system implementation study face Face to face learning or "face to face learning" can be replaced massively by virtual learning.

Methods

This research is descriptive research with a qualitative approach. This study aims to describe how virtual-based language learning management is, with various problems and efforts to find solutions so that it can be useful, especially during this covid 19 pandemic.

Discussion

Of the various problem that there would adversely affect the other, which may result from the learning-based virtual, namely that learning makes students closer to the world of the Internet so that it can happen that are not by the teachings of religion like watching things unethical and less moral, then it takes various rules and skills to be able to use this technology correctly and appropriately and to be able to take part in virtual learning activities without significant obstacles. Other negative impact, the Internet is a news source that provides all kinds of digital information required users, even information that has a negative impact even be found on the internet [12], although it is advanced in information technology are difficult to avoid, but the effort to keep the younger generation from immoral things and hoax news must still be done.

This condition can be a problem in the learning-based virtual classrooms because if students are not able to sort of information can create stuttering utilization of information, but it's, students and students already familiar with digital technology and generally know how to access, create, and share digital information [13], however, there are also students and students generally considered to be capable of using technology, many of them, this proved to be the result of research that done. [1] explains that online learning (virtual) is more successful in achieving learning outcomes compared to face-to-face learning students in learning English, besides the use of information and communication technology (ICT) has a positive impact on student learning [9], therefore, the demand for mastery of technology in education is also getting higher for educators because they are the main actors in the successful adoption of technology in learning [5]. This demand aims to improve the quality of education [2] which is characterized by the creation of a more attractive and effective teaching-learning atmosphere [11].

As education personnel either lecturers/teachers would be difficult to accept change if competence low, p Education will be more severe in the future if the quality of learning is still low, therefore, competence must be improved for the betterment of the quality of education in Indonesia today and into the future, in terms of The teacher as the spearhead dal am holding the stem of education can be assisted growth and development of the profession for the achievement of learning objectives.

In learning, of course, there is a delay from the subject is participating in virtual class activities, especially in language material in educational institutions and there is still a tendency for students not to be serious in participating in virtual learning activities so that students or students who study but also play games, watch TV and other activities at home or place of learning and of course, resulting not enough maximum time and ability companion's during the learning process with both because we do not have sufficient understanding regarding the material presented by the teaching workforce and eventually lack of effective management of learning such as the selection of materials and delivery take virtual classes in detail, but the most important thing in language learning is the student's attitude in learning. namely cognitive, affective, and behavioral [10].

To view the management functions can be seen from looking at the management, a da saying that the management function POAC (Planning, Organizing, Actuating, and Controlling). This abbreviation is taken from the definition of management according to Terry and Franklin [7], but the author adds that the POAC is not incomplete if it did not evaluate so that it becomes POACE: Planning, Organizing, Actuating, Controlling, and

Evaluating) so that all the activities that have been implemented must be evaluated so that future activity will be even better.

Based on the results of an interview with Yasmika Baihaqi, one of the lecturers of FKIP, English study program, stating that the 2020-2030 vision of Universitas Muhamamadiyah Metro is "Center of Professional, Modern and Enlightening Professional Profession ", while in the field of education, trying to develop an excellent, modern academic system and superior to produce human resources that have scientific prophetic professionals through the study of the Islamic thematic-oriented science and technology and environment, by the mission then learning English in a virtual must be implemented properly and correctly although, no barriers, in peerless ability students, master the Internet and the lack of student motivation to learn through I virtual pandemic in the future is covid 19 (06/10/2021)

Thus, in virtual learning management, of course, what must be prepared is how the planning and evaluation of learning can be by the desired expectations so that learning management can be carried out properly, such as planning here, how a teacher/educator makes a Learning Implementation Plan (RPP), in this function, of course, must understand how the plan will be implemented. Here it is understood any condition of a teacher must be able to plan to learn well, though in the era of plague covid-19 online learning/virtual then it will all be done well [6], it is expected there to optimize a variety of sources digital learning to create a more innovative and attractive learning atmosphere in language classes.

Thus, virtual language learning management can be carried out, if it can manage learning management and utilize the resources used in learning appropriately so that learning objectives can be achieved effectively and efficiently as expected by educational institutions both on campus and schools by the vision, expected mission and goals.

Efforts to Do in Virtual Language Learning Activities

1. Some efforts should be done by the learner students and students in virtual learning activities namely:
2. Have readiness and a learning plan in participating in virtual language learning.
3. Able to use virtual learning technology, especially communication and collaborative technology.
4. Has the concept of independent academic which strong as well as communication skills and interaction which good

5. Have a basic understanding and interest in virtual learning individually or in groups and try to build competence in related skills.
6. Have the ability to learn independently through time management arrangements and cognitive learning strategies.

There are several things that must be owned by both lecturers/ teachers in virtual language learning, namely:

1. Have careful planning, organization, implementation, and evaluation in virtual learning activities
2. internet mastery,
3. mastery of science,
4. creativity and innovation,
5. ability to motivate, qualified in the concept of virtual learning,
6. system management, selection of appropriate teaching materials
7. mastery of class control must exist and can be applied properly.

Solution to Do

Several solutions can solve the problem of virtual language learning, including:

1. Learners (Students / Students)
   a. Have to Discipline and Know the schedule of Virtual Learning activities, so it is not too late.
   b. The need for seriousness or focus in participating in learning.
   c. Having teaching materials in advance which will be delivered by educators,
   And actively ask, if the material is not understood.
2. Educators (Lecturers/Teachers) In virtual-based language learning, lecturers/teachers have an important role, including:
   a. Effective and interesting learning management, from planning to learning evaluation (POACE).
   b. Selection of material according to the ability of students.
   c. His delivery through virtual classes is clear and detailed.
   d. Provide opportunities for students to ask questions, discuss, and so on.
   e. Set the right time in delivering the material
3. Parent / Guardian / Companion
   In addition to educators and students, of course, it must be supported by parents/guardians, by :
   a. Assist parents/guardians so that students are disciplined in participating in virtual learning, because language learning is very difficult compared to other materials, even if parents/guardians are

unable, they should invite other people, who can help understand the material being taught.

b. Preparing Facility Services Company form computer / HP / Package Internet and so on.
c. During the teaching and learning process, parents/companions can guide students to provide a clear understanding and be patient and not protest much.
d. Reminding to focus, not doing other things such as watching, playing games, and so on.
e. As much as possible be able to help complete the tasks given by the teacher/lecturer.

4. Educational Institutions (Campus/Schools)
   a. For the government or private educational institutions that have educational institutions, they should:
   b. Pick I planning up to evaluation in virtual learning activities.
   c. Prepare facilities and infrastructure that can fulfill virtual learning
   d. Choose educators and education staff who are ready to learn, so that they have the will and ability to help or do virtual learning.
   e. Do not overload the parent/guardian special it's financing.

Thus, every manager, both in government institutions norn private, ranging from the board of trustees, leaders, educators and educational staff in educational institutions should be committed to the target of quality, timeliness, and effectiveness of a program of learning virtually, then do renewal of the process of teaching and learning activities in the service and satisfaction of stakeholders as well as the ability to actualize management best practice in the management and development of educational institutions. (M Ihsan Dacholfany, 2017:10), so that virtual language learning can be in line with expectations, with the support of several parties, starting from the leadership of educational institutions, educators, students/students themselves as well as the necessary infrastructure and needs can be met by well and neatly arranged by qualified management and as expected.

Conclusion

In Learning language-based Virtual is, should all parties, ranging from educators, learners and parents guardian/escort and facilities must support all activity learning process this and need good management so that the planning until the evaluation can be accomplished well even in this Covid- 19 Pandemic, and does not become an obstacle for all parties in the context of educating the nation's children.

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A Transformation of the Discovery Learning Model in the Context of Islamic Education (a Study on the Dinamics of Theories and Concepts)

Muhammad Syafi'i[1]

Introduction

Theory is a simplification of the complexity of reality which can be in the form of concepts, statements, procedures, mind mapping, schemas, charts and so on as logic buildings[1]. Theory can be developed with empirical findings through scientific studies or research. Society has complex needs in carrying out the obligations and roles of each individual in society, including education which is an important sector in building good human beings. One of the weaknesses of educational outcomes in general is that students lack an attitude of independence to improve their abilities, so that when they face problems, they are less able to solve problems independently, this is an indicator of the weakness of educational outcomes. The educational process is very important to plan in order to become an independent, active, cooperative and responsible person[2]. One model that is quite relevant to the process is inductive learning. The inductive learning model has more advantages and effectiveness than the deductive model[3]. The importance of the activeness of students in learning will shape attitudes. There are processes that need to be improved in the educational process, especially learning[4].

Learning models with learning responsibilities such as discovery learning are increasingly popular than traditional learning[5]. This model has all the advantages of the inductive learning model. The use of this model in learning is more effective than other models such as the expository instruction model. The model is able to provide increased learning outcomes and encouragement to cooperate, active thinking and cognitive strengthening to students in learning[5]–[7]. Learning is a psychological activity that occurs in students so that changes occur for the better in cognitive, psychomotor and affective. Psychological activities

[1] Lecture of Unipdu (Universitas Pesantren Tinggi Darul Ulum)

that occur can include thinking activities. Thinking can be a source and motivator of achievement[8]. Discovery learning has a central role in the learning process. Students perform simulations so that they are able to have an attitude of responsibility and independence in learning to find the expected results[9]. Discovery learning is known as cognitive instructional, meaning that learning with the application of the model has competency targets that are focused on the process of achieving cognitive abilities. Thus, the model has limitations on the achievement of psychomotor and affective abilities, so that the dynamics of constructive theories and concepts are needed to be known and applied by educators and teachers.

The Qur'an is a source of divine knowledge that provides information as a guide for humans in life. Efforts to achieve life goals require a process called education. Education is essentially a conscious effort made by educators so that students are able to understand and achieve their life goals[10]. One element of education that cannot be separated from the education system itself is the act of educating (educational activities). The implementation of education on a micro scale is carried out by teachers as educators and teachers to lead students to achieve their goals. The implementation of educational and learning activities requires relevant models, approaches, strategies, methods and techniques. The model is a conceptual framework that has a systematic procedure developed based on certain and relevant theories to regulate the learning process in order to achieve goals[1].The model in the context of Islamic education refers to the Qur'an and al-Hadith which are the main sources of Islamic teachings. The Qur'an as the main source has provided a lot of information as lessons and instructions for humans, including the value of education.

Knowledge of the dynamics of theories and concepts is very important to get a comparative value at each stage so that readers who play a role in education will have the best choice in determining and applying them in learning. This article is presented descriptively to provide an overview; 1) the transformation of the discovery learning model that departs from Bruner's theory and Kolb's theory and other supporting theories as the basis for the discovery learning model to transform into inductive discovery learning; 2) the stages of the model to achieve the realm of cognitive, psychomotor and affective competencies; 3) description of the existence of discovery learning in Islamic education.

Discussion

J. Bruner Bruner was one of the main founders of cognitive and constructivist psychology, and was also influential in educational theory and practice. Bruner admits that Bruner's philosophy of psychology has been influenced by Jean Piaget, Vygotsky, and Benjamin Bloom. He put forward a very influential cognitive instructional model of learning theory known as discovery learning, namely learning by own experience, trying to find problem solving and knowledge, in order to produce knowledge that is truly meaningful. Increased knowledge is influenced by students' thinking about the environment that occurs in stages, namely the enactive, iconic, and symbolic stages. The enactive stage is the stage where students carry out activities in the environment to understand using their motor skills. While the iconic stage is a stage where students understand objects in the form of parables and comparisons. The symbolic stage is the stage where students are able to have abstract ideas which are strongly influenced by language and logic skills[11].

According to Bruner's cognitive psychology learning theory, the most important learning is how to select, retain, and transform information effectively. Bruner focuses attention on the information received by humans and how humans process that information to achieve understanding as a new ability. Learning is a process in which students try to select, maintain and transform knowledge or information actively. According to Bruner, the process has three stages that occur simultaneously, namely obtaining new information, transforming information, testing the relevance and accuracy of knowledge. Bruner interprets this process with the term instrumental conceptualism on the basis of two principles, first, people's knowledge of nature is based on the models of reality they build. Both such models are first adopted from a person's culture, then the models are adapted to the use of the person concerned[12].

The increase in knowledge or cognitive depends on how students internalize events into systems in knowledge that are in accordance with the environment so that the increase becomes an ability that can be actualized by themselves and to others[12]. Learning is an active process by which students construct new ideas or new concepts based on the initial knowledge they already have. Learners select and process information, build hypotheses, and make decisions that take place in their cognitive structure, because learning is a process activity, of course in it gradual changes occur. These changes arise through stages that are related to each other sequentially. According to Bruner, in the learning process students go through three phases, namely: the first phase of information, a student who is studying obtains a number of information about the material being studied. Among the information obtained, some are completely new and stand-alone, while others serve to add, expand and deepen previous knowledge. The second phase of transformation, in this phase the information that has been obtained, analyzed, changed or transformed into an abstract or conceptual form. The three evaluation phases, in this evaluation phase, assess the extent to which the information that has been transformed can be utilized to understand the symptoms or solve the problems encountered[11].

The theoretical basis that becomes the reference for the discovery learning model is the view of constructivism in learning, cognitive learning theory, namely the discovery theory of Jerome Bruner as mentioned above. Broadly speaking, discovery learning is learning designed by teachers so that students find their own concepts based on predetermined instructional goals. The learning process with the discovery learning model has five stages, namely stimulation, problem statements, data collection, data processing, verification and generalization[13].Stimulation Stage; provide stimulation to students to start trying to think and explore. According to Bruner, this can be done by holding questions and answers or asking questions as a way of providing stimulation. Problem statements; The process of the simulation stages delivers the formulation of the problem to which the concept or answer will be sought. At this stage the teacher and students determine the point of the problem which is the main topic of the problem.

Data collection; Efforts to find answers or concepts to problem statements are through exploratory activities where the teacher is involved as a guide in the activity. Exploration activities involve all students' abilities (cognitive, psychomotor and affective) to seek, observe, perform as part of the expected data collection efforts. data processing; At this stage is the stage where students analyze data collection, select and sort as an effort to find concepts. Verification; The activity at this stage is an attempt to check the truth of the concept to get a complete concept to fit the expected goals. Generalizations; At this final stage, students attempt to draw conclusions after going through the process of data collection, data processing and verification. Drawing conclusions is the result of an inductive process.

Bloom and Krathwohl show that what students might master is covered in three areas, namely the cognitive, affective and psychomotor areas. The development of cognitive potential is basically an effort to improve aspects of observation, remembering, thinking, creating and creativity. Cognitive processes include changes in thinking, intelligence and language. Bloom's updated theory has divided six levels of cognitive behavior, namely knowledge, understanding, application, analysis, evaluation and synthesis. The increase in psychomotor potential can only be done with exercises that lead to an increase in ability. This increase requires a strong stimulus so that potential development can be optimal. Efforts to increase competence is a process of action in learning by paying attention to the stages of learning so that these competencies can be realized through learning.

Kolb's theory divides four stages in learning. First, concrete experience. At this stage, students are only able to participate in experiencing an event and have not been able to properly understand the incident. This incident is the beginning of the learning process. Second, active and reflective observation, students are gradually able to make active observations of events and start trying to think about and understand them. Third, conceptualization, students begin to learn to make abstractions or theories about things they have observed. At this stage, students are expected to be able to make general rules (generalizations) from various examples of events which, although they look different, have the same rule base. Fourth, experimentation. At this stage, students are able to apply a general rule to new situations. According to Kolb, such a learning cycle occurs continuously and takes place outside the awareness of students where this needs to be understood by the teacher in improving competence.

The learning process according to Bruner is an instrumental conceptualism that is built on two principles, namely the principle of the model that he built himself based on reality, the model that was built on the basis of use or function. Furthermore, he explained about the learning theory of cognitive instructional model known as discovery learning with three stages of learning. The first is the enactive stage where students carry out activities in the environment to understand using their motor. At this stage, the researcher argues in the context of learning that the interaction of students in order to understand objects with their sensory abilities requires a stimulus or stimulation. This process is in line with the flow of connectionism proposed by Thorndike, that learning is a process of interaction between stimulus and response which can be in the form of thoughts, feelings or movements, learning can also be done by trial and error (trial and error). In the context of learning, researchers categorize the process as the stimulation stage, namely providing stimulation to students to interact by thinking, moving to understand objects. The purpose of the stimulation activity is to encourage students to start the initial process of understanding the object. This process can be in the form of providing illustrations or examples related to objects, providing problems that are relevant to the object and interesting to be solved by students, presenting objects so that students interact by trying, feeling, seeing, hearing and so on through the senses they have.

The process as mentioned above is also in line with the learning process proposed by Kolb regarding the first stage of learning, namely the stage of concrete experience. At this stage the researcher interprets that students are placed in an environment or object to see, hear, feel, try with the senses they have concretely. The second is the iconic stage where students understand objects in the form of parables and comparisons. The researcher interprets the learning process more broadly and is not only limited to giving parables and comparisons, but is a phase where children try to find understanding exploratory. That is, children try to find, find, try to construct a search with their experiences. In the context of learning, the researcher categorizes this phase as the exploration and association stages. The exploration stage is the stage where students experience the process of searching, trying to find the truth actively based on the instructions at the stimulation stage. This stage is in line with Kolb's theory of the second stage in the learning process, namely active and reflective observation, meaning that students try to understand actively based on their experience. The association stage is the stage where students try to collect search results into ideas, ideas, truths.

The three symbolic stages where students are able to have abstract ideas which are strongly influenced by language and logic skills. Researchers interpret the symbolic stage as an effort to form symbols as indicators of knowledge, ability or experience not only influenced or realized with language and logic skills but also the ability to construct experience with information or knowledge into a new idea, idea or concept. This phase is in line with the third learning stage as described by Kolb, namely the conceptualization stage. Researchers categorize the symbolic stages in discovery learning as the conceptualization stage in the context of learning. Conceptualization is the process of forming ideas, understanding, ideas, abstractions. This means that at this stage is the stage where students try to find and construct new knowledge, skills and experiences. The concept will be firmly embedded and give birth to an attitude, skill which will become an ability or competence if the concept is experienced and tried by the students themselves so that it becomes a true concept generated through discovery. The stage of strengthening this concept is called the experimentation phase. Experimentation is an effort to try and apply ideas, ideas, knowledge found and experience to obtain the expected level of ability.

The enactive, iconic and symbolic stages in Discovery Learning are the stages of stimulation, exploration, association, conceptualization and experimentation, which are systematic procedures developed based on learning theories which are also conceptual frameworks that can be used to organize the learning process of students so that they have competence as learning outcomes. and learning objectives. The five systematic procedures are called inductive discovery learning. Inductive discovery learning is a model with structured activities designed by teachers or lecturers so that students (students) experience an active and independent learning process through stimulation, exploration, association, conceptualization and experimentation of learning resources so that they are able to find concepts comprehensively and gain experience. as an ability both in the cognitive, psychomotor and affective domains[1]. The model can also be understood as a systematic learning procedure designed by teachers or lecturers so that students construct their knowledge and experience in an exploratory and inductive way in order to have new abilities.

Islam is a divine religion that comes from the Qur'an and the words of His Apostle, thus the concept of Islamic education refers to these two main sources. Discovery learning as discussed above, in the context of education is a process of systematic activities carried out by educators by involving the activeness of students to be active and independent to achieve goals. The nature of discovery learning in Islam has been described long ago in the Qur'an, including Surah al-An'am 74-79. The verse describes the natural educational process by Prophet Ibrahim in finding the true truth about God. Ibrahim's activity in searching, seeing and analyzing natural phenomena that Allah unfolded step by step, starting from the creation of the stars, moon, sun to finding knowledge about the truth of God's essence, namely the creator of the heavens and the earth. The description in the verse shows that discovery learning has been carried out for a long time so that it becomes a source of inspiration for educators for more innovative and contributive development.

Conclusion

Based on the descriptive explanation of the dynamics of the theory and concept of discovery learning and its substance in Islamic education as above, it can be concluded that Discovery learning is a learning model that starts from Bruner's theory of learning stages consisting of Enactive, Iconic and Symbolic. The theory is transformed in the realm of learning with a systematic procedure consisting of stimulation, problem statements, data collection, data processing, verification and generalization. The concept emphasizes the achievement of cognitive domain competencies so that it does not accommodate the other two competencies. The concept was then developed more widely through research (RnD) and resulted in the concept of Inductive Discovery Learning with five stages, namely stimulation, exploration, association, conceptualization and experimentation. The content of discovery learning in the context of Islamic education has been described in the Qur'an, including Surah Alan'am verses 74 to 79 about the process of faith education given by Allah to Prophet Ibrahim 'Peace be upon him.

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Efforts to Improve Human Resources Through Project Base Learning Methods in Entrepreneur Course

Nanis Hairunisya[1]

Introduction

Education is the key to human resource development. Improving the quality of human resources is the key to realizing a just and prosperous Indonesia Gold 2045, safe and peaceful, as well as advanced and global. [1] Students have a strategic position in an effort to improve the quality of human resources. Students who have superior quality human resources can be shown by disciplined behavior, creativity, and a high work ethic in carrying out their duties and obligations during the learning process in higher education.) [2]. [3] Another study found that during a pandemic the level of student understanding decreased. [4,5]

As the results of research [6] state that learning trends and determining strategies are very important to produce students who are ready to face the 4.0 era. High-level thinking patterns are one way that can be used to improve the quality of students as human resources in the future. What efforts must be made so that students have superior quality human resources during this pandemic? One of the efforts made in entrepreneurship learning is to improve students' high-level thinking skills in constructing understanding of entrepreneurship concepts with the project base learning method through the development of Higher Order Thinking Skill (HOTS)-based Student Worksheets. Creative and innovative thinking is the ability needed in solving problems which is commonly referred to as top-level thinking ability [7] which has the following components: reasoning skills, argumentation, problem solving & critical thinking, and metacognition [8]. Useful and meaningful experiences can develop thinking skills. Students need high order thinking skills (HOTS) to find out for themselves the knowledge to get used to solving the problems they face. [9,10]

[1] Prodi Magister Pendidikan IPS, Universitas Bhinneka PGRI, anisa889@gmail.com

Higher Order Thinking Skill (HOTS) is a metacognitive process that teaches how to use the method of observing and studying information processes in making ideas [11]. According to Maharani [12] with HOTS students will be able to distinguish ideas clearly, argue well, be able to solve problems, be able to construct explanations, be able to hypothesize and understand complex things more clearly. The conclusion is that HOTS in learning requires students' thinking skills including analyzing, evaluating, and creating. By using HOTS, students are expected to have top-level reasoning abilities in solving problems at hand.

Entrepreneurship course is a course that trains students to be sensitive to see opportunities both in the business world and in the perspective of other fields of science. In Entrepreneurship courses, students are equipped with creative and innovative characters, both in the form of soft skills and hard skills. This research has a high urgency in improving the quality of learning and the quality of human resources. This research has a high urgency in improving the quality of learning and the quality of human resources.

Student Worksheet (LKM) is a tool to facilitate student learning which will lead to effective interaction between students and lecturers. LKM contains tasks that must be done by students as a form of exercise that aims to make students understand and understand the material being taught

The current COVID-19 pandemic has had a major impact on the world of education. The learning system that was previously carried out face-to-face is required to be carried out online given the social distancing rules. Project Based Learning is used because it is suitable for learning from home and contributes to the development of students' creativity. [13] Project based learning [14] is an opportunity to expand knowledge and develop skills through problem solving and investigation.

Baedowi [15] found that (1) the implementation of project-based learning (project-based learning) can improve students' understanding of Islamic values in Islamic Religious Education (PAI) courses at the PGSD Study Program, PGRI University Semarang; (2) Implementation of project-based learning (project-based learning) can increase student activities

Discussion

The project assigned to the Entrepreneur course is to make a canvas-based business proposal. The making of this proposal was initiated in the Entrepreneur 1 course in the previous semester. For practicum or implementation of this business proposal, it will be carried out in the following semester. Student Worksheets (LKM) are used to evaluate each stage of making a business proposal and during implementation in the field.

The evaluation in the LKM refers to the level of cognitive learning success with Bloom's Taxonomy that higher order thinking skills or HOTS involve the cognitive domain, namely knowledge (C1), understanding (C2), application (C3), analysis (C4), evaluation (C5) and creativity (C6). HOTS Entrepreneur assessment instrument in terms of valid, reliable, discriminatory index and difficulty level index. The results of this study are in line with the main goal of 21st century learning in improving students' higher-order thinking skills. [16] The results showed that it was easier and faster for students to construct an understanding of Entrepreneurial material by using a HOTS-based LKM.

This is one of the strategies in preparing higher quality human resources. This is also supported by the results of research [17] which found the implications of strategies for preparing human resources. Brewer found that higher business education plays an important role in preparing students to have quality knowledge as a resource needed in the company. Brewer also proposes a new model in planning and implementing the revised bloom taxonomy with the principles of knowledge management, human resource management activities.

Meanwhile [18] Bastas evaluates human resource management policies and strategies in higher education practice. self-report was conducted to gain experience of research participants on the process of human resource management. It was revealed that disability is an important factor in work. Human resource management is the ultimate solution for quality higher education.

The project in this Entrepreneur 2 course is in the form of a product exhibition in small groups which due to the pandemic situation is carried out around the student's living environment, the results of the exhibition are videoed and based on this video that has directed the content, the lecturer conducts an evaluation for student character assessment during preparation, implementation and accountability of reports after product exhibitions. It was found that students who have a high work ethic, are disciplined and responsible and creative will soon be able to complete the business plan that has been made. which have been set. While students lack motivation, responsibility and discipline, which results in them taking longer time to complete business plans and reports after implementation.

The efforts made in this study strengthen the results of research [19] which states that human resources (HR) have a significant role in every activity in an institution, including educational institutions. Human resources (HR) must be managed or managed properly according to their functions so that these human resources (HR) can play a role in accordance with their duties and functions in the institution where they are located. very important in the educational process in general. Therefore, the functions in the management of human resources must be carried out optimally so that the needs related to the goals of individuals, organizations/institutions, organizations or institutions can be achieved. In addition, with good human resource management procedures, it is hoped that the shortcomings and problems faced by the Indonesian people related to competitiveness can be overcome.

In line with the results of this study regarding the use of project based learning methods, it is stated that project based learning is understood as a promising approach that improves student learning in higher education. [20,21]

Based on the final evaluation after the product exhibition, it was found that students were fast learners and slow learners. With this finding, the lecturer provides a reinforcement that the characters found during learning in this Entrepreneurship course will become provisions after students graduate. Each student will get a note of improvement from the lecturer of what needs to be improved.

Regarding the character of students who are fast and slow learners, this will play a very important role in facing the era of the industrial revolution 4.0 which states that in the era of the industrial revolution 4.0, it is marked by increased connectivity, interaction and boundaries between humans, machines and other resources that are increasingly fast through information technology and communication. Education in Indonesia is also not spared from this change, so there must be a change in the application of learning methods in schools that are able to bring students to think creatively, critically and innovatively, able and skilled at communicating, working together and confident.

The development of the industrial revolution also has an impact on the development of children's character. Children must be able to filter positive information, then actualize it in positive behavior. Related to character building and the development of the industrial revolution, efforts that need to be made by the government in the field of education are the need for orientation to increase creativity, one of which is through Entrepreneurship education. The values contained in Entrepreneurship education can synergize with the development of the nation's character that is expected in the current era of the industrial revolution. Competition in all fields needs to be supported by positive attitudes and behaviors so that students are able to survive and compete.

In this study, it was found that students were better able to argue well, express ideas more clearly, break down complex problems into simpler ones by being trained using HOTS-based LKM as a learning medium. The results of this study enrich the learning media with structured practice questions.

As stated by [22] that in the era of globalization it is evidenced by the development of science and technology which is commonly referred to as the 21st century. The era of the 21st century demands high quality of human resources. According to Hasibuan, the characteristics of human resources in the 21st century are: (1) creative and innovative, (2) the nature of critical thinking, (3) integration of science, (4) Easy to get information (easy to get knowledge), 5) communicative and collaborative spirit, (6) Respect differences of opinion (respect differences of opinion) and (7) lifelong education. It was also found that the elements of the 21st century are: (1) Establishing quality human resources, (2) Lifelong learning. {Formatting Citation}

Along with the results of this study, Feri [23] stated that education is an important means to improve the quality of human resources in ensuring the sustainability of a country's development. To foster the growth and development of these students, learning becomes a very important thing. Learning in the educational process is a process of behavior change due to experience carried out by someone, one of which is the cultivation of student character. Character is innate, heart, soul, personality, character, behavior and character which refers to a series of attitudes, behavior, motivation and skills that are formed with the general goal of teaching and character education in schools.

Conclusion

The evaluation in the LKM refers to the level of cognitive learning success with Bloom's Taxonomy that higher-order thinking skills or HOTS involve cognitive domains ranging from C1 to C6. This is one of the strategies in preparing higher quality human resources.

It was found that students who have a high work ethic, are disciplined and responsible and creative will soon be able to complete the business plan that has been made. which have been set.

The efforts made in this study state that human resources (HR) have a significant role in every activity in an institution, including educational institutions.

The limitations of this research are the number of students who are included in the implementation phase and the conditions during the pandemic. The limitation during this pandemic period is when students have to do product exhibitions, it cannot be done together on campus, but only done in small groups and some are forced to report only via video to reduce the risk of covid. Also when observing SME Entrepreneurs and the Trekait Service. Another obstacle in implementing Entrepreneurial learning is the limited internet access of students when presenting online.

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Integration of Digital Games in Blended Learning for Elementary School's Geometry Subject

Rahaju[1], Sumaji[2], Muchtadi[3]

Introduction

Mathematics education aims to provide pupils with logical, critical, and creative thinking skills. Mathematics learning is supposed to develop students' curiosity and interest in mathematics so that they can believe in and appreciate the use of mathematics in everyday life [1]. The National Council of Teachers of Mathematics [2] contend that problem-solving, reasoning and proof, communication, connections, and representation skills can all be used to develop mathematical competence. According to some mathematicians and educators, the ultimate purpose of studying mathematics is to develop an adaptive capacity, namely the ability to apply information flexibly and creatively in a variety of settings [3]. However, existing mathematics learning practices are insufficient to assist the accomplishment of this ultimate aim.

Activities in today's mathematics classrooms tend to be informative. The teacher first discusses a theory, definition, formula, or theorem, followed by explanations of problems and the solutions. After that, the teacher assigns certain tasks to students, in worksheets or student handbooks and asks them to complete them in accordance with the processes that have been explained by the teacher earlier [4]–[6]. Because such learning process is continually repeated, mathematics is regarded as a dull, abstract, and uninteresting subject [7]–[9]. Students that learn in this manner are merely instructed to memorize formulae and processes, think mechanically, or follow pre-existing processes, preventing their thinking capability from developing correctly [5]. As a result, pupils are unable to grasp the principles they have learnt and are unable to solve issues with comprehension. Students also struggle when confronted with problems that have not been taught by the teacher or non-routine problems [6].

[1] Universitas PGRI Kanjuruhan Malang
[2] Universitas Muria Kudus
[3] IKIP PGRI Pontianak

Blended learning (BL) can be used as an alternative to achieve the objectives of mathematics learning. BL integrates online learning with face-to-face learning [10]. BL may be implemented in regular classrooms without the use of technology. The teacher uses the lecture technique to convey the subject in class, which is followed by class discussion, group discussion, or individual work. BL that is conducted online aims to encourage interaction between students and teachers, as well as between students and the content being studied. Outside of the classroom, online learning can be done independently [11] by integrating technology into the learning process. Learning activities, assignments, or exams are transferred to a website or Learning Management System [12]. The availability of technology facilitates communication among classmates through online discussion and collaborative activities in problem-solving, both within and outside the classroom [13]–[16]. Technology can also help students perform tasks individually as well as in groups because students do not always rely on the teacher as a single source of information [17].

Several studies show that BL can improve learning outcomes and student satisfaction [18]–[20]. BL also improves memory of knowledge, learning skills and science process skills [21], [22]; while developing independence in learning [23]. Innovative online learning can help students reach their learning goals more effectively. Innovations in online learning might take the shape of user-friendliness, interactivity, and interest [24]. As a result, the adoption of BL in mathematics learning must provide innovations that are consistent with mathematics characteristics and can overcome barriers to learning mathematics.

With the BL technique, digital games may be employed as innovations in geometry learning. Digital games can be incorporated into online learning to provide an enjoyable learning environment and promote students' excitement, attention, and involvement in learning [4], [25], [26]. Digital games have the ability to provide a positive learning environment and are well-suited to the study of complicated topics [27]. Color palettes in digital games are appealing, motion is integrated, and concepts are clearly shown. As a result, games may be utilized to overcome boredom in mathematics learning and promote student involvement in learning, resulting in increased student knowledge of the material being studied.

The benefits of BL have been extensively researched. Similarly, the favorable influence of adopting digital games in learning has been widely studied. However, no research on the incorporation of digital games into BL has been discovered. As a result, the purpose of this research is to discuss the use of BL in combination with digital games for geometry learning in primary schools. The volume of space is the content studied utilizing the BL technique. This topic was especially chosen since research demonstrates that learning geometry, especially the volume of space, necessitates the capacity to recall formulae and perform problem-solving techniques. The findings of this study are anticipated to give an overview of the phases of learning space as well as strategies for developing students' thinking abilities. Furthermore, this research will show the barriers to BL adoption and how to overcome them.

Discussion

The Implementation of BL and Digital Games

There are four models of BL, namely rotation model, flex model, self-blend model, and enriched-virtual model. Rotation model falls into four categories, that are (a) station-rotation model, (b) lab-rotation model, (c) flipped classroom model, and (d) individual-rotation model [28]. Each model requires distinct phases of learning. For studying the volume of space, lab-rotation model (LRM) was employed. The LRM model provide students with the opportunity to learn in computer laboratories online as well as in face-to-face classrooms [11], [22]. In face-to-face learning, the teacher reinforces students' grasp of the content covered in the computer laboratory and addresses issues that were not addressed or were poorly comprehended during online learning. The implementation of LRM in studying the volume of space can be divided into four steps. Figure 1 depicts student activities at each step.

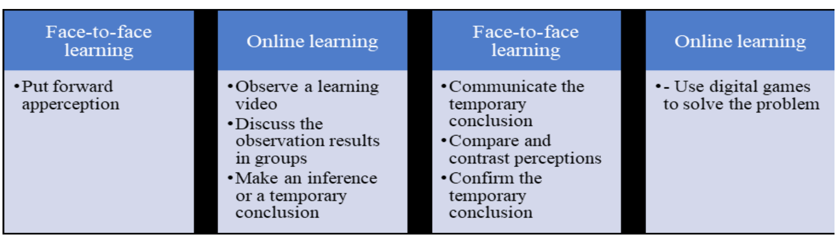

Figure 1. Stages of LRM when studying the volume of space

At the first stage, students study face-to-face in a classroom. The teacher goes through the ideas or attributes of the examined space. Following that, the teacher presents everyday problems relating to the material. This exercise seeks to expose students to the content to be studied while also motivating them by demonstrating the benefits of learning the volume of space. Students will be interested in learning a material if it is useful for their life. Next, the instructor communicates the objectives, learning phases, and activities to be performed so that students can manage their time and use their preferred learning strategy. After that, the teacher states that there will be a game-based competition at the end of the class to motivate pupils to pay attention and participate actively in the process [29]. Before ending the first stage of learning, the teacher divides the students into several groups for the second stage of activity.

The second stage of learning is carried out online in a computer laboratory. Students in groups watch a video about the concept and process of finding the volume formula for a space. At this stage students explore the material through observing, questioning, collecting information from the video. Next, students communicate the results of their observations and understandings to group members. Students can confirm their findings with learning resources available on the internet. Discussion activities are facilitated by a worksheet containing questions that direct the process of constructing concepts and formulas for volume of space. This prevents students from simply receiving information passively. The worksheet also contains some problems of space's volume. Students are expected to address the problems in their own unique way. As a result, students comprehend the purpose of problem-solving processes rather than just imitating them. Group learning requires students to assist one another and to take responsibility for group learning activities. [4]. In the second stage, the teacher observes student activities and assists groups that are having trouble running a computer or comprehending worksheet tasks.

The third stage of learning takes place in the classroom, face-to-face, utilizing a teacher-led discussion style. The discussion session begins with one of the groups presenting their results or worksheet responses. Other groups respond by giving suggestions or asking questions. Students refine their results with one another during class discussions. This assignment allows students to convey the outcomes of their research and comprehension. At the end of the course, the teacher summarizes the conversation and confirms the ideas, formulae, and techniques for finding the volume of space.

The fourth step of learning takes place online in a computer lab. Students learn problem-solving skills by playing digital games. Presenting issues in the form of games improves students' passion for problem solving and causes them to lose track of time [29], [30]. The playing environment stimulates students to answer questions, to desire to keep studying, to not be drowsy or bored [29]. Students' curiosity and passion for finishing each level of learning are piqued by digital games. Students are also taught to work under a time constraint through the use of digital games. Students compete to win the game in the fourth level of learning. Students or players who properly answer problems receive a reward in the form of points. The winner is the one who has the most points. The game's competitive character pushes students to attempt to answer the questions accurately [4].

The games can be played in groups or alone. The group competition takes place in a computer lab. There are two competing groups on each computer. Group competitions enable students to collaborate in understanding and solving the problems. As a result, each group member knows the problem and how to address it, making it less likely for pupils to plagiarize their peers' responses [4]. Individual competitions might be held at home or at a different location. An Android phone may be used to access the games. Each student is assigned a random opponent to answer the tasks. Individual competition allows students to answer problems anywhere and at any time. Students can play these games as many times as they need to until they truly learn how to solve the problems.

How to Overcome BL Problems

LRM is carried out in a variety of learning environments and through a variety of activities. For one activity, students study in class, while for another, they study in a computer lab. Students can avoid boredom by exposing themselves to a range of learning atmospheres and activities. Since learning mathematics in computer laboratories is novel in primary school, it becomes engaging. Through laboratory learning, students' interest, excitement, and involvement in learning develop significantly. Unfortunately, not every primary school has a computer lab. In fact, few schools can afford to equip laptop computers for online instruction in the classroom. To get around this, instructors and students can utilize android phones in place of PCs. Mobile phones are utilized to view educational films and to play digital games. Because practically every student's parent owns an android phone, this option is quite feasible. If the student's parents do not own an android phone, the school can give a number of smartphones for online study.

Online learning necessitates the availability of digital resources such as learning videos and digital games, which must be provided by the teacher. However, not all instructors are equipped with the knowledge and abilities required to develop digital media. To meet the need for instructional videos and digital games, instructors might use free or exchanged material created by others on the internet. Unfortunately, others' learning videos and digital games may not always suit teachers' needs. The distinction may be found in the substance or material, how it is presented, the type and level of the problems, and so on. Therefore, digital material should be created by the teachers themselves. One solution is to enlist the assistance of colleagues who are experts in digital media producing techniques. It would be much better if teachers continue to expand their knowledge and talents in creating digital media.

Another barrier to incorporating games into math classes is the misapplication of the idea of play. In addition to their numerous benefits, games in learning have certain drawbacks. Games can divert students' attention away from their learning objectives. As a result, games must be appropriately handled. Teachers must be able to guarantee that game-learning activities are relevant to the learning objectives. Instructions or game rules must be thoroughly stated so that students do not misuse the game or fail to answer the tasks presented. Sometimes, pupils who are very passionate about playing a game do not pay attention to the teacher's explanation, and as a result, they do not benefit from the game. This can lead to frustration and losing interest in continuing the game [4].

Conclusion

LRM is one of the potential ways for determining the volume of space. Online LRM allows students to construct knowledge or concepts. The concept construction process is carried out through observation, questioning, and digging up information with the help of learning videos. To practice problem-solving skills, digital games are integrated with online learning. Digital games create a pleasant learning environment and boost students' interest and tenacity in problem-solving. In face-to-face learning, students communicate interpretations or temporary conclusions that have been constructed. Following that, pupils affirm the provisional conclusion with the teacher's explanations and encouragement. Confirmation produces a meaningful concept rather than mindless memorization. Computer laboratories and digital media are required for the integration of LRM and digital games. The supply of a laptop or an android mobile phone can replace the requirement for a computer laboratory, allowing learning to continue.

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The Justice for Indigenous Peoples on Communal Intellectual Property

Raihana[1]

Introduction

Indigenous peoples and (communal) intellectual property have a fundamental relationship to rights and in regard of matters which can raise issues of justice. This matter describes the question on what constitute just and unjust towards the existence of parties, groups or communities. Justice based on the Big Indonesian Dictionary (KBBI) comes from the word just which means impartial, impartial, siding with the right, not arbitrary, or acting appropriately [1]. According to Aristotle in his book "Rhetorica", legal justice based on nature can be divided into: (1). Justice is particular and positive; (2). Justice is universal, and accepted by general humanity [2]. This concept refers to the following problems: (1) Moral justice is determined by authoritative rules for human behavior; and (2). Proportional justice is based on the principle of ratio-proportional equality. These two concepts are defined as commutative justice and distributional justice [3].

The issue of justice in intellectual property arises due to: (1). There is an imbalance of rights between the creator, inventor or other designation and the user; (2). The existence of the granting of rights or recognition of ownership by the state to parties who are not the actual owners, or who are not from the original community. This problem cannot be separated from the understanding on matter of exploitation and commercialization of cultural expressions, traditional knowledge of healers and genetic resources. The problem raises out of registration on copyrights and patents carried out by ones from outside indigenous communities, by companies, or by foreign parties with the hope of reaping high economic value. This action could disproportionately impact on indigenous peoples specifically on matter of communal intellectuals as the identity of indigenous communities. In short, the matter of relation between indigenous peoples and intellectual property regimes includes:

[1] Faculty of Law, University of Muhammadiyah Riau, rahana.nasution@umri.ac.id

1. The use of traditional knowledge, traditional cultural expressions, and genetic resources is increasingly included into modern intellectual property regime i.e. the ones which has the potential to be exploited commercially. Meanwhile, in the view of indigenous peoples, traditional knowledge, cultural expressions and genetic resources are an integrated unit in everyday life, which is called a living cultural heritage.
2. There is a difference in the system of granting ownership rights to intellectual works in developed countries which are given to individuals, while it is communally granted as rights, as matter of principle, in developing countries.
3. The copyright registration system is declarative, meaning that whether a copyrighted work is registered or not is protected. This proves a weakness for the protection of communal intellectual property, namely: the abundance of traditional knowledge, traditional cultural expressions, and genetic resources are not well documented, so that they could patented by foreign parties, for example by obtaining information on the benefits of genetic resources from indigenous peoples or traditional farming communities without giving fair compensation.

From these problems, the main study is to analyze on: how intellectual property rights law and human rights principles deal with the problems of justice and access to justice for indigenous peoples over communal resources. The research methods are: normative legal research methods through library research, the use secondary data in the form of document data or legal materials (primary legal materials, secondary legal materials, and tertiary legal materials). Following, the analyze go through: (1). Legislative approach; and (2). Conceptual approach. Management and presentation of legal materials is carried out by searching and collecting relevant data that supports the analysis of the main problems, then studied, digested and analyzed qualitatively based on the approach, then presented systematically with deductive conclusions.

Research Originality

From the results of previous relevant studies, including: Fathoni [4] who explores the legal aspects of IPR dispute resolution which is oriented towards the weak economic community. Fathoni explained that: Intellectual property rights with the sui generis system are not from Indonesian culture. Hence, this asks a proper understanding and avoids complying to coercion. The concept and settlement of IPR is adjusted to the values that live in the community without ignoring the applicability of the IPR system. The emergence of intellectual property rights dispute further emphasizes the existence of disputes on economic interests, so that dispute resolution is carried out by utilizing a non-litigation dispute resolution pattern. Sulasi Rongiyati [5] raises the issue of legal protection of traditional knowledge and the benefits, and obstacles of legal protection of traditional knowledge. The results of his research come into explanation that: (1). Legal protection for traditional knowledge is not optimal, because there is no law governing traditional knowledge, meanwhile traditional knowledge has existed since the time of the ancestors and was developed and maintained from generation to generation as a result of intellectual work. (2). The benefits of intellectual property rights that lead to commercialization which generate economic value which does not providing economic benefits to the holders of traditional knowledge. The obstacles are: (a). Limited understanding of intellectual property rights, (b). The lack or even the absence of documentation of traditional knowledge, (c). the difficulty of fulfilling the requirements to obtain the recognition of intellectual property rights that have been registered must be applied in the industry.

Simona Bustani's [6] research on the issue of protecting traditional cultural expressions (folklore) owned by Indigenous peoples explains: the protection of traditional cultural expressions (folklore) is inadequate. This is due to the conflicting legal concept, the intellectual property rights regime adheres to the individual concept, while the traditional cultural expression adheres to the communal concept. Then WIPO issued Article 8 letter (j) of CBD with a sui generis system with the aim of providing opportunities for developing countries to separately regulate the legal protection of traditional cultural expressions (folklore) in accordance with the interests of their respective countries in order to create a balance of rights, with the aim of providing opportunities for foreign parties to use traditional cultural expressions (folklore) legally, so that the Government can obtain financial benefits from the use of traditional cultural expressions (folklore) by foreign parties. The government is obliged to collect data on traditional cultural expressions (folklore) in each region to serve as evidence if there is a violation of traditional cultural expressions (folklore) in Indonesia by foreign parties.

Abdul Atsar's [7] research on the issue of regulation of legal protection of knowledge and traditional cultural expressions to promote national culture in terms of Law no. 5 of 2017 concerning the promotion of culture and law no. 28 of 2014 on copyright. Research results are: Copyrights for traditional cultural expressions are held by the State based on the obligation to: (a). conduct an inventory, and (b). preserve and preserve traditional cultural expressions. The use of traditional cultural expressions must pay attention to the values of the community that bears it. Copyrights held by the State for traditional cultural expressions are regulated by Government Regulations, but there are not government regulations regarding copyrights related to traditional cultural expressions held by the state. Law No. 5 of 2017, and there is not specialized provision protection for traditional knowledge and traditional cultural expressions such as arts, customs, folk games and traditional sports. The protection is carried out by taking an inventory of objects of cultural advancement through an integrated cultural data collection system, security, maintenance, rescue, publication and development.

Dyah Permata Budi Asri's [8] research is on exploring regulation of traditional cultural expressions in DIY in providing protection for traditional cultural expressions according to the UNESCO World Heritage Center. The research explained: Protection of traditional cultural expressions in DIY is very necessary for the following reasons: Yogyakarta has many cultures of various types that have the potential for economic claims of ownership and use by foreign parties. Protection efforts are needed in the form of regulatory mechanisms and technical implementation, so far local governments do not have specifically a documentation and databases that compile the local culture of indigenous peoples, have not carried out a comprehensive and integral inventory of the arts and culture of indigenous peoples. The regional government together with the DPRD formed a draft of Regional Regulation (Raperda) which provides copyright for traditional cultural expressions. The documentation process is carried out with respect to the will of the local community. These juridical efforts require evidence and strong supporting documents, so the commitment from the state is important. This conflict can be prevented by registering Indonesian culture as a world cultural heritage to UNESCO through the World Heritage Center. Hence, Indonesia and cultural activists can benefit through financial and technical assistance from UNESCO. The government plays an active role in identification, inventory, documentation and registration activities, which are outlined in a regulation on the management and protection of culture in Indonesia. These regulations can be in the form of improving existing intellectual property rights rules or new regulations that specifically regulate the protection and use of traditional cultural expressions in Indonesia (sui generis) by prioritizing aspects of justice for indigenous peoples as stakeholders, in the form of benefit sharing agreements between legal communities. customs and other parties in the use of traditional cultural expressions.

Joanita Jalianery and Evi's [9] research raised the issue of legal protection for traditional medicines in Central Kalimantan, and obstacles in the protection of traditional medicines in Central Kalimantan. Research Results: (1). until now, traditional medicines in Central Kalimantan have not received protection through patents. *Bajakah*, which is well-known as a traditional medicine, has only received copyright protection as a written work. In order to be mass-produced, as a modern medicine, traditional medicine must be protected through patents. The patent application process takes longer than the copyright application process. Thus, in the protection of intellectual property for traditional medicines, inventors should register a Copyright on a written description of the manufacture of a traditional medicine at the Ministry of Law and Human Rights, while the inspection process for pirated traditional medicine at the relevant agency is undertaken, (2). barriers to protection for traditional medicines in Central Kalimantan are the lengthy process of obtaining distribution permits and the length of patent examination, as well as the limited number of laboratories that are qualified to examine the content of a plant or traditional medicine.

Lorie Graham & Stephen McJohn [10] explored intellectual property law, negotiation, and human rights principles to address indigenous peoples' claims to cultural heritage protection. They explained international intellectual property law, the benefits can go beyond the protection of indigenous cultures. So, it tends to benefit the interests of the company at the expense of the public domain, prioritizing economic interests and sacrificing its role in protecting moral rights. From this condition, intellectual property should protect human rights. Finally, Grethel Aguilar [11] explored the issue of the legal framework for a fair and equitable distribution of benefits arising from the use of genetic resources and traditional knowledge of indigenous peoples. The research explained that indigenous peoples need legal instruments to protect genetic resources and traditional knowledge. The development of the sui generis system in the Convention on Biological Diversity and Article 27.3 of TRIPs calls on large pharmaceutical companies, researchers, states to pay attention to the rights of indigenous peoples and local communities. Big pharmaceutical companies, researchers, the state should properly provide an attention to the rights of indigenous peoples and local communities. This could not be separated from the national politics and legislation of each country in the protection of biodiversity by recognizing the rights of indigenous peoples, self-determination, property rights to land and natural resources, and upholding their norms as customary rights. Genetic diversity innovation, whether modern or traditional, by indigenous peoples or pharmaceutical companies is carried out by building a system on preserving indigenous people's resource and stopping the destruction of the resource.

The eight studies reveal the problem of differences in the concept of sui generis and dispute resolution, the protection of traditional knowledge is not yet optimal because the legal instruments do not yet exist, thus finding obstacles related to understanding, technical provisions, and not well documented in a database. ten previous studies, relevant as a reference and at the same time an opportunity for researchers to conduct research focusing on intellectual property rights law and human rights principles dealing with the problems of justice for indigenous peoples over communal assets.

Theory of Justice and Principles of Human Rights

The theory of justice was born from rational principles in the model of society which is supported by a regulation [12] that wants a balance of what is their right (proportional). The state is responsible for citizens by providing benefits without interfering with the rights of others, to realize social justice [13]. In addition, justice also requires the existence of the principle of freedom and the principle of equality: "Human freedom should be able to live together with the equality of other humans" [14]. This justice in a democratic society calls the principle of equal access and ownership rights in realizing economic equality [14].

In Indonesia, justice cannot be separated from Pancasila and the 1945 Constitution. The principles in Pancasila are as a unit by placing the first principle: "Belief in One Supreme God" as the basic corridor and the soul of the other four followed principles. The religious value of the first principle is interpreted as a source of recognition of morality, placing humans fairly, and prioritizing the public interest. The criteria for public interest are based on indicators: the nature, form and characteristics of the public interest which are formulated in a definite, fair and acceptable manner by the community [15].

Justice in principle talks about basic rights or what is called in the term of human rights whose substance includes: (1). civil and political rights, namely: as negative rights that place the state as the bearer of responsibility in the fulfillment of these rights, they are passive; (2). economic, social and cultural rights as positive rights in their fulfillment require the active role of the state, starting from formulating, compiling, and implementing programs for the fulfillment of these rights. In short, in human rights law, the state has full responsibility to fulfill, protect and respect [16] based on the following principles: (1). non-discrimination; (2). equality before the law; and (3). equality of legal protection [14]. These international human rights legal instruments are humanistic legal products, implemented by countries, could not be separated from the ideological and cultural bases of their respective countries, and fulfill the principles of balance, non-discrimination, and fairness.

Communal Intellectual Property

Communal intellectual property in Indonesia is born and grows and develops from works, creations, cultural intellectual creativity in the form of traditional knowledge (PT), traditional cultural expressions (EBT), and genetic resources (SDG) from more than 20,000 islands, produced by approximately 900 ethnic groups with their respective characteristics that are required by religious, moral and economic values as communal intellectual property.

Traditional knowledge by the World Intellectual Property Organization (WIPO) is defined broadly, including: "Knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity [17] ". In short, traditional knowledge includes: (1). agricultural knowledge; (2). scientific knowledge; (3). ecological knowledge; (4). medicines knowledge including related medicine and remedies; (5). biodiversity-related knowledge; and (6). cultural expressions (music, dance, song, crafts, language elements, and moving cultural objects) include signs and symbols [18]. Traditional knowledge in a narrow sense is defined as knowledge resulting from intellectual creativity in a traditional context which includes: knowledge, practice, skills and innovation [17].

Referring to the document of The Protection of Traditional knowledge: Draft article –Rev.2. Traditional knowledge, traditional knowledge is defined as: "Traditional Knowledge refers to knowledge originating from indigenous (people), local communities and/or [other beneficiaries] that may be dynamic and evolving and is the result of intellectual activity, experiences, spiritual means, or insights in or from a traditional context, which may be connected to land and environment, including know –how, skills, innovations, practices, teaching or learning [19]." Meaning: Traditional knowledge is a knowledge that is dynamic and developed as a result of intellectual activity, experience, spiritual means, or insights in or from traditional contexts, related to land and the environment, including knowledge, skills, innovations, practices, teaching or learning derived from indigenous peoples, local communities as rights holders and/or other beneficiaries." From this understanding, the elements of traditional knowledge include elements of objects and subjects, namely:

1. The object elements are:
   a. Knowledge is dynamic and evolving;
   b. The result of intellectual activity, experience, spiritual means, insight in or from traditional contexts, for example: related to land, environment, knowledge, skills, innovation, practice, teaching or learning;
2. Subjects of rights holders are: indigenous peoples or local communities

Likewise with traditional cultural expressions, based on the document "The Protection of Traditional Cultural Expression: draft Article (March 2019) traditional cultural expressions are defined as: "… art any form in which traditional culture and knowledge are expressed [appear or are manifested] [the result of intellectual activity, experiences, or insights] by indigenous [people], local communities and/or [of the beneficiaries] in or form a traditional context, and may be dynamic and evolving and chunking verbal forms, musical forms, expressions by movement, tangible or intangible forms of expression, or combination thereof [19]". From this understanding, traditional cultural expressions can be grouped into two, namely [19]:

1. Every form of culture and traditional knowledge whic is expressed by the people of origin, local communities and or other rights holders in the context of traditions that are dynamic in nature, and can experience development, for example: in the form of words, poetry, music, movements, expressions and forms of objects or immaterial, or a combination of the two; or
2. The result of intellectual activity, experience or understanding expressed by the community of origin, local residents and or rights holders in the context of a tradition that is dynamic and can experience development, for example: in the form of words, poetry, music, movements, expressions and objects or intangibles. object, or a combination of the two.

In short, traditional cultural expressions are: the result of intellectual activity, experience or understanding by indigenous peoples which is expressed in the context of a tradition that is dynamic and developing. For example: in the form of words, poetry, music, movements, expressions in the form of objects or intangibles or a combination of the two forms. What is meant by genetic resources are plant, animal, or micro-organism materials containing units that function as carriers of hereditary traits, both actual and potential value to create new strains, clumps or species [20]. Moving on from this understanding, the elements of traditional knowledge, traditional cultural expressions, and genetic resources meet the elements of subject and object. That is:

1. Subject elements: as rights holders or beneficiaries, which in this case are: indigenous peoples and or local communities;
2. Object elements include:
   a. Knowledge, experience and understanding are dynamic and evolving;
   b. The results of intellectual activity are:
      - As a spiritual means, insight in or from a traditional context. For example: related to land, environment, knowledge, skills, innovation, practice, teaching or learning; or
      - Expressed in the context of tradition. For example: in the form of words, poetry, music, movements, expressions in the form of objects or objects, and or a combination of the two forms; or

c. Plants, animals, or micro-organisms that have a function as carriers of hereditary traits, both actual and potential value to create new strains, clumps or species.

From the elements of objects of traditional knowledge, traditional cultural expressions, and genetic resources as communal intellectual property, there is a link and balance, perhaps uneven one, between indigenous peoples with those with innovation that produces an economic value benefit when it becomes part of the modern intellectual property rights regime in the fields of copyrights, brands, geographical indications, patents, trade secret. So that in the context of justice, indigenous peoples or local communities as rights holders or benefiting from them, it is important for them to get protection by the modern intellectual property system

The Problems of Indigenous Peoples' Justice, Communal Intellectual Property.

The issue of justice for indigenous peoples over communal intellectual property according to Lorie Graham & Stephen Mc John is due to the orientation of modern intellectual property law is commercialization and economic value by expanding the scope of patents, copyrights, brand rights and geographical indications, trade secrets, and plant varieties that benefit the interests of the company, foreigners outside the community, thereby narrowing or even violating the rights of the public and the rights of indigenous peoples. This problem is caused, among others, namely [10]:

1. There is a difference of interest in intellectual property law between private rights (companies and or foreigners outside the community or other designations) with public rights and indigenous peoples' rights to communal intellectual property;

2. The impact of private rights (company interests) on public rights and the rights of indigenous peoples;
3. Discriminatory treatment of indigenous peoples for the protection of communal intellectual property. So that legal protection of communal intellectual property is not only talking about economic benefits, but also an integral part of the survival of indigenous peoples, so that the source of this protection is not only based on the logic of privatization, but rather on human rights.

Based on these problems, several communal intellectual property products, for example: (1). traditional knowledge is related to: (a). know how, such as: making *tempe*; (b). skills (*kris* making or weaving); (c). agricultural knowledge (*subak* system in Bali); (d). ecological knowledge (traditional astronomical science); (e). knowledge of medicine and healing techniques including genetic resources (Sumbawa herbs-oil which consists of: coconut oil, ginger, roots, and spices); (f). skills in making traditional crafts. (2). traditional cultural Expressions, for example: (a). textual verbal forms in the form of stories, fairy tales, prose, poetry, puzzles, signs, language elements such as: names, words, symbols, indications and others (the legend of *sangkuriang*); (b). Music (rhythm art, stringed instruments and others); (c). movement (*pencak silat*, dance, games and others); (d). fine arts (paintings, carvings, jewelry, motifs (batik motifs), weaving, metal goods, textiles, designs, carpets, pottery sculptures, sewing, mosaic crafts, weaving, musical instruments (angklung and others); (e) traditional ceremonies; (f) theater; (g) architecture and landscapes (3) genetic resources such as: (a) plants such as rhizome roots, red fruit, *pasak bumi, temulawak* and others; (b) animals whose genetic resources are located in embryos, eggs and others (*Gembrong* goat, arrowroot sheep, Bali cattle (saliva and sperm etc); (c) Microorganisms or microbes such as: bacteria, protozoan viruses, molds (*tuak*, *tempeh*, curd, *barem* and other fermented foods), *lumpu* and others) [19].

From some of the results of communal intellectual property, problems began to arise when there were widespread claims of ownership of rights. Case in point: the theatrical performance of *La Galigo* (a classic Bugis traditional cultural expression) which performed in Singapore, the *Rasa Sayange* song and the *Pendet* dance in a Malaysian tourism advertisement, where both examples of these cultural expressions were performed or produced without a proper process of recognition towards the Indonesian government [6]. In addition, the claim to the expression of traditional Indonesian culture that occurred in 2008 in the case of crocodile skin motifs from Bali, where the Balinese artist, Ketut

Deni Aryasa, alleged by PT. Tangan Indah business group John Hardy Internasional Ltd (America) as plagiarizing the motif and non-existent of permission, in which copyright has been registered with the DJKI under the name "Batu Kali". The case of *tempe* patented by the Japanese state. The case of herbal medicine, whose medicinal properties were patented by the Japanese cosmetic company "Shiseido" at the European Patent Office. Other cases are: patents registered by foreign countries where they root out information of Indonesia-based traditional knowledge on medicinal efficacy (as a process of commercializing it), namely: (a). anti aging agent using the basic ingredients of *Sambiloto* and *Kamukus*; (b). Hair Tonic with the basic ingredients of Javanese chili; (c). beautiftying and whitening Demal Preparation for external use using *gambir lumping* as the basic ingredient [19].

Looking into those case, Grethel Aguilar argues that the emergence of fair and equitable legal issues as a result of the use of genetic resources and traditional knowledge of indigenous peoples, which in principle, communal intellectual property must be separated from the logic of privatization. Hence, for the purpose of protecting and preserving the identity of a group or indigenous peoples, the concern of the fulfillment of human rights through the principles of non-discrimination and self-determination is the primacy of the matter. This means that, on the basis of equality, indigenous peoples have the right to determine the continuity of their existence on their own destiny, as well as the right to determine the promotion of the continuity of their culture.

Thus, intellectual property rights law and human rights principles address the issue of justice for indigenous peoples on communal property. First: based on the normative approach, it has been explicitly recognized in Article 27 of the Universal Declaration of Human Rights (UDHR): "(1). Everyone has the right freely to participate in the culture life of the community, to enjoy the arts and to sare in scientific advancement and its benefit; (2). Everyone has the right to the protection of the moral and material interest resulting from any scientific, literary of artistic production of which he is the author". Then in article 15 of the Covenant on Economic, Social and Cultural Rights, namely:

1. The right to enjoy the benefits of scientific progress and its application;
2. The right to benefit from the protection of moral and material interests arising from scientific, literary or artistic works that have been created; and
3. The responsibility of the state to fulfill and respect the freedom for scientific research & creative activities [21].

It is understood that the protection of cultural life in human rights law is related to the right to benefit from the protection of traditional knowledge, traditional cultural expressions, and genetic resources. The meaning of cultural rights as part of human rights cannot be separated with other rights since it is basically and factually interrelated. The goal is to maintain human dignity and social relations between individuals and society and to preserver a multicultural life they are in. The element of taking part in cultural life means: the right of indigenous peoples to live, preserve and carry cultural traditions [22] as a characteristic of freedom that put the responsibility of the state to respect and protect all indigenous peoples based on the principle of equality both as a collective and individually [23].

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), provides protection and respect for the rights of indigenous peoples, free from discrimination as diversity, the wealth of civilization as a common heritage, with the concept of sustainable development, justice, and proper environmental management in its autonomous implementation [23]. It can be understood that:

1. Element: “everyone” is defined as individual or collective, with the meaning that cultural rights can be exercised by someone: (a). As individuals; (b). In relationships with other people; or (c). In a community or group [24];
2. Elements: "to take part" or "to participate" are interpreted by using interchangeably which includes three conditions, namely [25]:
   a. Participation includes: the right of everyone, either alone or in association with others or as a community, to act freely to: choose his or her own identity, identify with or with one or more communities to change choices, take part in political life, engage in one's own cultural practices and express themselves in language. Everyone has the right to seek, develop cultural knowledge and expression, and act creatively and take part in creative activities;
   b. Access includes the right of every person (whether individual/ group of individuals/community) to know and understand their own culture and that of others through education and information, receive education and training in a manner that respects cultural identity. Everyone has the right to learn forms of cultural expression and dissemination through technical media of information or communication such as: land, water, biodiversity, language or special institutions, and to benefit from the cultural heritage and creation of other individuals and communities;

c. This contribution refers to the right of everyone to be involved in the creation of a community's spiritual, material, intellectual and emotional expression which is in its development through the elaboration and implementation of policies or decisions on cultural rights.
3. Elements: "cultural life" which is defined as culture in a broad sense, where individuals and communities maintain the specificity of their life goals starting from the past and those born in the future which include the manifestation of human existence as a process of life, history, past developments, present and the future, so that this concept takes into account individualism and the existence of culture as a creation and product of society, including: ways of life, language, oral and written literature, music and songs, non-verbal communication, religion or belief systems, traditional ceremonies, sports and traditional games, production methods and technology, natural and man- made environment, food, clothing, shelter, art, customs, traditions expressed by individuals, groups of individuals or communities that reflect the values of welfare, economic, social and political life [26].

The right to take part in cultural life in its application cannot be separated from the principles of equality and non-discrimination provided that [26]:

1. Availability of services that are open as public spaces for cultural interaction for everyone, such as: libraries, museums, theaters, cinemas, and sports stadiums, literature, including folklore, art, parks, squares, roads, nature such as: seas, lakes, rivers, mountains, forests, nature reserves, including flora and fauna that describe the nation's biodiversity, language, customs, traditions, beliefs, knowledge and history, identity values and contributions to cultural diversity, and minority communities have equal freedom;
2. Accessibility to fully enjoy culture effectively for individuals and society both physically and financially in all areas without discrimination. Access rights include: (a). Availability of facilities for the elderly and disabled, for the poor; (b). Access to seek, receive and share information on cultural manifestations according to the language of choice; (c) access to means of expression and dissemination for the community;
3. Acceptability to enjoy cultural rights must be formulated through laws, policies, strategies and programs, so that they can be accepted by individuals and society;
4. Policies, strategies and programs adopted by the state must be flexible and relevant by respecting the cultural diversity of individuals and communities;

5. The suitability is based on human rights values and certain modalities or cultural contexts, namely: respecting the culture and cultural rights of individuals and communities, including minority communities and indigenous peoples. This relates to the rights to food, health, water, housing and education. The way in which these rights are implemented will affect and be adapted to cultural values, including: the way food is consumed, the use of water, the way health and education services are provided, and the way housing is designed and built.

The human rights principle emphasizes the attitude of limitations and exceptions to individual rights in order to protect community and cultural rights. This can be seen in the case of the application of intellectual property rights to seeds for the protection of plant varieties which are considered to violate the rights of farmers and indigenous communities, whose daily activities are traditional farming, maintaining the seed system freely: storing, selecting, exchange, sell and reuse, and destroy biodiversity. This issue also gave birth to the Declaration on the Rights of Peasants and Other People working in rural Areas (UNDROP) 2018. This provision aims to balance the rights between plant breeders' rights and the rights of peasants [27] and the rights of other people in it [27]. In short, UNDROP is a form of protection, respect, and fulfillment of the rights of farmers and indigenous communities, as well as maintaining biodiversity. So that the elements of farmers' rights in the UNDROP provisions include [27]:

1. The right of people to maintain, control, protect and develop traditional seeds and knowledge;
2. The right to the protection of traditional knowledge, innovations and practices relevant to seeds;
3. The right to participate in decision-making regarding Seeds;
4. The right to participate equally in the sharing of benefits from the use of seeds;
5. The right to store, use, exchange and sell stored seeds or breeding materials.

In its application, member states are given the freedom to interpret UNDROP provisions broadly into their respective national laws, based on the obligation to: (a). Ensure consistency of law and policy between international treaties and standards on the right to seed and national law; (b). Respect, protect and fulfill the right to seed; (c). Support crop seed systems and promote the use of plant seeds and agrobiodiversity; (d). Ensuring crop participation and seed-related decision-making processes; (e). Ensuring agricultural research and development with active participation of farmers [27].

The importance of limitations and exceptions to the protection of community rights to save ecosystems can be referred in the jurisprudence of Constitutional Court Decision Number: 3/PUU-VIII/2010 concerning the judicial review of Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands as an explanation the object of the Right to Management of Coastal Waters (HP-3) as the ruling of the Court on the basis of UDD 1945 (the Constitution of Indonesia) [28]. Essentially, this enumerates norms for limitations and exceptions to HP-3 objects, namely [28]:

1. Is the granting of HP-3 contrary to the principle of state control over natural resources for the greatest prosperity of the people, constitutional guarantees of the right to life and defense of life for coastal communities, the principle of non-discrimination and fair legal certainty;
2. Is the preparation of the Strategic Plan for the Coastal Zone, Small Islands (RSWP-3-K), the Zoning Plan for the Coastal Zone, Small Islands (RZWP-3-K), the Management Plan for the Coastal Zone, Small Islands (RPWP- 3- K), Action Plan for the Management of Coastal Areas, Small Islands (RAPWP-2-K) which does not support the community as participants in the deliberation, violates the constitutional rights of the petitioners and is contrary to the constitution.

The forms of limitations and exceptions for the protection of communal intellectual property in the Jurisprudence of the Constitutional Court are: Article 1 point 18, Article 16, Article 17, Article 18, Article 19, Article 20, Article 21, Article 22, Article 23 paragraph (4) and paragraph (5), Article 50, Article 51, Article 60 paragraph (1), Article 71 and Article 75 of Law 168 Number 27 of 2007 concerning Management of Coastal Areas and Small Islands, namely: (a). in contrary to the 1945 Constitution of the Republic of Indonesia; and (b). they are not binding legally. So, the importance of limitations and exceptions in this case are by considering [28]:

1. The maximum meaning of the prosperity of the people is the main measure for the state in determining the management, regulation or management of the earth, water and natural resources contained therein, taking into account the existing rights, both individual rights and collective rights. owned by customary law communities (*ulayat* rights), indigenous peoples' rights, as well as other constitutional rights such as: the right of access to pass, the right to a healthy environment and others;
2. Coastal waters and small islands already have individual rights, customary law community rights, as well as the rights of traditional fishermen, business entity rights, or other community rights as well as

the application of local wisdom, namely noble values that still apply in the way of life. the community, so that the allocation of coastal areas and small islands and several other areas to provide guarantees and protection for the area must be protected using an integrated approach (integrated coastal zone management) which includes the fisheries, transportation, tourism, mineral, environmental and other sectors;

3. The handover of the management of coastal areas and small islands to individuals, legal entities and community groups constructed according to this law by granting HP-3, will lead to privatization of the management and utilization of coastal waters and small islands to individual or private businesses;
4. Giving HP-3 has the potential to threaten the position of indigenous peoples and traditional fishermen who depend on their lives for generations from existing resources in coastal waters, small islands, due to limitations in obtaining HP-3 compared to private entrepreneurs, and the absence of special treatment for indigenous peoples and traditional communities to obtain HP-3, so that they are threatened with losing the resources that are their source of life;
5. The benchmarks for assessing the extent to which the granting of HP-3 provide the greatest prosperity of the people are: (a). utilization of natural resources for the people; (b). the level of distribution of the benefits of natural resources for the people; (c). the level of people's participation in determining natural resources; (d). respect for the rights of the people from generation to generation in utilizing natural resources;
6. The control of coastal waters and small islands by the private sector will still benefit HP-3 holders more than the benefits obtained by fishing communities, which on average have low levels of education and limited capital;
7. The granting of HP-3 may lead to indirect discrimination that causes losses to the fishing community, and competition in obtaining management rights, due to the unbalanced ability and condition of the fishing community compared to owners of large capital;
8. Community participation does not guarantee, protect, and fulfill community rights;
9. The HP-3 concept can eliminate opportunities for indigenous peoples and traditional communities who depend on coastal areas and small islands for their livelihoods;
10. Giving HP-3 will violate the principle of social justice for all Indonesian people, because the users of coastal areas and small islands become HP-3

areas controlled by large capital owners, which results in the exclusion of traditional fishing communities. Under these conditions, the state has neglected to carry out its responsibilities to implement a national economy that provides protection and justice.

The importance of limitations and exceptions can also be seen in the jurisprudence of the Constitutional Court Number: 35/PUU-X/2012 concerning Judicial Review of Law Number 41 of 1999 concerning Forestry against the 1945 Constitution [28], related to the following issues: (1). Provisions on the status and determination of customary forests; (2). Provisions on forms and procedures for recognizing customary law community units [28]. These restrictions are related to the provisions of Article 1 paragraph 6 [29], Article 4 paragraph (3) [30], Article 5 paragraph (1) [31], Article 5 paragraph (2), Article 5 paragraph (3) which is declared in contrary to the 1945 Constitution and does not legally. This decision illustrates the importance of limitations and exceptions for the protection of culture related to indigenous and tribal peoples, taking into account [29]:

1. Placing customary forests as part of state forests is a form of neglect of the rights of indigenous peoples;
2. The terms of recognition and respect for customary law communities in the phrase: "As long as they exist and their existence is acknowledged", must be interpreted as long as they are still alive and in accordance with the development of society, and the principles of the Unitary State of the Republic of Indonesia. This is because customary law is an unwritten law and is a living law, meaning that the law is accepted and implemented and obeyed by the community concerned because it fulfills a sense of justice and is appropriate and recognized by the constitution;
3. Private forest must be interpreted in terms of 2 (two) categories, namely: customary forest and individual forest or legal entity, so that customary forest is included in the category of private forest, not state forest;
4. If in its development the customary law community concerned no longer exists, then the right to manage the customary forest is appropriate to be returned to the government, and the status of the customary forest can be changed to state forest;

Second, through a conceptual approach related to the protection of traditional knowledge, traditional cultural expressions, and defensive genetic resources offered by the United Education, Cultural, and Scientific Organization (UNISCO), with the aim of preventing the extinction of a culture. Based on Presidential Regulation Number 78 of 2007 concerning the ratification of the convention for safeguarding of intangible cultural heritage and Presidential Regulation Number 78 of 2011 concerning the ratification of the Convention on the Protection and promotion of the diversity of cultural expression. So, it is important for protection of traditional knowledge to have a legal instrument that regulates the recording system of traditional knowledge, traditional cultural expressions and genetic resources by distinguishing between: (1). recording system for cultural preservation; and (2). recording system for the right to obtain the benefits of very high economic value as a result of communal intellectual property in a management knowledge.

Conclusion

Intellectual property rights law and human rights principles address the issue of justice for indigenous peoples on communal property in the face of the progression of modern intellectual property in which communal intellectual property is treated as rights of individual and commercial. This causes losses and the extinction of the rights of indigenous peoples. Further, non-existence of protection creates long-standing marginalization against them. We will principally look into: (1). Legal approach: it is considered important to have norms of limitations and exceptions for the protection of rights as a form of respect, fulfillment of the rights of indigenous peoples or farming or peasants or rural community communities; and (2). Conceptual approach: the protection of communal intellectual property is carried out in an organized and prospective manner, i.e. document of recording with different systems based on objectives, namely: (a). a communal intellectual property recording system for the purpose of preservation; and (b). Intellectual property recording system with the aim of obtaining the benefits of economic value in the knowledge management system.

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determines the forest status as referred to in paragraphs (1) and (2); and customary forest is determined as long as according to the fact the customary law community concerned still exists and its existence is recognized"; (4). If in its development the customary law community concerned no longer exists, then the customary forest management rights return to the Government.

Islamic Religion Education Towards Society 5.0 Spiritual And Ethical Perspectives

Rangga Sa'adillah S.A.P.[1]

Introduction

Society 5.0 is the fifth era of the industrial revolution leap in human life. Historically, the industrial revolution started with the industrial revolution 1.0. The first industrial revolution stems from the use of mechanical work tools that still use water and steam power. The second industrial revolution or the so-called industrial revolution 2.0 shifted from hydropower and steam power tools to mechanical-based work tools. Furthermore, the industrial revolution 3.0 is the transformation of mechanical work tools into computerization and automation of industrial processes. Recently, the hot topic of conversation is the industrial revolution 4.0, which is none other than the fourth industrial revolution. Some of the devices that are of concern to the 4.0 industrial revolution are artificial intelligence, robotic, data sciences, internet of things, cloud, biotechnology, big data, and drones.[1], [2]

The era of society 5.0 and the industrial revolution 4.0 are actually still intertwined. The era of society 5.0 can be called a continuation of the industrial revolution 4.0. Society 5.0 places more emphasis on the integration between the real world and the virtual world. If the industrial revolution 4.0 pays close attention to the development of human civilization in terms of materialism, while society 5.0 the development of civilization is returned to humans. The era of society 5.0 seeks to revive the human side that has been excluded from the ferocity of materialism in the 3.0 industrial revolution era which affected the 4.0 industrial revolution. The human side of the era of society 5.0 tries to be stimulated because materialism is not a proud achievement of human civilization. The era of Society 5.0 seems to be reprimanding humans that materialism is only a mirage while the human side is an entity from the human being itself which should be the concern of human civilization.[3]–[5]

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[1] Doktor Pendidikan Agama Islam di STAI Taswirul Afkar Surabaya

Change is a necessity, as well as a human civilization that is growing over time and changing into an increasingly sophisticated era. The era of society 5.0, which was preceded by an industrial revolution up to four times, of course, has an impact on all aspects of human life, including the aspect of education. Some of the challenges in the world of education related to the impact of the industrial revolution 4.0 are still quite heavy. If you categorize it, there are two challenges to the 4.0 industrial revolution that still make an impression until now, namely physical and mental challenges. The physical challenge is in the form of infrastructure for the world of education, at least the majority of which can be connected to the internet, varied learning patterns are supported by various learning sources.[6] Meanwhile, the mental challenge is that teachers and students are required to develop creative and innovative thinking patterns such as developing thoughts that lead to higher-order thinking skills (HOTS). You can feel that the world of education is stuttering in facing the challenges of the industrial revolution 4.0, both physically and mentally. The challenges faced by the current industrial revolution 4.0 in the world of education have not yet been completed. Currently, the world of education is shocked by a new term, namely the era of society 5.0.[3], [7]

This article seeks to describe the opportunities and challenges of Islamic religious education in facing a society 5.0. The perspective used in this article is the perspective of Islamic religious education because there is a connection point between society 5.0 and Islamic religious education. The spirit of arousing humanity in society 5.0 is in line with the spirit of Islamic religious education in building the spiritual side of humans. In education, it is taught that humans are not only creatures consisting of *jasadiyah* (materialism), but a combination of *jasadiyah* and spirituality, both of which coordinate to become a single human being.[4], [8], [9]

Discussion

Opportunities to Fulfill Spirituality on Society 5.0

The industrial revolution 3.0 resulted in humans trapped in materialism and in the end, led to massive modernism at the end of the industrial revolution 4.0. Naim and Muthohar shared a negative view of modernism [4], [9] that the current of modernism can erode the sides of humanity which acts as driving energy for humans to do good and good. However, on the other hand, human stagnation towards modernity will in fact reverse the direction of opening up other opportunities such as longing for the human side, in this case, Naim and Muthohar state that modernism is not always bad so that modernism can be an opportunity that can arouse human spirituality.

The phenomenon of spiritual drought that occurs in modern society can be identified into five points.[4] First, modernity begins with egocentric, a *jargon* that reads *cogito ergo sum.*[10], [11] The jargon which means, "I think so I exist" affects other aspects such as, I shop so I exist, I have so I exist, and other jargon. In this case, the spirit will have no place. Second, modern life emphasizes burdensome activity. Humans must work in a routine, must be disciplined, go to work from home early in the afternoon until late at night, and must get a target in the form of money. This kind of cycle continues to be carried out by modern humans, without space and time to contemplate, be alone, and give rights to their spirituality. At this stage, humans carry out activities in a vacuum.

The second dryness of spirituality is that the side of human spirituality has the opportunity to be channeled into religion but unfortunately it is not real spirituality that is obtained but pseudo-spirituality.[4] Religion offers peace to its adherents, but if religionists mislead the message of peace to its adherents, it does not make that adherent feel comfortable, on the contrary. The clergy who preach terrorism and radicalism have even further damaged the image of their religion. A cleric must be able to spread the message of love and love to anyone like the message of love from the Prophet Muhammad written by Imam Nawawi, *la yu'minu ahadukum hatta yuhibba liakhihi ma yuhibbu linafsihi* (imperfect faith of a person among all of you so that he loves his brother as he is. love himself).[12]

The third dryness of spirituality is that human rationality takes precedence over emotional.[4] The dense human work in the form of routines from morning to evening that is carried out every day has an impact on a rational and individual way of thinking. Every time people undergo work, they must be fulfilled with targets and strategies to achieve these goals. Humans are so selfish and ambitious to embrace work targets that their emotional side is forgotten, rarely communicate with other people, and even think that other people are competitors that must be eliminated.

The fourth phenomenon of dryness of spirituality, rituals, and religious products of modern society is mixed with the mission of consumerism.[4] Religious rituals such as marriage, fasting, to Umrah, and Hajj became a lucrative business in the era of the industrial revolution 4.0. The mission of religious rituals, which was originally carried out by Muslims to carry out their religious laws sincerely, in the era of the industrial revolution 4.0

became a lucrative commodity. Likewise, religious products such as waqf and Islamic banking are increasingly mushrooming. Of course, the more widespread rituals and religious products may be good, but if they end in commodities, rituals, and religious products, they only carry out a pseudo-religious mission..[9], [13]

Formulating the Ethics of the Islamic Religious Education on Society 5.0

Facing the era of society 5.0 Islamic religious education needs the right attitude and response so that Islamic religious education can be managed properly. It has been stated in the introduction that the challenges of Islamic religious education in facing society 5.0 are not only physical and mental but also the means of infrastructure.[3], [6], [7] The transformation of the era into an increasingly sophisticated era cannot be avoided, there must be an attitude at least to negotiate or adapt to an increasingly sophisticated era. Apathy and rejection of the progress of the times is not a solution but instead will result in Islamic education becoming increasingly left behind.[2], [14]

Indeed, it cannot be denied that the end of the 4.0 industrial revolution era which resulted in the digitization of technology and also the internet of things is an inevitable part. The impact is that infrastructure in the world of education is not a non-negotiable part.[5] However, the initial phase of society 5.0 must be considered, namely that the connection between the real world and the virtual world should at least be part of Islamic religious education. Society 5.0 is known not only for the transformation of the progress of the internet field but also the transformation of human ethics in using the internet and also communicating with fellow humans both in the real and virtual world. Ethics is a field of study that cannot be touched by technology, because technology only communicates automatically, while humans communicate morally. This means that the transformation of Islamic religious education towards a society 5.0 era is not limited to paying attention to the field of technology but also strengthening a positive attitude and fostering hope that the direction of Islamic religious education in the era of society 5.0 is full of hope.

The positive attitude that becomes the provision in facing the era of society 5.0 is to transform the mindset. Three transformations of thought patterns that become provisions in facing the era of society 5.0 are: first, the ability to solve problems.[3], [7] The problem faced in the era of society 5.0 is the continuity of problems that were not resolved in the era of the industrial revolution 4.0. Disruption became problematic that could not be avoided in the era of the industrial revolution 4.0 and then affected the era of society 5.0. The emergence of disruption at the end of the 4.0 industrial revolution era is like a reminder that nothing is eternal but Allah *subhanahu wa ta'ala*. In other words in a cycle, equilibrium cannot exist without disequilibrium. Equilibrium is a balance or an expectation that is desired by all parties, but before there is a balance to achieve this balance there is a stage called disequilibrium or disruption. From this disequilibrium stage, it becomes equilibrium. But keep in mind that equilibrium will not be perched forever without shocks, in other words, actually, the equilibrium stage is the initial stage towards disequilibrium. The cycle will forever rotate like that. Teachers and students must be trained to deal with the problems of disruption that are inevitable in the era of society 5.0.

Second, the ability to think critically. Many think that critical thinking skills are HOTS.[1], [3], [7] In relation to Islamic religious education, the ability to think critically in its application to learning refers to HOTS by optimizing several stages of thinking such as analytical, associative, evaluative, and creative thinking. These high-order thinking stages should be applied in learning not only students who are targeted in applying the critical thinking stage, but teachers also need to do upgrading or training so that teachers can guide students to have the ability to think critically. In line with the upgrading and training aimed at teachers as an effort to improve critical thinking skills, learning Islamic religious education in schools must also at least transform into learning that can encourage students to think critically. The scientific approach applied by Islamic religious education teachers through five stages is still relevant to be applied.[15], [16] If mentioned, some of the lessons that can improve critical thinking skills are inquiry, problem-based learning, project-based learning.[1], [17]

The third transformation of the mindset is the ability to be creative.[3], [7] The ability to be creative in Islamic religious education is an ability that is not easy to formulate. It needs to be honestly realized, that the formulation of the philosophical goals of Islamic religious education is still inapplicable wishful thinking, such as the formulation of the goals of Islamic religious education to form human beings or the formulation of Islamic religious education to form a noble personality.[18]–[20] Constructive criticism is conveyed to rethink the formulation of the objectives of Islamic religious education which can be broken down into more concrete formulations.[21], [22] The desire to re-formulate the applicable direction of Islamic religious education is in line with the direction of the transformation of the mindset at this third stage. One of the considerations for formulating a creative direction of Islamic religious education is how the direction of Islamic religious education is not only forming individual pious individuals but also socially pious.[23] A socially pious person in the era of society 5.0 can become a person who carries the prophetic mission of Islam to appear cooler, more tolerant, moderate, far from radicalism.

The idea to internalize the prophetic values of Islam in the era of society 5.0 is to internalize the values of Islamic religious education which is *rahmatan lil alamin.*[23], [24] Internalization of the value of Islamic religious education which is *rahmatan lil alamin* can be a driving force, a driving force for actualizing social action through several actions including 1) transmitting the social values of Islam in the form of divinity, tolerance, justice, brotherhood in the curriculum or Islamic religious education subjects and subjects other lessons that are integratively relevant; 2) using dialogical learning methods in order to guide students to find the truth of their religion such as using the inquiry or discovery method.[15] A dialogical approach is also in order to minimize the way doctrines are taught in Islamic religious education; 3) eliminating the dichotomy paradigm between religious science and general science because science is not free of values but is free to be assessed; 4) increasing love for the homeland and 5) increasing collaboration and cooperation based on a sense of ukhwah Islamiyah and ukhwah basyariyah.

Conclution

Change is a necessity, as well as a human civilization that is growing over time and changing into an increasingly sophisticated era. The peak of modernization that occurred in the era of the industrial revolution 4.0 resulted in humans forgetting their human side. The emergence of the Society 5.0 movement seeks to revive the forgotten side of human humanity, although there is still concern that aspects of human spirituality in the era of society 5.0 are neglected. Islamic religious education fills the side of human spirituality in the era of society 5.0. The five drynesses of spirituality that hit humans in the era of society 5.0 are: 1) humans are increasingly selfish; 2) pseudo-spirituality in religion; 3) the rationality side is more exalted than emotional; 4) religious commodities. Four phenomena of spirituality drought that hit Society 5.0 are the fields of work on Islamic religious education to transform a mission that is peaceful, cool, and tolerant.

Society 5.0 is not only a transformation of the progress of the internet field but also a transformation of human ethics in using the internet and also communicating with fellow humans both in the real and virtual world. Ethics is a field of study that cannot be touched by technology, because technology only communicates automatically, while humans communicate morally. This means that the transformation of Islamic religious education towards a society 5.0 era is not limited to paying attention to the field of technology but also strengthening a positive attitude and fostering hope that the direction of Islamic religious education in the era of society 5.0 is full of hope. Facing the era of society 5.0, it is necessary to formulate a strategy to prepare a generation of Islamic religious education which has three transformations in mindset, namely: 1) the ability to solve problems; 2) critical thinking skills, and 3) the ability to be creative based on prophetic ethics. Prophetic ethics is an action in carrying out social movements in the context of carrying out Islamic education that is *rahmatan lil alamin*.

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Product Development for Competitive Advantage of Ikat Woven Fabric Msme

Rita Ambarwati[1]

Introduction

The development of a dynamic industrial environment in the global era nowadays has become a trigger for many companies to explore their potential [1], and identify the key success factors to excel in increasingly competitive competition, including MSMEs. Rapid technology is also in line with competitive climate. The efforts carried out in the end are directed to provide the best products to consumers [2]. The product context offered by the company to consumers in terms of production and operations management is a combination of goods and services [3]. MSMEs will not be able to compete if the products offered are purely goods and the service company cannot compete if the product offered does not care about the service factor [4]. The success of MSMEs in providing the best products to consumers includes a combination of goods and services in each ideal portion according to the company [5]. The presentation of products in a broad sense is a challenge as well as an opportunity for operating production systems that must be carried out by MSMEs [6]. It is starting from identifying consumer tastes to seeking all input requirements from suppliers to produce and distribute these products according to the expectation of targeted consumers [7]. Basically, consumers expect to be able to obtain products that have benefits at an acceptable price. To realize the desires of these consumers, each company strives optimally to use all its assets and capabilities to provide added value to consumer expectations. The implementation of this effort certainly has different cost consequences for each MSME, including its competitors.

Approximately, about 20 woven industry homes at Bandar Kidul Kediri are done by the three family generations. The woven fabrics produced are starting from gombyor sarongs, misris (ordinary) fabrics, semi silk to silk. The fabric is made colourful with Kediren motifs such as ceplok to lung. Kediri's unique woven fabric can be found easily in the

[1] Universitas Muhammadiyah Sidoarjo

Bandar Kidul woven industry center, Kediri City. The community worked together to produce and market the woven fabric. The motifs used are salur, kuncup and Brantas River. Another woven competitor is the woven from Bojonegoro which is so popular with its batik. The motif of was adopted from Jonegoroan batik, it is batik with a distinctive Bojonegoro motif. There are also motifs used for typical Bojonegoro woven fabrics involving Sekarjati and Oxen Sekar Rinambat. One of the Jonegoroan woven centers is in Kedungrejo, Sumberejo District. There is also Lamongan ikat woven fabric produced in Parengan Village. The colour is brighter and firmer with distinctive features called Milkfish and Catfish. This woven is also combined with songket and batik to enhance its appearance.

The weaving process uses fine threads through two processing stages with 15 steps. The process of making warp or keteng through four stages called dyeing, spinning, skeer or rolling threads in the boom and graying process or connecting threads. The second process is spinning white yarn, re-arranging threads at bidangan, designing, binding, dyeing, plugging, releasing straps, breaking threads, spinning in pallets and finally the weaving process. The strength of the woven handicraft industry in Bandar Kidul is that the business activity has been going on for generations, has its own uniqueness in the patterns and motifs displayed and most of them have gained the trust of banking capital. The current marketing range of ikat woven fabric has reached cities throughout the country such as Jakarta, Palembang, Jambi, Toraja, Makassar, Denpasar, Malang, Surabaya and others. The results of the analysis show that the opportunities for developing the woven handicraft industry are still opened considering the number of requests tends to increase. While the optimum production capacity is still 2 (two) meters of fabric per machine per day so that to meet the high market demand, it is necessary to increase the number of machines, the number of labor and capital. Customers tend to choose MSMEs that offer the most competitive prices with quality standards that meet customer needs [8]. The mechanism of market competition and competitive advantage can be explained in five key words namely Quality (Q), Cost (C), Delivery (D), Safety (S) and Morale (M) aspects. In the beginning, the company only paid attention to the quality aspects of its products, but due to the development of the era and the tight competition of the business aspects of costs, delivery accuracy, and service from the company needed to be further studied [9]. The success of company in long term depend on strategy developing product [10]. These criteria are factors that influence customer satisfaction and support in winning market competition. Initially the company only paid attention to the quality aspects of its products, but due to the development of the era and the tight competition of business aspects of cost, accuracy of delivery, and service from the company needed to be further studied [11]. Therefor the criteria of Quality, Cost, Delivery, and Services are known or commonly called QCDS [12]. As time goes on and the demands of global business competition, companies need other criteria to support their competitive advantage [13]. Consumer awareness regarding aspects of safety and green manufacturing requires companies to change the paradigm of competitive advantage criteria by adding aspects of safety and morale that are closely related to the company's obligation to maintain the environment in every business process [14]. Because of these demands, the competitive advantage criteria that are relevant to be used are QCDSM. In the scope of business competition, every company must pay attention to aspects of the main concern of the competition itself such as quality, features, functions, product reliability, services provided, product stock availability, image and company reputation, mastery of the marketing team's knowledge of its products and technology, and competitive prices [15].

Competitive advantage basically grows from the value or benefits of the company to its buyers, where the value is more than the costs that the company must incur to create it [16]. It is this value or benefit that the buyer is willing to pay, and the superior value comes from offering a lower price than the competitor's price with equal benefits or unique benefits that exceed the price offer [17]. Competitive advantage is the superiority of competitors that is obtained by offering lower value or by providing greater benefits because the price is higher [18]. Based on the problems faced by these MSMEs, this study will try to solve the problem of how a product development is made using the QCDSM concept in an effort to maintain the suitable competitive advantage for the survival of the *Ikat* Woven Fabric MSME in Bandar, Kediri. Research on measuring customer needs in MSMEs in Indonesia, especially the level of quality and customer loyalty has not been carried out much. However, research related to the development of new products that meet the market expectations of the MSME industry in Indonesia, especially for textile MSMEs, has never been done. This study aimed to develop the products of Ikat Woven Fabric MSME in Kediri to survive in the era of global industrialization in Indonesia. By using QCDSM attributes as the basis for forming competitive advantage criteria which later become input for QFD (table 1), it is expected that this research would be able to provide a positive contribution to textile MSMEs, especially for Weft *Ikat* Industry in Bandar Kidul, Kediri.

Table 1 Competitive Advantage Attributes of Weft Ikat

Indicator	Criteria	Explanation
(1)Price Conformity	C+Q	The price is offered according with the quality of the product
(2)Endurance	Q	The durability of the product
(3)Product Packaging	Q+D	The product packaging attractive to consumers
(4)Trademark	D	The symbols and writing of SME's trademarks
(5)Product Size	Q	The size of the product
(6)Dyes	S	The dye harmful to consumers
(7)Product Color	Q	The color of the product attractive to consumers
(8)Packaging Material	M	The packaging material environmentally friendly plastic
(9)Product availability	D	The products always available at outlets
(10)Product Safety	S	The products safe to use for consumers
(11)Product Delivery	D	The product delivery always on time
(12)Dangerous waste	M	The production system produce dangerous waste
(13)Environmentally friendly	M	The business system of SME's friendly to the environment

Discussion

Based on the results of data collection and processing of the level of importance to customer, the data used was the result of processing IPA from the value of customer satisfaction and the value of the interests of the customer [19]. The use of the results of the Importance-Performance Analysis (IPA) aimed to find out what things are influential and become the main expectations of customers in obtaining products or services from Weft Ikat MSME in Bandar Kidul Kediri. Based on the results of the questionnaire that had been disseminated, the level of customer satisfaction and the level of importance of customers were obtained. The results of IPA processing from the value of satisfaction and customer interests can be seen in Figure 2.

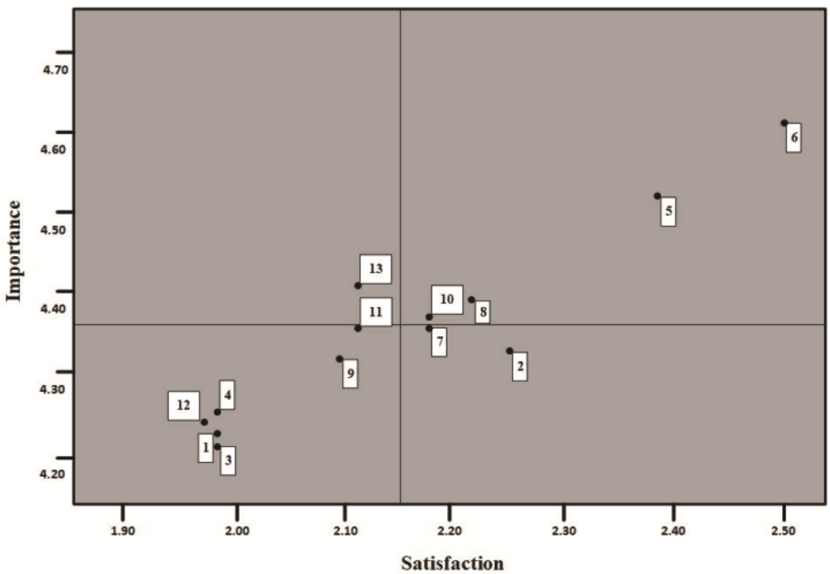

Figure 2 Diagram of classifying interests with the IPA concept

The results of the IPA analysis of consumer satisfaction to be mapped into house of quality were attributes that were in Quadrant A and Quadrant C. The quadrant C was attributes that were considered less important by the customer and in fact the performance was not good enough. Quadrant C was chosen because if an improvement was made on these attributes, it was expected that it would increase consumer satisfaction from the Weft Ikat MSMEs in Kediri. Quadrant A would be able to increase the number of consumers if fulfilled, and vice versa. The IPA that would be mapped into the house of quality was in Quadrant A and C because it had a high priority in increasing customer satisfaction so that it could provide a positive impact on the competitive advantage of the Weft Ikat MSMEs in Kediri. Customer Satisfaction is the perception of the quality of Weft Ikat products according to consumers as they perceive. This relates to consumer ratings of each of the Kediri Weft Ikat attributes based on the level of customer satisfaction. The assessment of the level of customer satisfaction was performed on the Weft Ikat Kediri and its competitors, namely Bojonegoro Weft and Lamongan Weft. The values of the level of satisfaction on each brand can be seen in table 2.

Table 2 Determination of the value of a goal or target

No.	**Atribut**	**Customer Satisfaction Performance**			**Goal**
		T.I. Kediri	T. Bojonegoro	T. Lamongan	
1.	Product Delivery	3.27	3.32	3.52	3.52
2.	Product Availability	3.28	3.38	3.42	3.42
3.	Trademark	3.77	4.08	3.82	4.08
4.	Dangerous Waste	3.55	4.05	4.23	4.23
5.	Price Conformity	3.83	4.03	3.85	4.03
6.	Product Pacakaging	3.63	3.58	3.80	3.80
7	Environmental Friendly	4.12	3.85	4.10	4.12
	Mean	3.54	3.77	3.77	

The improvement ratio shows whether a determined goal can be achieved or needs improvements so that the goals set can be achieved [20]. To find out whether the goal has been achieved is to look at the value of the improvement ratio. If the value of the improvement ratio is equal to 1 then the goal can be achieved and must or need to be maintained. But if the value of the improvement ratio is greater than 1, then the necessary improvements must be made to improve the quality of Kediri Ikat Woven products. The greater value of the improvement ratio, the greater the effort that must be made to achieve the determined goal. Technical response is a solution to consumers need in a company [21]. This solution describes the system that will be created by the company while demonstrating the management capabilities of the MSME Ikat woven fabric in overcoming the problems of meeting consumer needs with each attribute of competitive advantage of Kediri Ikat woven fabric MSMEs. Technical response is the answer to the problems in each attribute that illustrates the competitive advantage of Ikat woven products. At the House of Quality, the technical response is placed on the roof [22]. The solution to the problems in Ikat Woven fabric attributes was obtained from the results of interviews with the owner of MSME Ikat Woven fabric in Kediri. The interview results that gave rise to technical responses can be seen in table 3.

Table 3 Technical Response of Kediri Ikat Woven Fabric

No.	Attribute	**Technical Response**
1.	Price Conformity	utilize cheap domestic raw materials.
		arrangement of looms and sewing.
		suitability of paint raw material composition.
2.	Endurance	arrangement of looms and sewing.
		employee training
3.	Product Packaging	replace the form of plastic packaging into environmental friendly materials
4.	Trademark	arrangement of looms and sewing.
		Redesign trademark
5.	Product Size	*Employee training
6.	Dyes	*choose natural raw materials & do not contain B3
7.	Product Color	*suitability of paint raw material composition.
8.	Packaging Material	*replace plastic wrap with recyclable natural ingredients
9.	Product availability	*Increase in production
10.	Product Safety	*choose natural raw materials & do not contain B3
11.	Product Delivery	*partnering with third parties to ship goods
12.	Dangerous waste	*choose natural raw materials & do not contain B3
13.	Environmental Friendly	choose natural raw materials & do not contain B3
		replace plastic wrap with recyclable natural ingredients

After analyzing the planning matrix, prioritizing technical responses along with the correlation between technical response and customer need, and the correlation between technical responses, a quality improvement proposal of Kediri Ikat Woven Fabric MSMEs products can be proposed. To determine the priority of improvement proposals, the result difference was obtained from the Kediri Ikat Woven Fabric performance with the performance of Bojonegoro Woven and Lamongan Woven or it can be said to be the difference between the target and own performance. However, if own performance is better than the two other weaving producers, the target is the same as own performance, no improvement is needed. The results of own performance, competitive benchmarking, and target calculations can be seen in table 4.

Table 4 Own Performance of Kediri Ikat Woven Fabric Competitive Benchmarking and Target

No.	Technical Response	Performance			Goal
		TI. Kediri	T. Bojo negoro	T. Lamo ngan	
1.	utilize cheap domestic raw materials	3.75	3.98	3.92	3.98
2.	arrangement of looms and sewing	3.87	4.02	4.04	4.04
3.	suitability of paint raw material composition.	3.83	3.98	4.06	4.06
4.	employee training	3.62	3.73	3.75	3.75
5.	replace the plastic packaging into environmental friendly materials	3.64	3.79	3.82	3.82
6.	redesign trademark	3.71	3.84	3.81	3.84
7.	choose natural raw materials & do not contain B3	3.82	3.95	4.09	4.09
8.	replace plastic wrap with recyclable natural ingredients	3.82	3.94	4.11	4.11
9.	Increase in planning production	3.51	3.49	3.68	3.68
10.	using raw materials that do not contain B3 ingredients	3.82	3.94	4.11	4.11
11.	choose a third party to deliver the product	3.27	3.32	3.52	3.52

Based on the difference between the target and own performance, the priority for improvement recommendations can be made by the Kediri Ikat Woven Fabric MSMEs to maintain their competitive advantage. The priority recommendations are explained as follows: replacing plastic materials into recyclable ones, ensuring raw materials that do not contain B3 agents, choosing coloring agents that do not contain B3 agents, choose a third party to ship the product, weighing the dye materials according to their composition and appropriate measure, utilizing domestic raw materials so that the prices are more competitive. The environmentally friendly paradigm today is an important factor in business processes in every company [23]. This can be proven by the emergence of priorities for plastic materials and the emergence of consumer awareness to look for producers that are more environmentally friendly [24]. Therefore, replacing plastic materials as packaging into recyclable plastic will provide a competitive advantage for the Kediri Ikat Woven Fabric MSME because they lack of awareness on plastic problems while the consumers awareness have begun to raise. Therefore, this becomes an opportunity for MSMEs to be able to increase their competitiveness by using recyclable plastic materials. In addition, the selection of safe dyes for consumers is an important priority to be recommended for the Kediri Ikat Woven Fabric MSMEs. It is important for the Kediri Ikat Woven Fabric MSMEs to be able to know and sort raw materials that are safe for consumers and safe for the environment, so that it will increase consumer credibility. In addition, the impact that will be caused is an increase in public trust in the presence of the Kediri Ikat Woven Fabric MSME because the waste produced will be more environmentally friendly and will not pollute the surrounding environment. This paradigm shifts are things that need to be considered by MSMEs to be able to stay ahead in market competition. Things like price and quality that used to be the main keys in winning market competition, have now turned to the concept of green manufacturing that is more environmentally friendly. In other words, consumers have begun to be sensitive to environmental issues and the safety of the products used. This is closely related to the competitive advantage criteria raised, namely Quality, Cost, Delivery, Safety, and Morale. If a company wants to win market competition, then the criteria of the QCDSM must really be a top priority to improve its business processes and become a reference in maintaining its competitive advantage. After all the information about the required quality house has been obtained, then the next step is to create or compile a house of quality based on the available data. The results of the compilation of quality houses for Kediri Ikat Woven Fabric are explained as follows.

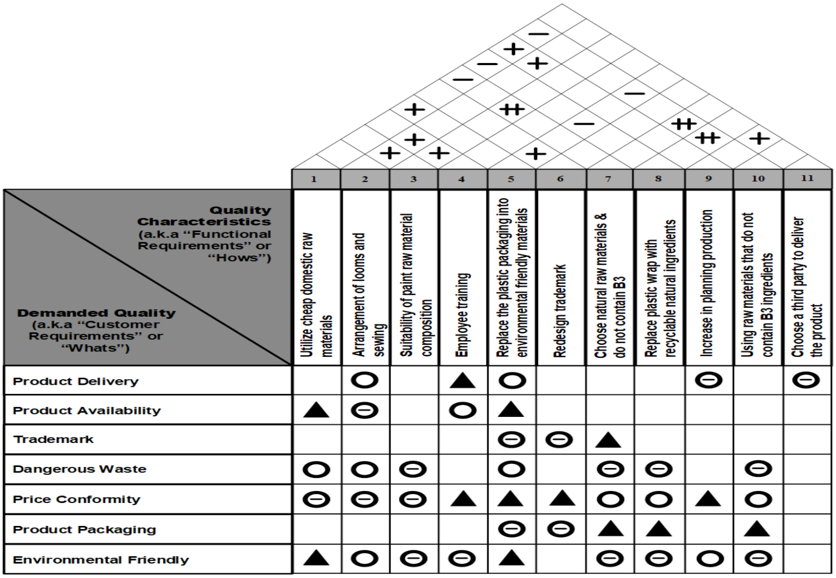

Figure 3 House of Quality of Kediri Weft Ikat MSME

HOQ preparation is performed by compiling customer needs, planning matrix, technical response, relationship matrix, technical correlation, and technical matrix. This study uses the customers' voice in determining measurement criteria based on quality, cost, delivery, safety and morale, whereas previous studies only used criteria based on quality, cost, delivery, service in manufacturing industries (Ambarwati, 2018). These criteria can be used for developing product and are also factors of measuring the competitive advantage of a product. In addition, many previous studies only used QFD (Quality Function Deployment) in building House of Quality, while in research using a combination of two methods of data analysis, IPA and QFD such as Ionica and Leba (2015), Cardoso et al. (2015) and Zaim et al. (2014). IPA is needed in determining the level of satisfaction and level of interest according to customer perceptions based on established criteria. This research was carried out in the ikat woven fabric industry that uses safety product criteria both in the processing of raw materials without using hazardous raw materials and packaging of products without using plastic. The other focus of research is product development that focuses solely on the processing & packaging of products that are effective and efficient without paying attention to hazardous waste caused, (Ambarwati, 2018).

Conclusion

The priority needs of Kediri Ikat Woven Fabric MSME's consumers are on attributes that are processed using IPA. These attributes include environmentally friendly attributes, attributes of price suitability, product packaging, trademarks, product availability, product delivery, and B3 waste. Almost all attributes of Kediri Ikat Woven Fabric are less able to meet the set goals. From the 7 attributes of the selected woven products, there are 1 product attributes that have fulfilled the goal because they have an improvement ratio equal to To be able to design products that are in accordance with consumer desires, a contribution value is shown that shows the contribution of the technical response to consumer desires. It is found that the technical response would be the priority of MSME owners to be used as an improvement material, the most important technical response is that the target value is lower than competitors, such technical responses are replacing plastic materials into recyclable materials, ensuring raw materials that do not contain B3 agents, choosing coloring materials that do not contain B3 agents, choosing a third party to deliver the product, weighing the dye materials according to their composition and appropriate measure, utilizing domestic raw materials so that prices are more competitive. This paradigm shifts are things that need to be considered by MSMEs to be able to stay ahead in market competition. Things like price and quality that used to be the main keys in winning market competition, have now turned to the concept of green manufacturing that is more environmentally friendly. If a company wants to win market competition, then the criteria of the QCDSM must really be a top priority to improve its business processes and become a reference in maintaining its competitive advantage.

This research contributes to the concept of product development in the MSME industry, by testing the level of satisfaction and importance of products for customers and creating house of quality. The results of this study can help in providing insight and knowledge for MSME owners as a basis for making decisions on the strategy of developing MSME products based on quality cost delivery safety and morale. The scope of this research is only on the development of UMKM woven industry products in Kediri and the measurement has elimanted several criteria that cause the loss information. The complement this research, the further research can be carried out in larger industrial sectors such as manufacturing. In addition, the criteria for product development can be done by adding a number of measurement indicators such as pre-product and after-sale services. This study contributes to the general industry, especially the development of MSME industrial products in applying the concept of product development, service to customers, and marketing of these products.

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Sarapatanguna Values (Norms Or Rules) In Baubau City Government Leadership

Rizki Mustika Suhartono[1]

Introduction

The Unitary State of the Republic of Indonesia is currently experiencing a leadership crisis. This fact is reflected in the collapse of public trust in most of its leaders. The community has lost a leader figure who can be an example in carrying out government leadership, both in the fields of politics, government, economy, socio-culture, to religion. Various cases of corruption, collusion, and nepotism as well as abuse of authority have injured exemplary leader figures in state institutions, both executive, legislative and judicial, who should act as role models, bearers of the people's trust [1].

The attitudes, behaviors and actions shown by state and government administrators, both at the center and in the regions as well as in various state and government institutions, must be based on morals and ethics, as well as high legal awareness. However, in reality, there are still some state and government implementers and administrators who still show attitudes and behavior that are very contrary to the rule of law and also cultural values that should be used as a view of life as a guide to norms of life, behave well in the interaction of social life, state, govern and have a god. The conditions as described in the description above are no exception in Baubau City, Southeast Sulawesi Province which is also part of the Unitary State of the Republic of Indonesia, which involves several government officials or leaders within the Baubau City Government [1].

Baubau City is known as a cultural city that inherits the cultural values of *sarapatanguna* which the people use as a guide for acting, behaving in society. divinity during the Buton Sultanate. As a philosophical foundation, *sarapatanguna* is formally listed in the Constitution of the Sultanate of Buton (the Constitution of the Seventh Dignity). As a philosophical foundation, *sarapatanguna* is a way of life, norms, rules that must be

1 Universitas Muhammadiyah Buton

understood, lived and applied by the entire community that supports these values. *Sarapatanguna* cultural values are being eroded by globalization and neglected in society. This is where the role of government leadership that is oriented towards local cultural values is needed to encourage the participation of all levels of society in realizing the acceleration of regional development in Baubau City [2].

Although the status of the Sultanate of Buton has ended along with the shift of our status and government system and finally switched to the government system of the Unitary State of the Republic of Indonesia, the cultural values of the *sarapatanguna* still live in society and remain a guide and guide for the life of society, state, government, and divinity. In this regard, *sarapatanguna* consists of two parts, namely the first part of the *sarapatanguna* which carries the philosophy of "*Binci-Binciki-Kuli*" which contains the principles of equality, equality and justice. This principle is then merged into four other basic values, namely: *Po-maa-maasiaka, Po-pia-piara, Po-mae-maeaka, Po-angka-angkataka* with the value of *Binciki-Binciki-Kuli*. While the second part of the *sarapatanguna* includes: *Yinda-Yindamo Arataa Somanamo Karo, Yinda-yindamo Karo Somanamo Lipu, Yinda-Yindamo Lipu Somanamo Sara, Yinda-Yindamo Sara Somanamo* Religion [2].

The implementation of the *sarapatanguna* values in Baubau City will create a stable, peaceful, conducive atmosphere so that on the one hand the community will be calm and safe in their activities and on the other hand the government will be more focused on running the government. However, the phenomenon that occurred in Baubau City, Southeast Sulawesi Province, there are still some corrupt practices, and legal cases involving a number of officials in Baubau City and even leaders at the Southeast Sulawesi Province level. This phenomenon should not occur, considering that Baubau City is known as a cultural city that inherits the values of *sarapatanguna*, which the people use as guidelines for acting and behaving in society. This phenomenon shows that there is a problem that should not have happened, this fact proves that there is a gap between das sollen and das sain (between what should be and what is actually), if we look closely, what causes this condition to occur is the erosion of morals, and the fading of Sarapatanguna values, because it is not socialized and implemented either in the family or community, as well as in government [2].

Discussion

Implementation of *Sarapatanguna* Values (norms or rules) in Government Leadership in Baubau City

The local wisdom of the Sultanate of Buton which carries the *sarapatanguna* values which contain the principles of equality, equality, and justice, then these principles fuse the four other values as follows: *Pomae-maeka* (mutual respect), *Popia-piara* (mutual care for each other), *Poangka-angkataka* (mutual respect), *Pomaa-maasiaka* (mutual love). *Sarapatanguna* values (norms or rules) are arranged in a concise, but very clear way to make it easier for supporters of these values to know, understand, and live up to, how beautiful these cultural values are. However, it is not enough to simply know and live it, because if this is the case, these values will become dry and rigid without any benefit [3].

Sarapatanguna local wisdom (norms or rules) is intended to be known, understood, internalized and then used as a reference, guideline, and paradigm to be further implemented, practiced, implemented by the whole community in all walks of life, all professions, all communities including all government leaders in all levels and levels. The Mayor of Baubau, Southeast Sulawesi Province, as the leader of the government, has issued a Decree on the Establishment of a Socialization Team for the Implementation of *sarapatanguna* Values (norms or rules) to support development in Baubau City. The discussion of each *sarapatanguna* value (norm or rule) can be explained as follows: a) *pomae-maeaka* (mutual respect), b) *popia-piara* (mutual care or mutual service), c) *pomaa-maasiaka* (mutual love), and d) *poangka-angkataaka* (mutual respect, and the main priority) [4] ;[5].

The implementation of government leadership is based on the *sarapatanguna* values (norms or rules), as follows [6]:

a. The government must be *pomae-maeaka*, that is, have a fear or shame if it violates the rules. Fear is meant that a leader should not underestimate others. The values of pomae-maeaka in relation to the government in supporting the implementation of government are intended to be mutual fear of fellow organizational personnel and other interested parties, moreover leaders should not underestimate other people. Even though he was a subordinate, he was still seen as the same because of his human being. The government that carries pomae-maeaka is nothing but based on solid morality. A government leader really portrays himself as a person who has noble character that is worthy of being imitated in all respects, including having fear and shame when breaking the rules.

b. Morality is an important key in governance that is developed in the Butonese community. Based on historical evidence, morality is the pivot point for the development of a common life that is able to create prosperity. Government based on morality is an absolute necessity. On the other hand, government leaders who do not consider morality will only lead the country to destruction. On the other hand, the sanctity of taste and morality in the pomae-maeka (mutual fear) philosophy is a sanctity based on a belief to be afraid of doing violations and all the prohibitions of Allah and His Messenger. In this context, including Butonese people are afraid to commit shirk, arrogant, malevolent, arrogant, ujub, riya, vile and evil, stingy, hypocrisy, and tyranny.
c. Agovernment that consistently shows exemplary in influencing others means providing impetus to motivate itself in building integrity, which indirectly encourages others to understand deeply the principles in developing integrity which we call the first principle is to develop trust and confidence in changing sensory awareness to a higher level; the second principle is to give mutual respect and respect for others; the third principle is to have the ability to mature spiritually, socially, emotionally and intellectually.
d. The government must implement *popia-piara* (mutual care, love or serve each other). Caring for each other, loving fellow human beings and especially loving God Almighty. Mutual care is intended that fellow elements of leadership, elements of employees and administrative staff as well as other organizations and the community in carrying out activities always maintain the element of togetherness/unity and unity, maintain the good name of the organization, the good name of fellow leaders, and the good name of fellow employees and other staff. They do not bring each other down, trust each other, and understand each other between them. In connection with the above description, in maintaining the element of togetherness/unity and unity, the government in carrying out its duties, the leader always maintains his attitude and words so as not to cause offense to his subordinates and groups even though one of the subordinates has acted indecently but nevertheless the leader must always show sympathy for other members and staff. The values of *popia-piara* (mutual care), in relation to the organizational climate in the implementation of government, are that fellow elements of organizational personnel in every organizational activity should always maintain the element of togetherness/unity and unity, maintain the good name of the organization, the good name of fellow leaders, and the good name of fellow subordinates and other administrative staff.

They don't bring each other down, they trust each other, and they understand each other.

e. The government must implement *pomaa-masiaka*, which is to love and care for each other. The values of *pomaa-masiaka* (mutual love) affect the implementation of government. This can be found in the interactions of organizational personnel, for example between group members and other members, between subordinates and superiors, children's affection for parents can be proven by subordinates' obedience to their superiors and always praying for them. A government that has a loving and compassionate nature is the elaboration of ra`ufun womb. Compassion needs to be owned by everyone, in this case, a leader. With compassion, leaders are able to sympathize and provide empathy, and lend a hand. With compassion, a leader will go around to see one by one the state of his people. Are there any of them who are malnourished, sick but unable to seek treatment, are in debt that cannot be paid, so that the leader is the first person to always feel what his people feel.

f. The government must implement *poangka-angkataaka* (mutual respect and mutual priority). Prioritizing respect for fellow human beings especially God Almighty above all things with sincere intentions, beliefs and behavior. *Poangka-angkataaka* is meant to respect and respect one another among organizational personnel and other interested parties. The manifestation of this attitude of respect and respect can be seen in the behavior of every personnel, namely when every personnel, administrative staff and members of the organization in general are not present in carrying out their duties, whether due to illness or unable to attend due to other important matters, they always convey information or news first. first, either orally or in writing to the leadership. In the context of organizational leadership, the strategy of appreciating employees must also be considered by a government leader, given that in order to motivate employees sometimes a leader must give awards to employees, people will be happy if they are appreciated.

g. Giving awards is a different strategy from giving warnings. If the reprimand is delivered in private, on the contrary, the award is given openly, in public. This will have two positive impacts, first is that the recipient of the award himself will create a sense of pride so that by receiving the award he will be more motivated to improve his performance. Meanwhile, for friends in the organization by seeing that one's achievements are quite appreciated by the leader, they are also motivated to do their best. In addition to these four pillars, the coolies also hinted at the implementation of government based on the values of *Yinda yindamo arata somanamo karo*: let property be destroyed as long as one is safe (wealth is willing to be sacrificed for personal safety), *Yinda yindamo karo somanamo lipu*: let oneself be destroyed as long as the region safe (self willing to be sacrificed for the safety of the country), *Yinda yindamo lipu somanamo sara*: let the region be destroyed as long as the government (the country is willing to be sacrificed for the sake of the government's safety), *Yinda yindamo sara somanamo religion*: let the government be destroyed as long as religion (government is willing to be sacrificed for the safety of religion).

The four pillars above can give birth to leadership values that can be applied in government. Leaders in regional government can have a personality in themselves by being honest and clean, open and transparent, orderly and disciplined, according to words and deeds, willing to sacrifice themselves for the public interest, upholding rules and truth, acting for the benefit of fellow human beings, prioritizing religion above everything. In this regard, it can be easily concluded that the value of sharing (norms or rules) has all of those values in which there is a harmonious integration between these values. In the first part of the meeting, the focus is more on the values of life, human values, and social values, which are based on the principle of equal rights and degrees for every human being. The second part of the *sarapatanguna* (norms or rules) places values according to levels, with the basic values being spiritual values, namely belief in God Almighty (religion), the basic values that underlie and animate the overall values contained in the *sarapatanguna*. (norms or rules) which are harmonious, interconnected, interrelated, and mutually supportive [7]; [8].

Conclusion

The shared values can give birth to leadership values that can be applied in government. Leaders in local government can have a personality in themselves by being honest and clean, open and transparent, orderly and disciplined, according to words and deeds, willing to sacrifice themselves for the public interest, upholding the rules and the truth, acting for the benefit of fellow human beings, placing importance on religion above everything.

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The SAR (Sehat, Aman, Ramah) Digital Literacy Model for Teenagers to Overcome Pornographic Content on The Internet During Covid 19 Pandemic Era

Rr. Setyawati[1], Melati Ismi Hapsari[2]

Introduction

The COVID-19 pandemic was experienced by all Indonesians and even the world. There are many significant effects in all aspects of life (World Health Organization, 2021). One of the most crucial implication is several main activities including works and studies in all educational level must be carried out online [1]. The majority of schools have to be closed due to the pandemic and the rise of cases. It gives the implication for students, including the teenagers at junior or senior high schools. It is well-known in this situation that students having tight contact with the internet and their gadgets due to online study activities [2], [3]

Adolescence is a developmental stage fulfill of encouragement to mingle in social interaction and the needs of social acceptance. The social distancing and the closed of school can be a great obstacles during their school life. During pandemic circumstances, they use various online learning and virtual meeting platforms [4]. They spent the majority of their time in online activities, not only for studying but also for making social interaction with their peer groups. Eventually, it seems that virtual communication is the only way for teenagers to stay connected with their peers [5].

Having maximum activity on the internet can give huge risks to teenagers, particularly if they have virtual communication and internet browsing without adequate supervision from parents and a certain environment. There are some "dark web" zones, which mostly provide hosts unethical activities, contain pornographic and even criminal acts [6]. In addition, teenagers may never visit the “dark web”, but there are

[1] Universitas Muhammadiyah Purwokerto
[2] Universitas Muhammadiyah Purwokerto

many inappropriate parts or information even on the official web pages. Teenagers might inadvertently come across graphic content such as violence, pornography, or inappropriate material related to radical social, religious, or political movements. Moreover, they can fall into a black hole of malicious content on sites and popular platforms like YouTube or Instagram [7].

Research shows that approximately 20% of teens have sent sexually explicit photos of themselves to others [8]. Furthermore, there has been an increase in various cases experienced by Indonesian teenagers during the Covid-19 pandemic related to cyberspace behavior. For instance are online prostitution, pornography by teenagers, sexual abuse, and the victims of sexual predators (KPAI, 2021). There are many cases related to pornographic attraction to teenagers, those who consumed ones can have crucial risks. Ironically, recently people call teenagers a digital generation who intensively browse the internet for their school matter but on the other hand, they consumed and being exposed to pornographic actions and other harmful content from worldwide. Based on this explanation, teenagers should already understand how to use any platform on the internet like Instagram especially the live feature one, because the contents they posted could be consumed publicly.

Internet Pornography

Peter & Valkenburg, (2009) define internet pornography as the activity of viewing or downloading pictures or videos that expose genitalia and/or pictures or videos in which people have sexual activities and imply sexual reaction. Another definition of internet pornography is any kind of image or video that can be viewed and downloaded from the internet (Medical Dictionary, 2012). The definition of pornography from the Britannica Dictionary is the representation of sexual behavior in books, pictures, statues, films, and other media that aims to cause sexual arousal (Britannica, 2021). Definition Merriam Webster Dictionary (2021) of pornography is the depiction of erotic behavior (as in pictures or writing) and or material (such as books or a photograph) that depicts erotic behavior intended to cause sexual excitement; the depiction of acts in a sensational manner so as to arouse a quick intense emotional reaction

Digital Literacy

Gilster (1997) defines digital literacy as the ability to understand and use information in various formats from several sources on the internet. Digital literacy involves the ability to critically evaluate information and make decisions on how to use the information in many different real-life contexts. Digital literacy refers to the ability of individuals to find, evaluate, and communicate information clearly through the internet, in detail on social media or various digital platforms. In addition, the digital literacy skill is correlated to certain skills like people vocabularies and composition of sentences, skills of writing and typing, ability to produce text, images, audio, and designs using technology.

Digital literacy is important to address the impact of pornographic exposure via the internet, and it has been advocated as an approach to reduce the harmful effects on teenagers [10]. Based on media literacy theory [11], the main aim of the digital literacy approach is to teach the main skills for young people to critically analyze the clear or hidden messages in pornography. Furthermore, it increases teenager's understanding of the risks of pornography exposure, eventually encourage them to have a critical attitude about the negative contents and messages.

This research aims to answer the problem of internet pornography that occurs among teenagers as an important sexual health problem. However, the topic is complex and highly sensitive, therefore the best practices to avoid and reduce the harmful effects of internet pornography have to be comprehensively formulated. Moreover, using a cross-disciplinary approach is one way to achieve a better understanding of the problem of exposure to internet pornography. Finally, designing a model of community basic-needs and informational digital resources to promote digital literacy to address negative effect of pornography exposure.

Method

Research Design

This study used a survey method. The survey method aims to collect data on a variable at the same time. The survey method in this research applied open-ended questions that are used to obtain answers in the form of written words submitted by respondents [12].

Research Respondents

Research respondents were conducted purposively. The sampling technique took deliberately in accordance with the sample requirements. Purposive sampling was applied based on the reason that there are often many limitations that prevent researchers from taking random sampling techniques. The selection of purposive sampling is due to determine the criteria for the sample obtained to be in accordance with the research to be carried out. The main subjects of this study were determined based on the criteria, namely adolescents aged 11-21 years and experienced exposure to the internet with pornographic content.

Data collection technique

The data collection technique used a questionnaire containing free questions to be answered by the respondents. Responses to the open questionnaire are not limited by the answer choices. Questionnaires were provided in google forms. The google form was sent to the respondents (who meet the criteria) through the Whatsapp group, furthermore, the answers were collected online in real-time.

Data analysis

In this study, a thematic analysis was used in the qualitative approach and focused on examining themes or patterns of the data [13]. This method can emphasize how to organize the data and rich the description, moreover, the sets of data theoretically informed interpretation or meaning (Guest&Mac Queen, 2012). Coding is the primary process for developing a theme by identifying items of analytical interest in the data and tagging them with coding labels. In some thematic analysis approaches, coding follows the development of themes and process allocating data to the previously identified themes [14].

Research result

Based on the questionnaires that had been distributed through social media, there were 112 respondents who gave responses. The following is a table of respondents' demographic data which includes age, place of residence, gender, and level of education.

Tabel Data of Respondents' Demographic

Data of Respondents' Demographic	Category	Number of People	Percentage
Age Group	11-13 years old	15	13%
	14-16 years old	49	44%
	17-20 years old	48	43%
Address	District	63	56%
	City	49	44%
Sex	Male	40	35%
	Female	72	65%
Level of Education	Elementary-Junior Highy School	47	41%
	Senior High School	40	36%
	University	25	23%

Based on the thematic analysis toward respondents' answers to the open questionnaire, there are some themes were obtained :

Media Literacy for Teens

The survey results show that 42% of adolescents have never obtained digital literacy. The diversity of information contained on the internet sources (social media or websites) requires youth skills to understand, sort, and use the internet in an appropriate, good, and healthy manner. Digital literacy has not been formally provided by stakeholders or competent parties, therefore the teenagers using digital literacy skills based on their self-taught.

Confidentiality and Privacy

Almost all respondents said that it is necessary to maintain their privacy and other people on the internet or in cyberspace. Privacy is the right of teenagers to protect all kinds of information related to themselves and others when interacting in cyberspace. Teenagers might use several ways for protection, for instance, lock their social media accounts, do not upload un-useful or sensitive photos/videos or other content so that it can protect them from negative judgment or intervention from the public. In addition, teenagers also argue that they can make good protection ways through avoid spreading private content in cyberspace, limit the content posted in social media, do not tell personal numbers or other personal matters like email, detail of address, and also avoiding the act of disseminating personal or private information to other people. The other ways mentioned by the teenagers are do not overly exposing their daily life activities, and trying to be more passive in cyberspace while maintaining the etiquette on social media.

The Role of Parents, Teachers, and Government to Protect Youth

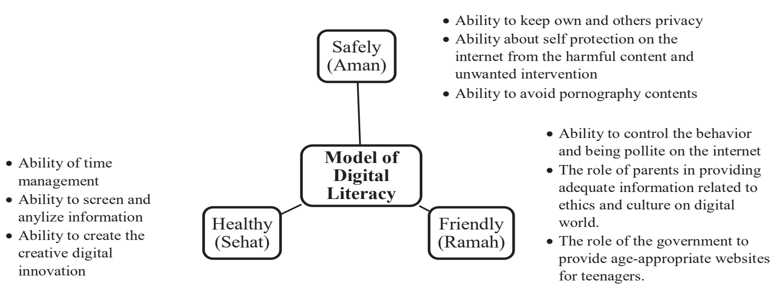
Respondents have various opinions regarding the needs of parents to provide digital literacy. Some of the teenagers' opinions are that parents should use discussions with their teens to guide the use of the internet in accordance with social ethics. The involvement of teachers to provide knowledge and rules for the teenagers on how to use the internet are in order to sharpen teenagers' positive abilities and potential. According to teenagers, they mentioned that the government should limit access to social media that spreads pornographic content.

Browsing on The Internet Safely

Respondents stated that they should be able to search the contains on the internet according to their needs, as well as avoid unclear domain websites, do not open advertisements, do not use any VPN, use some security mode while browsing, activate parental mode control, and age restriction, reset privacy settings, create strong passwords, keep passwords confidential, separate private accounts from public or business accounts, and encrypt sensitive pages and limit the spread of sensitive information. They also mentioned that teenagers have to open only the legal and verified sites, immediately block and remove the pornographic content that suddenly appears on the screen, be more aware about the search bar toward unwanted adult material. Furthermore, check whether the site is safe or not to be consumed, and limit the people we need to follow as well as the follower on social media and any other platforms.

Critical Thinking Ability when Receiving any Information on the Interne*t*

Respondents said that they should search for only necessary sources, also sort out the appropriate and inappropriate information, be more aware and careful with something and someone on the internet. In addition, if some friends upload something inappropriate, unethical, and harmful on social media, the best way is not to click them, even turn off social media for a few days. Other solutions are limiting the social media activities, do not respond to strangers, do not publish any things that can provoke unpleasant actions, and clicking the report button when there is negative intervention from others on social media. Based on the results of this study, the researchers proposed a solution to overcome this problem, namely using the Healthy, Safe, Friendly (SAR) as a Digital Literacy Model.



Gambar 1 Model of SAR (Sehat, Aman, Ramah) Digital Literacy

Discussion

The findings of this study are to develop a digital literacy model that is healthy, safe, and friendly (SAR) so that teenagers can have adequate skills to understand, sort, and use the internet in an appropriate, good, and healthy manner. Digital literacy skills are a new competency that must be mastered by today's youth. This is in line with research by Nugroho and Nasionalita, (2020) which stated that teenagers in Bandung, Surabaya, Pontianak, and Denpasar can use technology and digital media ethically to communicate, create, find and choose the right information. In addition, this study shows that adolescents have the understanding to maintain the privacy of themselves and others.

Other research in line with this study is by Santer et al., (2021) that found, adolescent's behavior and beliefs related to privacy things are in cyberspace are diverse and complex. Adolescents are now able to conceptualize digital privacy, then show the appropriate attitudes, beliefs, and support toward messages and information that are prescriptively private. The role of parents is still needed to guide and direct teenagers during activities on the internet [17], [18] .

In line with this finding, research showed that digital literacy mediates the relationship between restrictive (but inactive) parental mediation, internet risks, and opportunities. The findings show that digital literacy remains important because it allows adolescents to take more opportunities, that parents should choose other mediation methods rather than restrictive mediation. Teenagers said that the government must have a real contribution to providing safe internet websites and policies for teenagers [19]. Turner et al., (2017) who stated that policymakers should support and promotes the movement of digital literacy as well as general literacy in today's world. It is well-known that the right and appropriate information spread widely in society, basically depends on how the citizens applied their digital literacy. This study also found that skills of browsing on the internet safely are the competencies that must be possessed by teenagers in the digital era.

This result is corroborated by research by Luthfia et al (2021) that showed the monthly expenditure, age, and level of education on adolescents (ages 17-24) are important factors that impacted the quality of digital literacy and online participation. In another word, the digital literacy variable plays an important role and positively influences online participation as well as opportunities. Eventually, digital literacy gives greater influence on online opportunities rather than the risks.

The ability to think critically must be possessed by teenagers when they are consuming information on the internet. They must search and limit the sites and information based on their needs and must be able to sort out the benefit and the accuracy of information. The ability to analyze and make good decisions is important when exploring some sites on the internet, in particular pornographic content. Research by Ku et al., (2019)found that digital media literacy significantly affects adolescent critical thinking. Critical thinking skills can encourage individuals to better understand and seek the validity of information obtained from social media.

Research limitations

This study has an unequal number of samples between men and women, questions on the questionnaire are still limited, and data collection methods used were only the online surveys.

Implication

This research can be developed to build further digital literacy strategies, especially related to exposure to pornographic internet content.

The results of this study can be used as a basis for the preparation of a program to prevent exposure to pornographic internet in adolescents.

Conclusion

The SAR (Sehat, Aman, Ramah) Digital Literacy Model can be developed to help adolescents think critically. The results of this study can add information for researchers, practitioners, stakeholders, and policymakers. Involving teenagers in the preparation of digital literacy programs to overcome their exposure to internet pornography can achieve significant benefits, in particular, to develop and implement the program effectively. These findings provide a starting point for sexual education practitioners to develop programs that are relevant to community concerns. Further research needed is the study that can measure the effectiveness of this model by spare adolescent age groups. The differences between these groups will allow us to develop program content that is more interesting, age-appropriate, and effective.

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Teaching Students Using Online Project-Based Learning

Saefurrohman[1]

Introduction

Teachers must be able to choose and execute appropriate instructional techniques in relation to the material being delivered. Each method to learning has a number of advantages and disadvantages when seen from a variety of angles, but in essence, every strategy, technique, or learning model used must have certain objectives in order to be effective. Due to the diversity of students' interests, a teacher should ideally use a range of methods, such as varying the learning models used in the classroom [1]. This is done to avoid student boredom. Throughout this process, students make use of all of their basic abilities and knowledge to gain information and learning objectives. Students make an effort to identify and resolve any existing problems. Thus, students acquire really meaningful experiences and information, rather than just acquiring values-based learning goals [2], [3].

Project Base Learning (PBL) is a learning paradigm that incorporates concepts from many components of knowledge, disciplines and collaborative learning to produce an organized, time-consuming, problem-oriented, relevant learning unit [4], [5]. The teacher thus acts as a facilitator to help pupils discover problematic solutions related to the topic. Students are required to work with teachers and study groups to address problems. This is in line with the topic of building drawing, which requires that students may create ideas from all current problems in design.

Project-based learning involves complex tasks, focused on extremely tough topics and challenges, and requires students to develop, solve problems, make decisions, do research and give students an opportunity to work independently. Independent [6]. The goal is to ensure that students are autonomous in carrying out their duties.

[1] Universitas Muhammadiyah Purwokerto, saefurrohman@ump.ac.id

What is Project Based Learning

Project-Based Learning (PBL) is a new learning paradigm that focuses on contextual learning via complex activities [6], [7]. Students may benefit from a more engaging and meaningful learning experience if they participate in project-based learning.

A project-based learning model is a kind of learning paradigm in which projects or activities are used as media [8]. In order to produce a range of learning outcomes, the teacher assigns students to research, analyze, interpret, synthesize, and present information. Issues are used as the first step in collecting and integrating new knowledge based on real-world experiences in this learning method.

Project-Based Learning is defined as the use of authentic, real-world projects based on highly motivating and engaging questions, tasks, or problems to teach student academic content in the context of working cooperatively to solve the problem, i.e. the use of authentic, real-world projects based on highly motivating and engaging questions, tasks, or problems to teach student academic content in the context of working cooperatively to solve the problem [9].

Project-Based Learning is a learning and teaching approach that stresses student-centered learning in the context of a project, enabling students to construct their own learning and concluding in a realistic result, such as student-generated work [6].

According to these definitions, Project Based Learning is a learning paradigm that use projects/activities as a learning instrument to attain attitude, knowledge, and skill capabilities. This learning focuses on student activities that require them to solve issues by investigating, evaluating, producing, and presenting learning products based on real-world experience. This approach enables students to work alone or in groups to create genuine products based on real-world issues.

Characteristic of Project Based Learning

There are several limitations to project-based learning, despite the fact that it has the potential to significantly increase students' interest and enjoyment in learning [10]. When it comes to PJBL, a lot of characteristics set it apart. Students make an attempt to address an issue or conquer an obstacle that they are unsure about. Additionally, students contribute to the development of the problem-solving process, which allows them to be more actively engaged in it. Following that, kids are encouraged to exercise critical thinking, collaborate, and experiment with different modes of expression[11]. When students acquire knowledge on their own initiative and by their own efforts, they are held accountable for that learning. Continuous evaluation is carried out throughout the life of the project to ensure its long-term sustainability. Finally, the project's final result is shown in a public setting. In the classroom, students acquire a positive attitude about mistakes and changes, as well as a supportive environment that encourages feedback and correction[12].

The features of Project-Based Learning may be used to distinguish it from other types of learning [4]. first Students have the option of selecting a framework for their project from a list provided. It is certain that students may face problems or roadblocks throughout their academic careers. Then students come up with creative solutions to problems or methods to get past roadblocks on their route to success[13]. Student collaboration is also encouraged in order to gather and organize information in order to solve problems that arise during their academic careers. The assessment technique is presently in the process of being finalized and implemented. Following that, students are encouraged to think on and share their experiences[5]. Quality will be evaluated in this learning activity, and the final output will be evaluated on that basis. Positive learning environments are those that allow students to make mistakes and adjust to their circumstances as they see fit, rather than those that discourage them from doing so.

Using PJBL in online Class

There are some steps of applying PJBL in your online class [6], the procedures are as follow:

1. Determine an issue that is unique to your students.
   First, students do extensive study on a specific issue that is both genuine and relevant to their needs [8]. A real challenge is one that links your students education or to your studnets school, regional, national, or global community in a meaningful and meaningful way.
2. Investigate the problem using the inquiry method and include ideas from the relevant field.
   The topic or disciplines will be used by your students in order to turn their ideas into viable solutions to problems. Therefore, the academic language of your area, the application of standards, and subject expertise are all critical components of the structural design of the actual problem. Here may seem very academic, but this is when the problem takes on a life of its own, having been committed to the students's care. [14] This is the point in time when we want our students to start asking a lot of questions!

3. Collaborative exercises allow you to investigate and test your students ideas.
   The phrase "group work" refers to collaborative learning in which students develop, debate, discuss about, and discover many different views on a topic in order to produce the most suitable and feasible results [15]. In PJBL, this is referred to as "project-based learning." Incorporated within the PJBL process are individual and group dynamics that assist students in generating meaning from their learning and in communicating their understanding of that meaning to others [11]. This occurs at the outset of the encounter as well as throughout later learning episodes, as described above. This sets the tone for collaborative activities that will take place throughout the PBL journey.
4. Make use of the inquiry process to improve the quality of your students product.
   While resolving issues and developing new goods, the inquiry process represents the complex social circumstances in which professionals work while resolving problems and developing new products [16]. In every well-planned public-private partnership initiative, it serves as the pivot around which everything is centered. When students are involved in the continual refining process, they are motivated to create higher-quality work as they improve their products. Students improve their work as a result of feedback from peers, experts with whom you engage, and your direction. As a result, while instructing your pupils on how to give feedback, the same elements must be taken into consideration [12].
5. Provide the public with a definitive product that addresses the issue or problem that has been identified.
   It is a concept that encourages students to tackle real-world problems by asking questions, investigating the issues further, analyzing the evidence they gather, making conclusions, and ultimately sharing their results with a realistic audience [14]. While working on a project, students benefit from modeling, mentoring, and scaffolding, which assist them in acquiring the knowledge and skills they need to reflect on and articulate their final answers.

Final solutions are much more successful when given to a professional audience, since students are more concerned with the presentation's potential impact and the benefits they may be able to accomplish as a consequence of the presentation than with earning a mark on the assignment [10]. As a consequence, experts should be rotated over the duration of the project to ensure that the final product properly reflects this important circular feedback loop.

Consider how the project's primary features allow you to include it into the curriculum rather than offering it as an after-class enrichment activity. When it comes to the process of creating and designing final goods, standards and learning objectives in one or more subject areas become critical components [17]. This is one of the most challenging aspects of making the shift from a conventional classroom to a learner-centered setting.

Conclusion

Project-Based Learning (PBL) is a teaching technique in which students actively participate in real-world and personally relevant projects in order to learn. It is becoming more popular. In PJBL, success is determined by the ability to use all of the following skills: critical thinking, problem solving, teamwork, and different kinds of communication. Students must do much more than just recall knowledge if they are to react to an urgent problem and produce high-quality work. They must think critically and creatively in order to answer effectively. Higher-order cognitive processes and group collaboration are required of them as they go through their education.

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Blended Learning and Assessment of Learning Outcomes

Samritin[1]

Introduction

The development of information systems and technology has spurred rapid changes in all sectors of life. Education is one sector that cannot be separated from this development so that various problems that are at the same time become challenges arise. The emergence of an international disaster complicated this situation since December 2019. Coronavirus disease-2019 (Covid-19) appeared suddenly and destroyed the entire order, including the educational system. As a result, face-to-face learning in class at all institutions and levels of education is immediately required to turn into online learning.

The demands for change did not present various obstacles in the field. Multiple obstacles that arise include the limited internet network infrastructure and the readiness of devices that can be used by students. In addition, the financial ability of parents to pay for online learning and interaction between students and between students and teachers also hinders. The many obstacles in education have implications for student learning outcomes. This raises concerns from various parties, especially students and parents.

Teachers must provide appropriate learning solutions to facilitate students in achieving the essential competencies specified in the curriculum. One choice is blended learning. Blended learning is the most logical and natural evolution of learning. Blended learning is very good at presenting learning challenges according to students' personal needs. This is an opportunity to integrate innovation and technological advances in online learning with the best features in traditional learning [1]. The application of blended learning requires creativity not only in terms of learning but also in assessment. From the aspect of learning, teachers are required to facilitate learning needs following the curriculum targets. Learning needs

1 Elementary School Teacher Education, Muhammadiyah University of Buton

include not only cognitive aspects but also behavioral and psychomotor aspects.

It is hoped that the fulfillment of learning needs will not be disturbed by the mixed learning model between traditional face-to-face learning (offline learning) and learning through the internet (online). Furthermore, how teachers assess or measure student learning outcomes in learning is also not an easy thing. Moreover, mixed learning is carried out during a pandemic. During the pandemic, almost all activities and direct interactions between students and teachers are severely restricted by health protocols. Meanwhile, the number of students in the class is also limited according to the ratio of the room area and the number of students. Classes that were originally able to accommodate 30-40 people, during the pandemic class were only allowed 15-20 people.

Discussion

Blended learning cannot be separated from the terms e-learning and conventional teaching and learning. E-learning is associated with the use of online media in the learning process. The use of online media in learning is believed to be very important and has an extraordinary contribution along with accelerating the development of information technology. Moreover, during the "restriction" of activities outside the home or together with other people. In this condition, online media users are beneficial for student learning activities.

Meanwhile, many parties still view that face-to-face learning in the classroom is still needed. One of the considerations is the characteristics of certain learning materials as well as the effect of emotional closeness between teachers and students on learning outcomes. For this reason, face-to-face learning is traditionally still needed and must be maintained and implemented in the classroom.

Face-to-face learning, especially in the classroom, is felt to have a better effect than other learning. On the other hand, conventional learning has many limitations, one of which is the slow adjustment of the accelerated development of information technology. While formal educational institutions are charged with preparing a generation that is not left behind by the acceleration of technological development [2]. In this case, the teacher's task is not only to carry out learning in the classroom but also to meet students' needs in following the development of information technology.

The idea of using online media in learning and maintaining conventional learning has resulted in blended learning. Blended collaborative learning is a distance learning method that combines face-to-face and online learning that utilizes asynchronous conferencing facilities [3]. Blended learning involves learning activities with a traditional approach-face-to-face with learning through the internet connection. Learning activities in blended learning can be carried out synchronously as well as asynchronously. Empirically both have been done in learning. Synchronous learning is done through video teleconferencing applications, e.g. through the Zoom cloud meeting application or others. Asynchronous learning is done through eg. blogs, emails, forums, or otherwise.

To implement blended learning to be effective, teachers must pay attention to the essential features of this learning. Carman mentions five elements of blended learning, namely live events, self-paced learning, collaboration, assessment, and performance support materials [4]. These five elements have functions that should not be ignored. Four components are directly related to the learning process while one other component, namely assessment, is a learning quality control tool.

The first element of blended learning is live events. Students learn directly with their teachers. Learning is carried out now either in the classroom or synchronously in different places using virtual classes simultaneously. Why live events? Each student has a different learning style, but most students do not have one that can replace the direct role of a teacher. Sometimes students find it easier to understand the material when the teacher is in front of them. This means that the presence of the teacher can provide motivation which greatly supports the effectiveness of learning. This can be explained using the ARCS motivation theory (Attention, Relevance, Confidence, and Satisfaction) by John Keller [4]. These aspects can be influential in creating an exciting and practical learning experience for students.

In learning, student attention is very important. Students who do not have full attention in learning, are not necessarily able to understand the learning material well. For this reason, at the beginning of learning, both virtual teachers need to make sure that students' attention is fully focused. This can be pursued by asking some questions that can arouse students' curiosity. In addition, teachers must pay attention to the relevance of the study of lesson content to students' development needs and circumstances. In one place students have different needs, conditions, and situations from students in other places. If the learning material is packaged according to the conditions of the students, students will focus on the learning presented. Virtual teachers need to provide examples or stories that are close to students. For example, don't give examples of rice fields for students who have never seen the rice fields.

In learning, students' beliefs must also be considered. Virtual teachers must instill in students a high degree of confidence that they are great kids. For this reason, the teacher needs to provide opportunities for students to apply the knowledge they already have in problem-solving as well as in practicum. He will get the high confidence of students when he is successful in solving problems or completing given assignments. The success of students in solving problems and completing assignments will also make students satisfied with what they have.

The second element of blended learning is self-spaced learning. There are opportunities for students to study independently. This is very important for students because they have the opportunity to explore the learning material. Students can obtain this independent study opportunity anywhere and anytime. Of course, to support the learning process, teachers must prepare learning materials that are easily accessible to students. Learning materials need to be prepared on a multi-media basis (eg video, audio, images, or an overall combination).

The third element of blended learning is collaboration. Students' learning experiences will be better if learning is done collaboratively. Collaboration in learning can involve students from other schools or campuses. In addition, collaboration in learning can also be done by involving educators across schools or study programs, or campuses. Thus, between students and teachers from other schools or campuses can share experiences and help each other to achieve learning goals. This collaborative learning can be done synchronously and asynchronously.

The fourth element in blended learning is assessment. Assessment is an important aspect of education. Mardapi [5] explained that assessment and learning are two inseparable things. The implementation of blended learning must be designed so that students' development and learning outcomes can be measured properly. Assessment in blended learning is not sufficient if only a paper-pencil assessment is used. Assessment needs to be carried out also in other forms such as authentic assessments such as portfolios. Assessments also need to be packaged in offline and online forms. This will facilitate the implementation of the assessment and access for students. Assessment will support the student learning process if the assessment is done properly, which is packaged to provide both teachers and students feedback. However, the validity of the assessment should not be ignored either. If the assessment is done online then the teacher must ensure that the assessment goes as planned.

The fifth element of blended learning is performance support materials. Blended learning can be done by combining virtual face-to-face and face-to-face classes. However, it should be noted that this combination requires adequate support materials. Learning materials should be converted to digital forms that can be accessed offline and online, such as YouTube. Learning materials can be packaged by themselves or using materials that have been prepared by other parties whose use is permitted. Sufficiently available material will enable and facilitate students to deepen the material that has been taught and find other relevant sources.

Assessment of Learning Outcomes

The development of online learning and mixed learning has been accompanied by concern about the quality of learning [6]. The quality of learning can only be seen through the results of the assessment. In education, the terms summative and formative assessment are known. But there are also terms of quizzes, authentic assessments such as portfolios, and others. Summative assessment is classified as a type of high-risk assessment. This assessment is conducted to measure learning achievement or student success at a certain level as well as to measure the performance of teachers and schools. Summative assessment is in charge of assessing the understanding of the predetermined curriculum representation content. In addition to assessing student achievement, teacher and school performance, the results of this summative assessment can also be used as evidence of educational accountability at all school levels, including tertiary institutions.

Summative assessment makes an important contribution to accountability and education policy at both the local (school and district) and national levels [7]. However, summative assessment has limitations. Summative assessment cannot be used to diagnose gaps between student knowledge and curriculum targets. Summative assessment can provide information to stakeholders about the material that has been and has not been studied by students. On the other hand, summative assessment is not able to provide detailed information about the strengths and weaknesses of students in mastering learning material. These weaknesses and strengths have a very important contribution in adjusting and improving the learning process in the classroom.

To adjusting the learning program, use an "interim" assessment at each meeting. The results of this assessment can provide important information for adjusting current learning or for the next meeting. This assessment is intended to determine student achievement of the learning objectives being studied at that time. Although not detailed, the results of the analysis of this assessment can provide information about the weaknesses of the learning process so that they can be corrected in further learning. The forms of this assessment include group or individual reports and quizzes. In addition, the results of this assessment can also be used as a factor that can be taken into account in students' final grades. The momentary assessment provides students with experiences to deal with summative tests and provides the information needed to adjust for subsequent learning [7] [8].

Although summative assessments and interim assessments can provide information and help build accountability, they are unable to provide sufficient information to improve the quality of the learning process. To improve the learning process, detailed information is needed about students' weaknesses and gaps in the target learning outcomes. For this purpose, formative assessment is needed. The formative assessment identifies student weaknesses and the learning process. Teachers and students can use the results to plan learning improvements during that time. Formative assessments can be carried out periodically (eg at the end of each topic) to provide timely feedback to teachers and students on the progress that has been made [9], [10].

Many studies show that formative assessment is very useful for improving student learning outcomes. A study that conducted a meta-analysis of the findings of many studies concluded that formative assessments provide "contingency moments" [10]. Meanwhile, the critical point for changing the direction of learning is primarily determined by the assessment results. This reinforces that formative well-designed evaluations can provide information to improve learning promptly, the student's needs can be met [10]. Through formative assessment, students are allowed to express abilities and increase self-confidence which is the foundation of independent learning [11].

Formative assessment can provide detailed information about student learning outcomes. Thus, it is very easy to see the quality of student learning outcomes in class through formative assessment. However, it is more difficult to apply this assessment in blended learning than it is only applied to traditional classes. One solution is to take advantage of the self-assessment that accompanies each item that is responded to. The forms of tests commonly used in class, such as true-false, multiple-choice, and short answers, can be used in this formative assessment. This test can be done using a google form or the like. Students provide answers through the form prepared. In the assessment form, apart from the choice or answer room, a self-assessment is also ready, for example, the selection of sure, not sure, not sure about the answers given/chosen. This makes it very easy for teachers to analyze the weaknesses and strengths of achieving predetermined targets. In this way, the teacher easily confirms the students' level of understanding of the critical points. This analysis can be used as a reference for teachers in making improvements to the learning process. Several authors have suggested the advantages of formative assessment like this based on their studies. The results of the study concluded that there was an increase in participation, attendance, and learning outcomes through the application of the student response system [12], [13], [14], [15].

Portfolio assessments may also be used to ensure the quality of blended learning implementation. Portfolios can be used to demonstrate students' real performance. This evaluation tool keeps track of students' progress over time. Project-based learning is an ideal match for this type of evaluation. Students' work can be collected through traditional paper-based portfolios as well as digital-based e-portfolios. Portfolios can be in the form of recordings of the learning process or the results of student work at a certain time. Through portfolios, teachers will be able to properly assess participation, insights, ways of thinking, the ability to express ideas, actions, skills, and other aspects.

Conclusion

Blended learning requires careful planning. Blended learning involves a learning process and an assessment of learning outcomes. Planning and implementing learning must pay attention to the fulfillment of student learning needs both from the cognitive, affective and psychomotor aspects. Students also need feedback from the results of the assessment carried out both formative assessment and summative assessment. The implementation of assessment of learning outcomes in mixed learning is not as simple as implementing assessment in traditional learning. Therefore, it takes creativity and innovation in both learning and assessment of learning outcomes.

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Students' Covariational Reasoning in Representation Translation

Sandie[1]

Introduction

Covariation is important in mathematics learning such as describing the graph of the dynamic event of time changing to the fuel height of a vehicle and illustrating the fuel tank side view of a vehicle. Thompson (1994b) states that understanding the relationship of dynamic concepts is fundamental in relating the changes of two quantities to construct image. Covariation is closely related to investigate the pattern of a change. Moreover, covariation is also the essence of understanding the concept of calculus. [1] states that person's calculus ability has a strong influence on his/her ability to analyze changes in two quantities that occur in the form of graphs. Therefore, covariation is important to understand.

Covariational reasoning is the cognitive activity associated with coordinating two different quantities by observing the changes in quantity that causes changes in other quantities [2], [3]. [3]state a mental framework of the action of covariation and the extent of covariation. [4] state that although covariational research is widely investigated, covariational reasoning in the U.S., Japan, South Korea and Russia is lack of concern. In fact, the difficulties found when someone faced the covariational problems are still many.

Some of the difficulties experienced by the students when they face the problem of covariational are the difficulties in reasoning covariatively [5], concept error [6], and interpreting the graph of the dynamic event function [2], [3], [7]–[9]. But in reality, The [10], [11] states that students need to be able to analyze patterns of changes from different contexts and develop more the skills about quantity change mathematically. According to some researchers, covariational reasoning is the thinking foundation of someone in constructing, interpreting, and using functions with meaning [2], [3], [7], [12], [13].

[1] IKIP PGRI Pontianak

To solve the covariational problem, a representation is required. Representation is an external object that serves as a symbolic system for coding, describes relationships or mathematical ideas, communicates mathematical knowledge, operates mathematical constructs relating to mathematical objects or concepts associated with existing knowledge [14], [15]. Representation has an important role for a person in understanding the problem [6], [16]–[24]. Problems show in some representations, make them easier to be understood and to determine the solution steps [25]. Some researchers [26]–[28] state that the ability to comprehend mathematical concepts, mathematical connections, and mathematical problem solving is supported by the students' ability to construct different mathematical representations. In the representation, there is a translation term. According to Janvier [29], translation on representation is a psychological, intellectual or cognitive process that classifies information changes by encoding it in the form of a mathematical representation into another mathematical representation. Therefore, this research examined the students' covariational reasoning in representational translation.

The covariation problem in this research was to construct the form of car fuel tank based on the the car fuel needle movement speed observation through dyno test. The process of representation translation occured was from the verbal representation forms (observations) to the pictorial form (side view of the fuel tank). In the process of representation translastion, students had to involve covariational reasoning to construct the fuel tank form based on the observations. An illustration of the representation translation in covariational problem is presented in the figure 1 below:

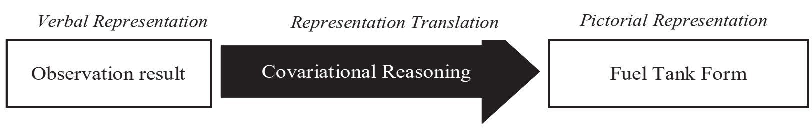

Figure 1. The Representation Translation In Covariational Problem Illustration

To illustrate the fuel tank based on the observations, what students needed to do first was to find the hidden attribute on the problem. For students who were unable to find hidden attributes on the problem, they were thought that they could not describe the side view of the fuel tank nor had an error in describing the shape of the fuel tank. The hidden attribute was information by a car dyno test in constant velocity causing constant fuel consumption, and relationship between the cross-sectional area which was causing changes in the speed of the fuel needle movement.

To solve the fuel tank covariational problem in representation translational of the verbal form to the pictorial form, it involved covariational reasoning as expressed by Carlson. The mental action that played a role during the representational translation process in the fuel tank covariational problem was like the covariate level framework disclosed by [3]. At the coordination level (L1), students were required to identify the speed of fuel needle movement associated with time as the independent variable and fuel height as the dependent variable on the graph, and the fast speed of the fuel needle was influenced by the narrowness of the fuel tank section. At the direction level (L2), students were required to understand the meaning of fuel needle movement from F (1) to E (0) which was the event of fuel consumption and its attribution on the graph starting from point F (1) to E (0) on y (from top to bottom), and time on x (from left to right), on the side view of the fuel tank then to understand F (1) above and E (0) below. At the level of quantitative coordination (L3), students were required to identify the speed of fuel needle movement associated with the graph and side view of the fuel tank by involving the measurement. At the average level (L4), the students were required to coordinate the time unit changes to the change of the fuel height unit on the graph, and the unit area of the fuel tank side view adjusted to the speed of the fuel needle movement. At momentary change level (L5), students were required to determine the turning point of the graph, and the change of cross section of the fuel tank adjusted to the observation result.

Methodology

This research used qualitative approach. It was conducted to 15 students of the 1st semester students in S1 Mathematics Education Department of Malang State University and 25 students of 5th semester students in S1 Mathematics Education Department of Malang Islamic University. Problems were randomly assigned. Students with correct answers were further interviewed in order to explore the students' covariational reasoning when they were solving the fuel tank covariational problem studied through the covariational reasoning framework presented by Carlson. The covariational problem of the fuel tank is presented in the appendix.

Research Result

The result of the students' work in solving the problem of the fuel tank dynamic event showed that only 10% of the students (4 of 40) that could draw the side view of the fuel tank correctly shown through table 1:

Table 1: Description of Students' Work Results

The Answers of the fuel tanks Covariational Problems	Total	Answer Category
Correct answer	2	Indirect translation
	2	Direct translation
Wrong answer	22	-

Interviews were conducted on 4 students who could draw the shape of the fuel tank correctly. There were 2 students in the interviews answered the need to draw the graph of the time change function against the fuel height, while the other students answered that the graph did not need to be described. Students who claimed the need to describe the graph were classified into the indirect translation group, whereas the students who claimed did not need to classify the graph were put into the direct translation group. So the process of students' reasoning in representation translation was divided into two groups which were indirect translation subject group and direct translation subject group.

Indirect Translation Subject Group

Based on the research data, there were two students, namely subject 01 and subject 02 who stated that a graph was needed to be drawn after drawing the side view of the fuel tank. The results of side view of fuel tank and graph of the time change function of the fuel height are presented in Figures 2, 3, 4 and 5 as below:

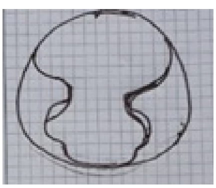

Figure 2. Fuel Tank Side View of Subject 01

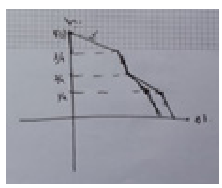

Figure 3. Graphic Function of Subject 01

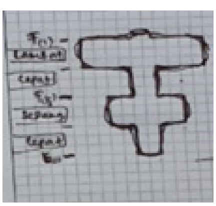

Figure 4. Fuel Tank Side View of Subject 02

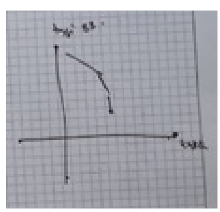

Figure 5. Graphic Function of Subject 02

Although the results of subject 01's and subject 02's works showed that they had completed the side view of the fuel tank first and based on the interview did to them to know more about their reasoning actually they constructed the graph first before constructing the side view of the fuel tank. If the representational translation was reviewed based on a covariational reasoning framework [3], there were twice representational translations occured which were the covariational reasoning process in the representational translation of the verbal form in the graphical form and the representational translation of the graphic form to the pictorial form.

At the coordination level (L1), subject 01 and subject 02 coordinated factors affecting the speed of needle movements varied each quarter. Subject 01 and subject 02 coordinated them to construct the graph, the x-axis on the graph represented time and the y-axis represented the fuel height. For its association with the side view of the fuel tank, the more extensive the cross section of the fuel tank in a certain part meant that the volume of fuel was large and vice versa. So, it could be concluded that the more extensive the cross section of the fuel tank meant that the greater the fuel volume to cause the decreasing of fuel height which was getting slower and vice versa.

At the direction level (L2), student 01 and 02 understood the needle movement from F (1) to E (0) which was the event of vehicle fuel consumption so that the graph moved from F (1) over to E (0) below on the y axis. The time increased as the fuel height changed. So, the x axis on the graph moved from left to right. In general, the graph started from top to bottom and from left to right. For its attribution to the fuel side view, the fuel at initial condition was full so that the position of F (1) was placed on the top and position E (0) on the bottom.

At the quantitative coordination level (L3), the fuel needle was divided into four equal parts which meant the y-axis on the graph was also divided into 4 equal parts which were from E (0) to one fourth, one fourth to two fourths, two per four to three fourths, and three-fourths to F (1). The observation stated that there were three types of speed that occured in the needle movement which were slow, moderate, and fast. The fuel needle movement changed every four parts if it was associated with time on the x-axis of the graph which caused the interval differences and had different interval lengths between the movement speed when the needle was slow, moderate, and fast. For x-axis interval at slow-needle speed, it took a long time when the fuel level falled to one-quarter so that the interval was long, and at the speed of the medium needle, it took the intermediate interval, and the fast needle speed, it took a while so the interval became short. The relation between the fuel needle to the side view of the fuel tank was described as for the slow fuel needle, it meant the area of the fuel tank cross section was broad, at the fuel needle moderate speed it meant that the cross section of the fuel tank was moderate, and at the fast fuel needle speed it meant that the cross section of the tank was narrow.

At the average rating level (L4), the subject 01 determined the x-axis interval on the graph for a slow time which was 9 units, for a medium time which was 6 units, and for a fast time which was 3 units. Meanwhile, the interval of the fuel tank side view with wide tank area for slow fuel needle speed was 12 units, for moderate fuel needle speed was 8 units, and fast fuel needle speed was 4 units but for high fuel tank, the accuracy was neglected. The subject 02 poured thoughts about slow, medium, and fast time using minute units. There was also a statement from subject 02 that was "For example within 1 hour, a slow event took 30 minutes, a moderate event took 15 minutes, and a quick event took 5 minutes. " But the graphical representation of subject 02 only conveyed meaning on the slow needle speed which meant the graph slope was ramps, at moderate needle speed the graph slope was moderate, and at the fast needle speed the graph slope was steep. Meanwhile, the interval on the fuel tank side view with the tank width for the slow fuel needle speed was 10 units, the moderate fuel needle speed was 6 units, and the fast fuel needle speed was 2 units. Subject 02 observed the same fuel tank level in each condition which was 3 units.

At the instantaneous change level (L5), subject 01 and subject 02 were able to determine the point of graph gradient change and the fuel tank side view was adjusted to the observed result. At the observation, there were four changes at the needle speed. The graph constructed by subject 01 was adjusted to the observation results that reflected the needle movement from F (1) to three-quarters moving slowly, three-quarters to two-quarters moving fast, two-quarters to one-fourth of the fuel needle moving moderately and from one quarter to E (0) moving quickly. At the time of drawing the fuel tank side view, there was a misinterpretation of the tank cross section in the form of a circle causing the subject 01 drawn the tank as presented in Figure 03 but the he asserted that the reduction of fuel from each fuel tank area was constant. The subject 02's the graphic image did not seem to pay attention to the exact interval as presented in Figure 06. However, based on confirmation through interview, subject 02 asserted that the graph described was an event of observation which was ramps, steep, moderate, steep. The illustration of the fuel tank side view was accurately described and also showed which the conditions on the fuel needle speed movement was slow, fast, medium, and fast.

Direct Translation Subject Group

Based on the research data there were two students, namely subject 03 and subject 04 which stated that it did not need to describe the fuel time changes on the dynamic event graph. It was found through interviews after the students finished the side view drawing of the car tank that it was not necessary for the graph to be known. The subject 03's and subject's 04 works are presented in Figures 6 and 7.

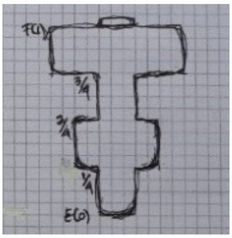

Figure 6. Fuel Tank Side View of Subject 03

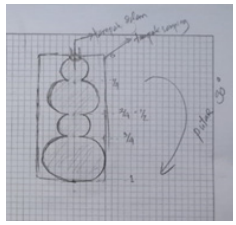

Figure 7. Fuel Tank Side View of Subject 04

Subject 03 and subject 04 performed a one-time representation translation which was the representational translation of the verbal form to the pictorial form. At the coordination level (L1), subject 03 and subject 04 coordinated the factors affecting the needle movements speed varid each quarter. Subject 03 and subject 04 coordinated that if the cross section of the fuel tank on a certain part was broad, it meant the volume of fuel in a certain part was large and vice versa. So, it could be concluded the more extensive cross section of fuel tank, it meant that the greater the fuel volume to cause the decreasing in fuel height which was getting slower and vice versa.

At the direction level (L2), student 03 and subject 04 understood that the needle movement from F (1) to E (0) was the event of vehicle fuel consumption and had a relationship with the fuel side view. Subject 03 understood that the fuel at initial condition was full so that the position of F (1) was placed at the top and the position of E (0) was placed at the bottom and the area of the tank cross section in each condition was different. In contrast to subject 04 who put F (1) at the bottom and E (0) at the top. However, essentially subject 03 and subject 04 had the same thought based on the information given by subject 04 who said that the tank was rotated 900. Subject 04 did not think carefully by declaring the tank rotated 900. Through the interview, subject 04 stated that the tank drawn was reversed. In order to demonstrate the understanding that the tank was reversed, subject 04 provided the information that the tank was reversed by 900 which should be 1800.

At the quantitative coordination level (L3), the fuel needle was divided into four equal parts which mean the y-axis on the graph was also divided into 4 equal parts which were from E (0) to one fourth, one fourth to two fourths, two per four to three fourths, and three-fourths to F (1). Based on the observation, there were three types of speed that occured in the needle movement which were slow, medium, and fast. The movement of the fuel needle changed every four parts which meant that if the speed of a slow fuel needle meant that the area of the fuel tank cross section was broad, a moderate speed of the fuel needle meant that the cross section of the fuel tank was moderate, and the fast needle fuel speed meant that the cross section of the tank was narrow.

At the average rating level (L4), the subject 03 specified that the width of the cross-sectional area for the event of a slow needle movement was 11 units, the moderate needle movement was 7 units, the rapid needle movement was 3 units. Subject 03 also determined the tank height of each condition which was 4 units and the total tank height was 16 units.

Subject 04 had a difficulty in interpreting and understanding the area of tank in the form of a circle. The error of the interpretation was also shown in figure 8 which was understood as the extent of the cross-sectional view. However, through interview, subject 04 stated that the fuel height condition decreased on each event was occuring constantly. He had difficulty in describing the side view of the tank which was influenced by the area of the tank cross section in the form of a circle. Subject 04 determined the width of the speed tank side view at slow needle movement was 10 units, the moderate needle movement was 8 units, and the rapid needle movement was 4 units.

At the instantaneous change level (L5), subject 03 and subject 04 were able to determine the shape of the tank with broad, moderate, and narrow cross-sectional areas adjusted for the observed results. The fuel tank drawn showed conditions appropriate to the observations which indicated the conditions of F (1) to three-quarters was at the slow needle movement speed, three-quarters to two-fourths was at the fast needle movement speed, two-fourths to one-fourth was at the moderate needle movement speed, and from one-fourth to E (0) was the rapid needle movement speed.

Discussion and Conclusion

Based on research data, representational translation was divided into two parts, namely indirect translation and direct translation. There was a difference between covariational reasoning process in the indirect translation subject group and the direct translation subject group. A detailed description is described below:

Indirect Translation Subject Group

Students who needed graphics to solve covariational problems involved in this group. In the representation translation, there were twice representations occured which were a representation of verbal form (observation result) to graphic form (graph of the time change function to fuel height), and from graphic form to pictorial form (side view of fuel tank). For each representational translation process which were the verbal form of the graphic form and the graphic form to the pictorial form, each translation involved five mental actions of covariational reasoning expressed by [3]. The illustration of the representation translation of subject 01 and 02 could be seen in Figure 8:

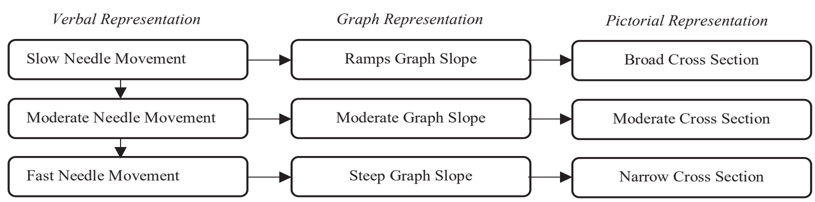

Figure 8. Indirect Representation Translation

Subject 01 and subject 02 showed that they had five mental actions as stated by Carlson et al, (2002). If these five mental actions were owned by subject 01 and subject 02, it meant that it showed a good covariational reasoning. Any representation translation such as interpreting the slow, moderate, and rapid fuel needle movements on verbal representations involved global interpretation[29], [30] to construct slopes of gentle, medium, and steep graphs and construct tanks with broad, moderate, and narrow sectional areas.

Direct Translation Subject Group

Students who did not need graphics to solve covariational problems if examined through representation translation which was the representation translation from the verbal form (observation result) to pictorial form (side view of fuel tank) were put in this group. The representation translation of the verbal form to the pictorial also involved five mental actions of covariational reasoning as stated by [3]. The illustration of the representation translation from subject 03 and subject 04 can be seen in Figure 9.

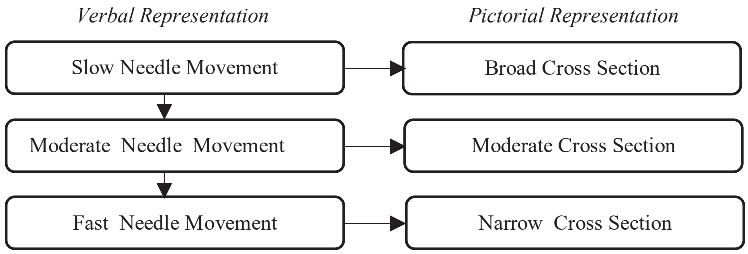

Figure 9. Direct Translation Representation

Subject 03 and subject 04 also showed that they had five mental actions as stated by [3]. If these five mental actions were owned by them, it meant that it showed a good covariational reasoning. Each representation translation such as interpreting the slow, moderate, and the rapid fuel movement of the verbal representation involved global interpretation [29]–[31] to construct tanks with broad, moderate, and narrow.

This research showed that few students could solve covariational problems. This was because the students thought that mathematics always contained numbers and number operations. When students were faced with problems which did not contain numbers, this became a great difficulty. This was indicated by only 10% of the students who could solve the covariational problem. This problem was a serious problems in both representational translation and covariational reasoning. Therefore, it needed to be studied more deeply about reversible representational translation of the covariational problem.

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The Legal Problems of Virtual Court

Saut Maruli Tua Manik[1]

Introduction

The Covid-19 pandemic is still engulfing the world, including Indonesia. Kompas.id reports that the University of Washington's Institute for Health Metrics and Evaluation (IHME) noted the deaths due to Covid-19 in Indonesia reached 118,796 people as of mid-May 2021, more than 2.5 times reported. Indonesia is ranked 17th in the world with the highest number of deaths due to Covid-19 [1].

The pandemic has forced everyone to be able to adapt to various policies that are expected to reduce the rate of transmission and the growth of positive cases. The Indonesian government has taken preventive measures to prevent and minimize the spread of the virus in the country. They have implemented large-scale social restructions, social and physical distancing, rapid and swab tests, and also vaccination. These series of policies have impacted the dimension of law enforcement *(rechtoepassing/ rechtshandhaving)*, especially in virtual courtrooms through teleconference facilities. The implementation of virtual trials is seen as in line with social distancing and physical distancing policies to suppress the spread of the Covid-19 [2]. It is apparent that Covid-19 could not stop trials, in which courts must remain open to protect the people seeking justice.

Regarding the online trial, the Supreme Court issued Law Number 1 of 2020 on March 23, 2020, concerning Guidelines for the Implementation of Duties During the Prevention of the Spread of Corona Virus Disease 2019 (COVID-19) within the Supreme Court of the Republic of Indonesia and the Judicial Bodies. This regulation evaluates and revokes the law by the Secretary of the Supreme Court of the Republic of Indonesia Number 1 of 2020 concerning Adjustment of the Work System of Judges and Judicial Apparatuses in Efforts to Prevent the Spread of COVID-19 in the Indonesian Supreme Court and the Judicial Bodies, which was issued on March 17, 2020. Later, The Attorney General of the Republic of Indonesia also issued a legal basis in Number 5 of 2020 concerning Policies for the

1 Universitas Muhammadiyah Riau, sautmarulituamanik@umri.ac.id

Implementation of Duties and Case Handling During the Prevention of the Spread of COVID-19 in the Prosecutor's Office of the Republic of Indonesia on March 27, 2020. The instruction was accompanied by the law from the Attorney General of the Republic of Indonesia Number 2 Year 2020 concerning Adjustment of the Employee Work System in Efforts to Prevent the Spread of Coronavirus Disease (COVID-19) in the Prosecutor's Office of the Republic of Indonesia.

Many defendants complained about virtual trials through teleconference. Most come from the defendants concerning the implementation of online or teleconference trials from a non-technical side. Virtual trials are prone to problems such as unstable internet connection, which most likely result in not being heard, seen properly, or misinterpreting the meaning of the statements of the parties. This may affect prosecutors, judges, lawyers, witnesses, and defendants, which can obscure the actual facts where truth is hardly achieved during the criminal case trial. Noise disturbances in the place of detainees may also result in unclear voices that can complicate evidence. It requires ability from the public prosecutor to unravel the conformity testimony of witnesses, documentary evidence, instructions and other evidence, as well as confronting the statements of witnesses, defendants and documentary evidence presented by the public prosecutor. All these matters cannot simply be carried out through teleconferences or virtual meetings.

The number of problems in the implementation of virtual trials makes it more difficult for defendants to get legal certainty; as well as justice and benefits for justice seekers. This study unravels the legal problems of virtual courts from a philosophical, sociological and juridical perspective. Based on the philosophical perspective, the court decisions in the form of *irah-irah* (based on the One Godhead) is the one distinct criterion that differs Indonesian judiciary from the courts of other countries. However, the value of *irah-irah* in a virtual trial is difficult to find because the strength of the spirit of the virtual trial is absence. The rights of the defendant are ignored and neglected by the law enforcement, which is not a concern for judges' "Positive Normative Decisions". The sociology perspective regards that virtual trial is problematic due to the judge's methods in assessing the guilt/criminal responsibility of the perpetrator, and how the judge considers the imposition of a criminal on the perpetrator. Juridically, a virtual trial is hardly deliver justice for the Defendant because the legal basis for a virtual trial is contrary to the Criminal Code.

Legal Problems in Virtual Courts from the Philosophical perspective

Criminal law policy refers to an "effort to realize criminal laws and regulations to suit the circumstances at a certain time *(ius constitutum)* and in the future *(ius constituendum)*". It is the logical consequence where criminal law policy is identical to penal reform in a narrow sense. As a system, criminal law consists of culture (cultural), structure (structural), and substance (substantive) law [3]. From the perspective of legal politics, criminal law politics have attempted to formulate good criminal legislation.

According to Muladi, the purpose of punishment is integrative (humanity in the Pancasila system). The theory of integrative punishment departs from the fundamental assumption that a crime is a disturbance of balance and harmony in community, which causes damage to individuals and society. Hence, the purpose of punishment is to repair the damage caused by criminal acts [4]. Adherents of the integrative punishment theory for judges in their decisions are expected to maintain humanity in their final decisions. Judges are expected to uphold the dignity of the perpetrators, conveying educational elements in their decisions, which are able to awaken the perpetrators' awareness so that they have a positive and constructive mental attitude. For prevention, judges' decisions must maintain elements of justice and be fair to both parties [5].

Legal trials result in sentencing that felt fair to the defendant (justice seekers). The defendants can witness the process while being accompanied by legal counsel and judges in facing the public prosecutor. It is an ideal trial that has been carried out so far where evidence can be delivered directly without many technical problems. However, the Covid-19 pandemic has shifted the practices of physical trial into online trial with teleconferences, resulting in non-technical problems. Among the issues are unstable internet connection that causes disturbances where cases are not being heard and seen properly. Misinterpreting and misunderstanding may also take place during the statement delivery by the prosecutors, judges, lawyers, witnesses, or other parties. Besides, defendants can obscure the actual facts so that material truth cannot be achieved from the results of the criminal case trial.

Furthermore, complex evidence that requires prosecutor's ability to parse the statements of witnesses, documentary evidence, instructions and other evidence can also be disturbed. This may affect the process of confronting the statements of witnesses, defendants and documentary evidence presented by the prosecutor. These obstacles will affect the rights of the litigants, including the defendant, the victim, or the community in general, which cannot be reduced or deviated in order to find the material truth in the trial of criminal cases. The number of online court or teleconference problems certainly affects decisions that are detrimental to justice seekers.

Philosophically, judge's decision is intended to be an effort to improve the behavior of the defendant through the sentencing process. This means that the philosophy of punishment is to coach perpetrators, so that his behaviour will shift positively after being released from jails. This goal is hardly achieved if the defendant does not feel the essential meaning of the statements.

It is important to realize that "Justice Based on the One Godhead" is not textual, but rather an essential meaning of justice that must be obtained for justice seekers. *Irah-irah* in a decision reflects the value of "justice" based on God Almighty. It leads to an understanding where justice is a life value to achieve the benefits of life. Justice is the attribute of law and the act of determining rights or punishments. The term justice *(iustitia)* means "fair", which is defined as an effort to resolve a matter that is not one-sided, neutral; but still defends and favors the right, should and does not do arbitrariness to others. Justice is closely related to interactions in the form of attitudes and behavior between humans. It is something that requires everyone to be able to give fellow human beings treatment according to their rights and obligations, which is not discriminatory, but gives something with what should be received [6].

According to Bismar Siregar, a decision for justice based on God Almighty is an affirmation of an oath in the name of God, for which he is obliged to seek and explore, then formulate the values of law and justice. It is the basis for decisions that are in accordance with the "feelings of" and the "sense of justice" that lives in society [7]. Judges are warned not to be rigid, not to be hung up on literal rules. They are are obliged to decide cases, nd deliver justice wisely by "flexibility". It is amongst the judge's attitude to research and review each case [7]. The essential meaning in these decisions must always be embedded in the trial procedure, the same is expected in a virtual trial.

The defendant's objection to virtual trial was due to the fact that the legal culture of judges and public prosecutors as law enforcers had not yet received the trust of the public [8]. It can be said that the values and practices of traditional face-to-face trials do not translate to the virtual trials. The embodiment of the role of judges' beliefs based on conscience towards virtual trials is difficult in finding justice. There are disputes whether online trials are incarnated in the head orders of decisions in judging cases based on conscience because truth is difficult to obtain. It is obvious that virtual trial is problematic, especially because its implementation is against the orders of the decisions. It has not yet gained trust in the community.

Legal Problems of Virtual Court in Sociological Perspective

It is necessary to analyse the practices of virtual trial from sociological perspective. It encompasses public reaction to the Covid-19 pandemic and to technological advances. During the pandemic, law enforcers are faced with two challenging options whether to resolve cases virtually or delay the trial with the consequence of an accumulation of cases in the future [2].

Courts must remain open, especially to protect vulnerable people. It is important for courts to create a healthy working environment for judges and staff. Courts must set an example and communicate among each other in addition to its importance in prioritizing case handling.

Senior advocate Luhut MP Pangaribuan said the use of teleconference technology in future court sessions is a necessity. However, he assessed that the hasty application of online criminal case trials could either reduce or override the provisions of the applicable criminal procedural law, particularly the standard of evidence. Furthermore, Pangaribuan stated that if online criminal trials continued to be held, it would disrupt the principle of fair trial. Because if the infrastructure to support online justice is inadequate, it has the potential to reduce the validity of the evidentiary process.

The readiness of law enforcement actors is critical to support the evidence in a virtual trial. The competency of virtual network of law enforcement and human resources in using virtual court facilities and infrastructure is pivotal. A virtual trial where prosecutor and witnesses are in the office, the Panel of Judges is in the courtroom, the defendant is in custody/ prison, the legal advisor is in his law office, and sometimes also in the District Court must be able to create a real atmosphere. Technical-empirical problems in the field, including unstable internet connection and the lack of maximum evidence during virtual trials will create disappointment for justice seekers, as well as for the general public.

However, the judge's decision must be accepted. It means that in deciding cases, the judge is not only based on the written law, but also must be able to see the values in the society [9]. The law enforcement process during the Covid-19 pandemic must be able to realize justice in the midst of a critical situation [10]. In essence, court decisions must convey substantial justice that accurately distinguishes between individual and social justice. In other words, the ideal value of a decision will be well described if individual justice is reflected in social justice. This means that an individual justice depends on social justice as social justice value is a change that takes precedence over the value of individual justice [11].

Technical problems and non-legal factors in the virtual trial potentially cause the law to be inefficient or useless. This includes personnel, information, budget, facilities, substantive law, procedure law, decision rules, and decision habits [12]. Starting from a virtual trial, the judge as the head of the room must be fully aware of the consequences of his decision. Judges must be able to show the best legal culture, in which the virtual trial process does not change the essential meaning of a common trial. Hence, both judges and prosecutors must be able to show the performance of virtual trials where it does not reduce the value and real meaning of face-to-face trials. In this perspective, law should provide something more than just legal procedures. The law must be competent and fair, be able to recognize the wishes of the public and have a commitment to achieving substantive justice [13].

Legal Problems of the Virtual Court in Juridical Perspective

Regarding the online trial, the Supreme Court issued Law Number 1 of 2020 on March 23, 2020, concerning Guidelines for the Implementation of Duties During the Prevention of the Spread of Corona Virus Disease 2019 (COVID-19) within the Supreme Court of the Republic of Indonesia and the Judicial Bodies. This law evaluates and revokes the regulation from the Secretary of the Supreme Court of the Republic of Indonesia Number 1 of 2020 concerning Adjustment of the Work System of Judges and Judicial Apparatus in Efforts to Prevent the Spread of COVID-19 in the Supreme Court of the Republic of Indonesia and the Judicial Bodies, which was issued on March 17, 2020. Later, The Attorney General of the Republic of Indonesia also issued a legal basis, namely Number 5 of 2020 concerning Policies for the Implementation of Duties and Case Handling During the Prevention of the Spread of COVID-19 in the Prosecutor's Office of the Republic of Indonesia on March 27, 2020. The instruction was accompanied by the law from the Attorney General of the Republic of Indonesia Number 2 Year 2020 concerning Adjustment of the Employee Work System in Efforts to Prevent the Spread of Coronavirus Disease (COVID-19) in the Prosecutor's Office of the Republic of Indonesia and other legal grounds.

Series of legal bases above are against legal harmonization because Law Number 8 of 1981 concerning the Criminal Procedure Code (referred to as the Criminal Procedure Code) because the Criminal Justice System in Indonesia is not amended. This makes virtual trials difficult to carry out. The disharmony of the legal basis for the virtual trial including Article 154 of the Criminal Procedure Code (KUHAP) confirms that the Defendant should be present and not allowed to be represented in the trial based on a summons by the Public Prosecutor (Article 152 paragraph (2) of the Criminal Procedure Code). KUHAP does not allow judicial proceedings in absentia in ordinary examinations and brief examinations, as affirmed by Article 154 paragraph (4) of the Criminal Procedure Code [14]. The principle of the presence of the accused is commonly known in special crimes such as corruption and economic crimes. The principle of the presence of the accused has other names, namely *ius singular, ius speciale,* or *bizonder strafrecht [14].* In addition, the principle of the presence of the defendant is related to the principle of direct and oral examination by the judge [15].

The existence of disharmony of regulations in a virtual trial must be resolved immediately because omission of regulations that are not solid, contrary to higher regulations will lead to complicated and complex problems in the future. Starting from the problem of virtual trials in terms of juridical matters, it is suggested that stakeholders, especially law enforcers who have the authority, together with the government and representatives must revise the Criminal Procedure Code (KUHAP). Revision on the KUHAP is also expected to involve other legal experts including sociologists who has the capability of community sociology due to the Covid-19 pandemic.

Conclusion

Defendants' complaints about the practices of virtual trials includes the non-technical side. It was also vulnerable to legal problems from a philosophical, sociological, and juridical perspective. From the philosophical point of view, the strength of the spirit is not obtained in the virtual trial. Virtual trial does not reflect essential meaning in the decisions of the head of the decision. Second, the sociological view regards that judges' assessment and prove of the criminal acts are problematic. It is questionable how judges assess the guilt/ criminal responsibility of the perpetrator and how judges consider imposing criminal charges against perpetrators. Last, the juridical perspective views that the practices of virtual trials are contrary to the Criminal Code. Solutions for virtual trails call for real efforts. It has to take into account philosophical, sociological, and juridical decisions to build a legal culture of law enforcement, develop supporting facilities for virtual hearings. Hence, it is mandatory to revise the Criminal Procedure Code by involving legal experts, including sociologists, to support the future credibility in the practices of virtual court.

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Science Technology Learning Cycle (Stlc) Learning Model in Virtual Class

Siti Patonah[1]

Introduction

One indicator of the progress of a nation is markedly the rapid technological progress produced by every human of the nations. Various technologies needed by its citizens can be met from their own country and can even export to other countries. Technology emerges from human innovation to meet the needs of the increasingly complex and fast life. Technology only is produced by humans as intelligent beings. Technology has enormous benefits for humans and the environment. The principle of expediency in developing technology is a hallmark of the application of the underlying science. Technological advances go hand in hand with scientific advances. Therefore, mastery of science and technology is a fundamental key in facing the challenges of the times. Various challenges that arise include improving the quality of life, equitable development, and developing human resources[1].

Technology is essentially an implementation of science to meet human needs. Technology is born from the creation of human thought through a scientific process. The process of science is a series of activities used to test knowledge into science. There are five characteristics of science, namely: objective, logical, methodic, systematic, and universal. Objective refers to the efforts taken in revealing an object under study that is carried out honestly, as it is, does not depend on any facilities from the investigating subject. Logical shows that science can be accepted by human common sense, based on a causal relationship, not something in the form of conjecture or prejudice. Science is organized based on a certain method known as the scientific method. The stages in the scientific method include problem formulation, drafting a framework of thinking, formulating hypotheses, testing hypotheses, and drawing conclusions. The systematics feature of science is that various information and data

[1] Faculty Education of Universitas PGRI Semarang

are arranged according to certain regular relationships. The truth obtained from the scientific process, in general, can be accepted by some or all circles of society. Technology comes from the Greek, namely "Tecnologia" which means a systematic discussion of arts and crafts. The root of the word technology is "techne" which means "art" and "craft". Technology is the art of producing tools and using them.

The current technological development known as the industrial era 4.0, is an achievement that began with the 1.0 industrial revolution. The first industrial revolution began in 1700-1800 marked the replacement of power from animals and humans with machines. People's concentration shifted from agriculture and hunting shifted to the manufacturing sector. In this era a phenomenal achievement was the creation of the steam engine by James Watt (1782). The discoveries produced in the 1.0 industrial revolution encouraged the creation of new technologies that were increasing. The industrial revolution 2.0 started from 1800-1900 marked by the emergence of electric power generation and combustion motors and sparked the emergence of telephones, cars, and airplanes. In this era, the mechanization of the mass production system of each product is starting to be more effective and efficient, therefore quality and quality standards are carried out to control it. The digital system and the internet became a sign of the emergence of the industrial revolution 3. The period of this industrial revolution lasted from 1900 to 2010. Routine human work began to be replaced by automatic machines. Industrial equipment is no longer controlled by humans but replaced by computers. After computerization in all fields, the next stage is the industrial revolution 4.0. The characteristic of this era is the application of artificial intelligence in all industrial fields.

Science and technology are two things that interplay. Technology supports scientific activities vice versa science can produce technology, both are like currency. Mastery of science and technology is an absolute prerequisite for the success of nation-building [2]. The application of science to technology does not always bring benefits to humans/ nature, it has moral, social, and cultural implications. Therefore, a good understanding of science can minimize the negative impact of the application of technology. Natural Sciences (science) as part of science has a central role in preparing reliable human resources. Through science learning, participants learn about natural phenomena that exist within themselves and their surrounding environment and can apply them in solving problems they face daily. The science studied always be updated with technological developments so that the nature of science as a unit between products, processes, attitudes, and applications can always be an inseparable part.

Science as a product refers to a collection of facts, concepts, principles, and theories obtained through a series of systematic and methodical processes called the scientific method. The development of information technology has accelerated and made it easier for students to obtain information related to science products. This shifts the position of the teacher/teacher from being a source of information to being a facilitator for students to more optimally carry out a series of scientific processes. The scientific process is trained massively to students to position students like a scientist discovering new concepts/facts/theories. A series of scientific processes is known as science process skills, these skills are useful for understanding a person's knowledge of science [3];[4][5]. Science process skills are divided into 2, namely basic process skills and integrated science process skills. Included in the basic skills are: observing, measuring, classifying, predicting, inferring, and communicating. Meanwhile, integrated skills include: interpretation of data, making hypotheses, identifying variables, defining operations, conducting experiments, and making models. A scientific process that is carried out well has an accompanying impact in the form of a scientific attitude. Scientific attitudes cannot be obtained without carrying out a scientific process. Both are obtained simultaneously and it is not enough to just memorize but must make students involved in it. Science process skills are closely related to critical thinking skills [6]. Students who have high science process skills also have high critical thinking skills as well as those at medium and low levels. The science application is the application of the science concept in the form of technology [7].

Doing small experiments is a form of learning in science learning. This can train students' accuracy, be honest about the failures encountered, and not give up to get maximum results. Experiments/practicums in science if done seriously can encourage students to acquire basic technology from the science concepts being studied. To make high-level technology such as airplanes, students can start by making simple technology related to light, sound, fluid, electricity, magnetism, body anatomy, and much more. Every activity of compiling simple technology must be accompanied by its application on a macro scale of technological products that can be produced. Thus, students can find out their current position and their position in the future for a wider role. This activity is known as basic science through activities students are motivated to catch up with technological advances from other countries. In this case, the role of science education and learning by teachers is the spearhead for students' success in producing technology products based on science concepts.

But in reality, science learning is still dominated by things that are memory and information. Space for students to carry out simple experiments has not been fully facilitated by the learning held by the teacher. Research conducted by Marlina (2019)[8] shows that as many as 62% of science teachers have not developed tools based on critical thinking skills, so learning activities are still dominant in knowledge transfer. Aspects of skills and attitudes have not been trained optimally. Research conducted by Windyariani (2017)[9] shows that 100% of teachers agree on the existence of a practicum but 75% of teachers experience difficulties in carrying out the practicum, with the main obstacle being the lack of supporting infrastructure (59%) and as many as 81% of the practicum carried out based on the concept according to textbooks and not based on the context of life. Based on these data, prospective teachers are needed who have the readiness to facilitate their students to understand science concepts correctly and apply them in solving problems of daily life. Science learning in elementary school becomes a link for students to like the material or ignore it at the next level. Therefore, preparing prospective teachers who can carry out science learning according to its essence, various innovations need to be carried out. One of the learning models developed to empower critical thinking skills is the STLC (Science Technology Learning Cycle) learning model. How the characteristics of the model and its potential in the virtual classroom will be discussed in this article.

Discussion

Science Process Skills and Critical Thinking Skills

The 21st century is marked by an unpredictable acceleration and reaches all fields such as technology, communication, information, economics, and so on. According to the Indonesian Ministry of Education and Culture (2016), there are three main characteristics of the 21st century, the availability of abundant information anywhere and anytime, computerization/use of machines in all routine work, and unlimited communication. To be able to survive in these conditions, individuals need skills that are soft and hard. These skills include critical thinking skills [10];[11]. Critical thinking skills are included in the top 10 groups as skills that must be possessed by individuals to adapt in the 21st century [12]. Critical thinking skills are a person's skills in determining the right decisions from the problems at hand. Critical thinking skills are a contradiction between what is believed and done with a new phenomenon. There are six aspects of critical thinking skills as proposed by Facione (2016)[13], namely: interpretation, analysis, inference, explanation, evaluation, and self-regulation. The purpose of critical thinking according to Blinkey [14] there are 2, namely (1) understanding systems and strategies to overcome unusual problems and (2) understanding the importance of evidence in building beliefs and being able to re-evaluate beliefs when contradictory evidence is found. These two objectives can then produce judgments based on accountable criteria.

Science process skills are closely related to critical thinking skills [6]. Students who have high science process skills also have high critical thinking skills as well as those at medium and low levels. Science process skills, is a set of skills used to carry out the stages of the scientific method systematically. Science process skills are divided into 2 major groups, namely basic and integrated [4];[3]. Included in the basic groups are: observing, measuring, classifying, communicating, predicting, and inferring. Meanwhile, included in the integrated group are: interpreting data, formulating hypotheses, identifying variables, defining operations, conducting experiments, and developing models.

Active learning in the Covid-19 Pandemic Era

The Covid-19 pandemic has affected all orders of life globally, especially in the world of education [15]. The sophistication of information technology encourages progress in the fields of technology, communication, and information which has encouraged the emergence of disruption in all fields. Routine work is being replaced by machines/artificial intelligence that penetrates almost all sides of life. At the beginning of the industrial revolution 4.0, education was seen as a field that was not easily crushed by the times. The function of the teacher as an educator cannot be replaced by technological sophistication. However, the emergence of a pandemic provides its phenomenon. Teachers are faced with conditions that force them to change their views and behavior. Learning is no longer done face-to-face (offline) but learning is done face-to-face (online). The role of technology is a determinant in the successful implementation of online learning. Teachers must use technological advances as the main medium in educating their students. Teachers make technology only as a sweetener medium for learning to shift to the main media in learning innovation. utilization so that not all teachers want to use technology for learning innovation. However, there has been a very rapid shift due to the pandemic, that the media is no longer a compliment but is the main tool in the learning process.

Various platforms or modes of learning continue to be developed and forced to be mastered by teachers as a means of online learning. Various google applications can be used, as research conducted by Mulyana [16] shows the use of google classroom, google forms, and WhatsApp groups is dominant at the college level, while at the lower level it is dominated by the use of WhatsApp group (WAG). Applications google meet, zoom, and jam board is still rarely used.

Characteristics of STLC Learning Model in Virtual Class

The STLC learning model was developed using a learning model development pattern adapted from the learning model by Joyce & Bruce Weill [17] and James Richard Arends [18]. The development aspect of the learning model consists of 4 parts, namely: theory, specific objectives, learning syntax, and class management. The theory that underlies the development of the STLC model comes from inquiry Wenning [19] and Technology Learning Cycle [20], information processing [21];[22];[23];[24];[25], discovery learning theory, discovery learning theory, constructivist theory, and higher-order learning theory. The specific purpose of this learning model is to empower critical thinking skills and environmental awareness. The learning syntax consists of six steps as shown in Figure 1.

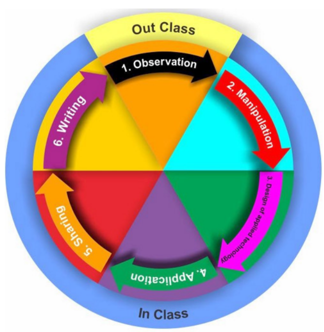
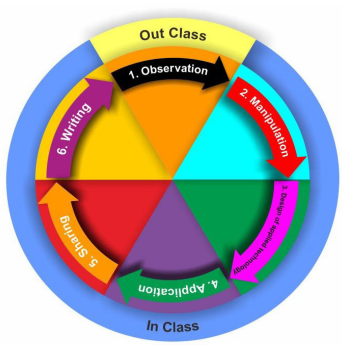


Figure 1. Siyntax of STLC Learning Model

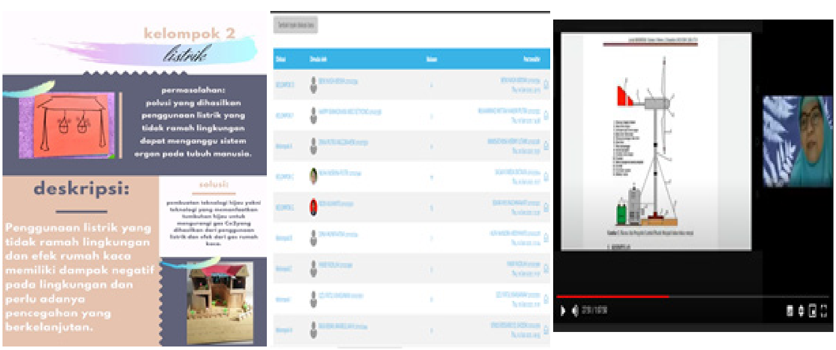
The learning stage begins with making observations, the purpose of making observations is to build student awareness in seeing the phenomena and problems faced in the surrounding environment. Preferably direct observation. In addition, observations can be made virtually via video. Observations are equipped with geographic data related to the space and time of the observation. Observations were made by referring to keywords: geographical conditions, location descriptions, problems encountered, and brief descriptions of the solutions provided. In connection with the technology that can be applied to overcome the problems that arise, the closing of the observation is to make a temporary design of the technology to be developed. The next step is manipulation, in this stage students explore the literature that supports the development of the technology that will be used. References come from articles in journals, national and world scale. The next step is to design a simple technology that will be used/created. The simple technology developed refers to the description of the tools, tools, and materials used to make, the required budget plan, and the manufacturing procedure. The next step is to apply the ideas that have been compiled in the form of simple technology in the real conditions faced. The findings are shown to other groups through visits to group members to provide advice and input to technology developers. The last stage is compiling a series of information learned in written form. Table 1 shows the learning activities in the virtual class for each syntax.

Table 1. Student Activity and Platform fo STLC Learning Model

Syntaxs	**Description**	**Student Activity**	**Platform**
Observation	Stimulate environmental awareness through observation to collect data on environmental problems	Finding problems with the types of pollution/environmental pollution	SPADA/WA/Gmeet (synchronous dan asynchronous)
Manipulation	Analyzing data/information from observations	Gather supporting references to develop appropriate technology	ERIC, Google Schoolar, E-Resouces Perpurnas, Science Direct (asynchronous)
Design of applied technology	Design and development of appropriate technology solutions to solve environmental problems.	Designing the technology to be used	SPADA, Video Call group WhatsApp, Gmeet, Jam board (synchronous and asynchronous)
Application	Application of appropriate technology in solving environmental problems	Implement the planned technology	SPADA, Video Call group WhatsApp, Gmeet, Jam board(synchronous and asynchronous)
Sharing	Conceptual presentation and discussion in solving environmental problems.	Presenting group project results	SPADA, Video Call group WhatsApp, Gmeet, Jam board, Canva (synchronous and asynchronous)
Writing	Writing essays about the results of conceptual discussions	Write down the results of the whole group discussion	SPADA, Google Drive, Google form (asynchronous)



Observation syntax can be executed asynchronously and synchronously. Syntax manipulation is carried out using electronic search sources with trained keywords. Students in each group submit 2 articles, while each group consists of 4 to 5 members. The articles obtained are then analyzed as a scientific basis in understanding the problem and proposing a solution to the problem. In the next syntax, students use WhatsApp groups in their groups, discussion forums on SPADA, and use jam boards in meetings on google meet to design the planned technology. The application syntax still uses the same platform synchronously and asynchronously. In collaboration, students apply the proposed technology design in the form of a prototype. The strengths, weaknesses, and descriptions of the developed technology are displayed in the "Canva" application to give each other advice to improve product quality (sharing). Each participant presents his work to at least 2 or 3 other groups. The results of sharing are written as a whole in the form of communicative writing of a maximum of 250 words (writing). Examples of learning activities using the virtual STLC learning model are shown in Figure 2.



a b c

Figure 2. STLC learning activities in the virtual classroom

a. canva products
b. group discussion room
c. manipulation of journal references

Classroom management needed in implementing the STLC learning model in the form of syllabus, lesson plans, learning modules, and assessments. The main impact of the application of the STLC learning model is to empower critical thinking skills and environmental awareness in elementary school teacher candidates. While the accompaniment impacts are: scientific attitude, group work, communication, and creativity.

Conclusion

The STLC learning model can be applied to online classes synchronously or asynchronously. This is reflected in student activities in each syntax. To optimal results, the products produced can prepare early so that good product. The STLC learning model can be used as an alternative in teaching science as a technology that can be used to solve environmental problems through critical thinking.

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Strategic Management of Virtual Learning

Suardin[1]

Introduction

Globalization which is marked by the rapid development of technology and information today has created a new order of life, in which the boundaries between countries are geographically meaningless, and almost all human activities require and/or depend on information technology. The main characteristic in life in this era of globalization is the ability to apply information technology competitively. Globalization initially had more of an impact on the economic field, but in its development, it has had an impact on almost all aspects of human life, including in the field of education. Referring to the term World Trade Organization (WTO) identified four models of educational services, namely; (1) The existence of cross-border education supply: occurs when educational institutions offer learning via the internet; (2) the need for education abroad: occurs when students study abroad; (3) the presence of commercialization of education: marked by the presence of foreign educational institutions, in collaboration with domestic educational institutions; and (4) the presence of individuals: occurs through the presence of foreign teachers who teach at local educational institutions [11].

The situation above shows that access to education is now increasingly wide open/borderless, thus forcing tight competition between educational institutions, both between educational institutions at the local, regional, national, and international (global) levels. Therefore, every educational institution at all levels (public and private) needs to continue to race to make adjustments by presenting creativity and innovation in the management of its institutions, in order to provide easy access and quality education services with highly competitive graduates. One of the most affected aspects in the management of education in the era of information technology is the management of the learning system, namely the shift from offline or offline learning systems to online/virtual learning or in the internet network (online) or can also be referred to as e-learning. This

[1] Universitas Muhammadiyah Buton, suardinmuh78@gmail.com

online learning/e-learning system has targeted every level of education, both formal and non-formal.

E-learning is a form of learning that utilizes information and communication technology facilities, where teachers and learners do not have to be at the same place and time in carrying out the learning process [12]. In the online learning system, teachers simply upload subject matter materials on available e-learning sites, and students can access them anywhere and anytime without being dependent on space and time. Along with the development of science and technology, e-learning continues to adapt and improve content, so that the contemporary definition of e-learning can be interpreted as managing learning through internet or Web media which includes material, evaluation, interaction, and communication aspects, which are further categorized as a learning environment virtual. Donelly explained that e-learning is a medium where face-to-face learning interactions are used to create virtual discussion areas [2]. A virtual learning environment is a platform designed to support teaching and learning activities on the internet, by making it easy for teachers to manage various educational programs via the web, providing tools or applications that allow users to upload materials, customize content/materials according to users' wishes, delivery of content, assessment, evaluation, communication, etc. [9].

Online/virtual learning in principle facilitates the learning process, generally helps overcome the limitations of face-to-face offline learning, and makes it easier for students to enrich and develop knowledge through the internet. However, in its implementation, online/virtual learning also encountered a number of problems/obstacles, especially for students, namely: unstable internet network, too many tasks, difficulty focusing, limited quota pulses, complicated applications, and more fun with face-to-face learning [4]. In addition, the obstacles encountered in online learning in several regions in Indonesia, namely: the availability of learning facilities, limited internet access, social and cultural conditions of the Indonesian people who have not been able to follow the new system quickly (it takes time and consistent practice) [2].

Challenges or obstacles experienced in online learning, namely (a) For students: forced to study remotely without adequate online learning facilities, the absence of a distance learning culture, loss of social interaction among friends and teachers, boredom; (b) for parents: an increase in the burden of parents' expenses for internet quota fees; (c) for educators: not all are proficient in using internet technology devices, limited facilities and adequate infrastructure at home (laptop, computer or mobile phone), distance learning culture has not grown, boredom, loss of social life due to loss of interaction with peers and students, adding to the burden of expenses for quota fees [5]. Weaknesses of online learning, among others; lack of student discipline, lack of concentration and student motivation, fatigue and boredom due to most online assignments, lack of social interaction, limitations of internet networks and technological devices. For subjects related to calculations and practice it is not effective if only through online learning. It was further explained that the role of educators cannot be completely replaced by technology, students still need the physical presence of an educator because the role and function is not only to convey material and transfer knowledge, but also to educate or shape character and teach how to interpret and live life better [13].

Broadly speaking, the problems or barriers to implementing virtual/online learning above include; internet network limitations; limited information technology facilities or equipment; limited internet quota for teachers and students; difficulties of teachers and students on the application of virtual learning systems; too much student workload; lack of feedback in learning; the ineffectiveness of the formation of skills and character education of students; low quality control of learning processes and outcomes; loss of social interaction between teachers, teachers and students; loss of social interaction among students; the increasing economic burden of teachers, the increasing economic burden of parents/families of students, and the low motivation, discipline, independence, and responsibility of students in learning. A number of virtual problems mentioned above, when viewed from the management concept, are closely related to problems at the level of decision making, planning, implementation, and control or evaluation problems. For this reason, this research offers a management formulation in online/virtual learning.

Discussion

The Rationality of the Need for Strategic Management of Online/Virtual Learning

The problem of online/virtual learning is basically caused by two main factors, namely the carrying capacity of resources and governance. The carrying capacity of resources, in the form of; availability of human resources, funds, and infrastructure. The key characteristics in a virtual learning system are administrators, teachers, and students [6]. Meanwhile, Tearle explained that in addition to attitude and work ethic, the key factor in implementing computer information technology (ICT)-based learning is coordination and management that focuses on management functions needed in implementing ICT learning to run effectively and efficiently [3]. The virtual learning model must be easy to use, attractive, and seeks to create a conducive learning climate between lecturers and students, with the assumption that effective learning requires effective management as well [8]. Therefore, the purpose of learning management is to manage various student activities so that they have a positive impact on the institution (school), which is expected to run smoothly, orderly and well so that it can provide support for achieving school targets and educational targets in general [10].

To realize the effectiveness of virtual learning, it is necessary to formulate the concept of strategic management. Strategic management is the art and science of formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its goals, namely to create different new opportunities for the future or long-term planning, by optimizing current trends for the future [1]. Strategic management can also be interpreted as a collection of managerial decisions and/or actions in determining the long-term performance of the organization, which includes planning, organizing, implementing, controlling. There are two reasons for the importance of strategic management, namely making organizational performance higher, and dealing with environmental situations that are constantly changing or facing an uncertain environment. Organizations that are able to perform high and survive in a constantly changing/uncertain environment are only organizations that carry out strategic management well [7].

A number of the complexities of virtual learning problems above, require shared responsibility for all elements of education, both the government, local governments, school leaders, teachers, students, and the community. All parties must synergize and take their respective roles, in accordance with their authority and responsibilities in the administration of education. On the other hand, the virtual learning system is closely related to the development/advancement of technology and information, so the formulation of strategic management in online/virtual learning becomes an important necessity. With the strategic management formulation, it is expected to be able to overcome virtual learning problems that arise, so that learning outcomes are more effective and efficient. In addition, it is also able to adapt to situations or needs, and changes in the virtual learning environment that continues to develop, along with advances in science and technology, while also helping to map and synergize the roles of each party in efforts to increase the effectiveness of virtual learning.

Formulation of Strategic Management of Virtual Learning

This study develops the strategic management concept of the Robbins & Coulter model, through six strategic steps, namely: (1) identifying the current mission, goals/targets and organizational strategy. Define mission, carefully review its products and services, current goals and strategies used, "does it need to be changed"; (2) external analysis (opportunities and threats): knowing what competitors are doing, applicable policies, and labor supply in the organization's environment, as well as seeing trends in environmental changes that occur. Positive tendencies of external environmental factors are called opportunities, and negative ones are called challenges; (3) internal analysis (strengths and weaknesses): clearly assess the organization's resources (funds, technical expertise, human resources), and the ability to perform functional tasks. Good organizational activities or any unique/excellent resources are called strengths, and activities that can't be done well or resources that are needed but not owned are called weaknesses; (4) formulating strategies: formulating alternative strategies, choosing strategies that support the strengths of the organization, and taking advantage of opportunities and improving weaknesses to overcome threats; (5) strategy implementation: implementing the strategy properly, reorganizing the structure and staff of the organization. The key to success is top management; and (6) evaluate the results: evaluate and assess the results obtained. If so, what adjustments or changes are needed [7].

Based on the description of the strategic management concept above, it is then adapted in the management of virtual learning. Clearly the hierarchy of the six steps can be shown in Figure 1, with the following description:

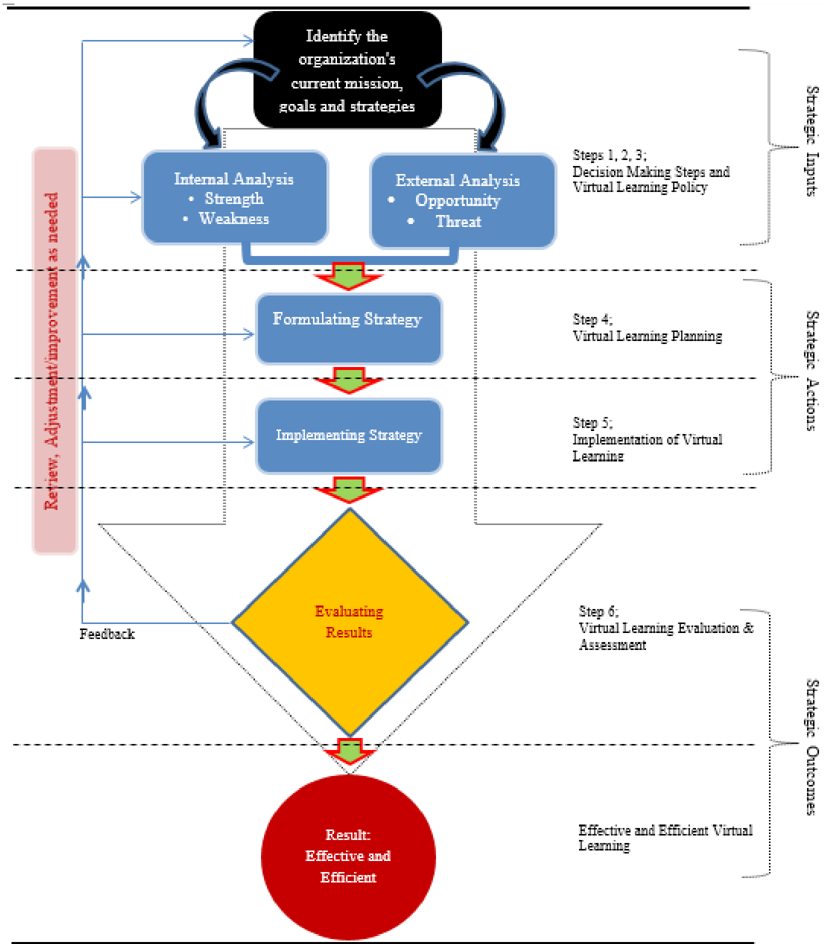

Figure 1. Strategic Management of Virtual Learning (Adaptation of Robbins & Coulter's Model, 2007)

Step 1. Recognize/identify the organization's current mission, goals/goals and strategy. At this stage the leadership together with other internal stakeholders carefully redefine the mission of the institution, to ensure whether the mission is in line with the development of science and technology, and contemporary education services. Next, identify the current goals and strategies that exist, whether they are relevant to the virtual learning program. Wherever possible, make adjustments/changes (if needed) or formulate new goals as the basis for virtual learning planning and institutional performance targets. Leaders can consider making strategic decisions on the current vision, mission, and goals/strategies. Is it necessary to make partial adjustments/revisions, or total/total changes, to support virtual learning.

Step 2. External environment analysis (opportunities and threats). At this stage, the leadership together with other internal stakeholders conduct an external analysis. The important concerns include; (1) current education policies: provisions of applicable laws and regulations related to virtual learning policies; (2) the activities of competing educational institutions: the extent to which the effectiveness of virtual learning is applied and what problems are encountered, what applications are used in virtual learning, etc.; (3) supply of resources in the operating school environment: targeting the analysis of the availability of teachers/teachers, IT staff, administrative staff, IT infrastructure, etc.; (4) analysis of trends in demand for virtual education and learning services: the level of application system requirements that may be used according to the level of funding and human resources capacity, adjustment of students, socio-economic conditions of the community. Positive tendencies of external environmental factors are used as opportunities that must be seized, and negative tendencies are used as challenges which must then be eliminated/eliminated.

Step 3. Internal environment analysis (strengths and weaknesses). At this stage the leadership together with other internal stakeholders conduct an internal analysis by clearly assessing the institutional resources including; (1) capital/funding: the level of availability of institutional funds and the possibility of alternative sources of funding to support the implementation of virtual learning; (2) Human resources: the level of availability of administrative staff, teachers, IT staff/IT experts as a supporting capacity for virtual learning (quality and quantity aspects); (3) leadership support capacity: level of unit leadership capacity and capability (top, middle, and bottom leaders). Implications for reviewing the organizational structure of the school and the personnel of the unit leader; (4) infrastructure: availability of virtual learning support facilities and infrastructure (quantity and quality aspects). Implications for the procurement of facilities and infrastructure as well as a set of virtual learning application systems; (5) the ability to provide virtual education/learning services: technical readiness and readiness of all internal stakeholders in providing virtual education services. Activities that are considered well carried out and all the unique resources that support virtual learning are strengths that must be improved, and programs that are not carried out well, and resources that are needed but do not have are weaknesses that must be overcome.

Step 4. Formulating Strategy. At this stage, the leadership together with other internal stakeholders, formulate virtual learning plans, then choose the right strategy to realize effective virtual learning, take advantage of opportunities by improving institutional weaknesses to overcome threats. Strategy formulation can be done at the level of institutional management and teacher functional. At the institutional management level, among others: (a) strategies for strengthening leadership capacity, namely: socialization of virtual learning policies, education and training of school/educational leadership, virtual learning workshops; (b) strategies for improving human resources, namely: planning training/workshops for administrative staff, teachers, IT staff, and students; (c) budgeting strategies, namely: virtual learning budget planning, increasing school funding sources (school entrepreneurship, community/company/industry donations); (d) strategy for the procurement of virtual learning facilities, including; planning virtual learning facilities (hardware and software), selecting virtual learning applications according to user needs and abilities, providing school internet networks, providing internet quotas for teachers and students; (e) virtual learning service improvement strategies, including; curriculum development, skills improvement workshops on the use of virtual learning applications for teachers and students).

While the formulation of strategies at the functional level of teachers is the formulation of virtual learning plans, with work plans for example: preparation of annual programs, preparation of semester programs, weekly plans, preparation of learning implementation plans (RPP), preparation of teaching materials, preparation of student worksheets, and preparation of test questions. evaluation of learning outcomes. The whole formula is directed at meeting the needs and effectiveness of virtual learning.

Step 5. Implementation/implementing the Strategy. At this stage, the leadership, together with other internal stakeholders, consistently implements the strategies and work plans that have been formulated as formulated in step 4 above, by utilizing all the potential and resources they have optimally. The implementation is carried out in a measurable and controlled manner both at the level of institutional management and at the level of the teacher's functional duties. In addition, monitoring and evaluating the virtual learning process. The commitment and strategic decisions of school leaders are the main key determinants of ensuring the implementation and success of virtual learning programs effectively and efficiently.

Step 6. Evaluation/Results Assessment. At this stage, the leadership together with other internal stakeholders evaluate and assess the results of the implementation of existing programs, both evaluation of program implementation at the institutional management level, as well as evaluation of planning implementation at the functional level of teachers in virtual learning. Evaluation of program implementation at the institutional management level is carried out to assess the effectiveness of program implementation in relation to the utilization and utilization of all potentials and resources, including: leadership, human resources, funds, infrastructure, and community participation. While the evaluation of the implementation of planning at the level of the functional task of the teacher, is carried out to assess the effectiveness of the implementation and the results of virtual learning associated with the suitability of the learning plans carried out, the achievement of learning outcomes from cognitive, affective, and psychomotor aspects, as well as the achievement of the minimum completeness criteria (KKM) both individually as well as classical. Based on the results of this evaluation, it will be possible to identify which aspects are the shortcomings/weaknesses or possible failures, as well as the good, even the success of the virtual learning program, among the strategic steps 1, 2, 3, 4, and step 5 above. The findings and decisions of this evaluation become the school's follow-up plan, for what improvements or changes are needed? If the evaluation results are judged to have been effective, it can be used as a basis for further improvement of virtual learning standards.

Closing

In the management review, the effectiveness of virtual learning can be realized by the formulation of strategic management, which is implemented in six steps, including; (1) identification of the school's current mission, goals/targets and strategies; (2) analysis of the school's external environment; (3) analysis of the school's internal environment; (4) virtual learning strategy plan formulation; (5) implementation of virtual learning strategies; and (6) evaluation/assessment of virtual learning outcomes. Through the strategic management formulation, leaders can identify, consider, and make appropriate decisions in planning, implementing, and evaluating virtual learning, in accordance with the availability and capabilities of their resources, so that all aspects run synergistically and measurably.

It is hoped that there will be a synergistic and proportional support capacity between the government, educational institutions, teachers, and the community through various strategic roles, including; (1) government policies, including: support for the availability of funds, the availability of educational facilities and virtual learning equally; (2) leaders of educational institutions who are visionary, competitive and skilled in decision makers and have good education management skills, (3) quantity and quality of school resources, including: availability of funds, teachers, staff, students, and virtual learning infrastructure ; (4) active community participation in supporting the implementation of virtual learning.

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The Role of Science Learning in Building Society's Scientific Literacy in the Era of the COVID-19 Pandemic

Suciati[1]

Introduction

We have been through the Covid-19 pandemic for more than a year, but until now the pandemic is still an interesting and important topic to discuss, especially related to behavioral trends that are developing among the community [9]. The society support for the implementation of the Covid-19 prevention program tend to be less than optimal, especially compliance in carrying out health protocols.

Since Covid-19 first appeared in Wuhan, China in December 2019, it has spread rapidly and widely in various countries. Besides India, Iran, Lebanon, Turkey and Israel, Indonesia is one of the Asian countries with the highest active Covid-19 cases, especially on the islands of Java and Bali with 480,000 cases out of 743,000 in Indonesia. The very fast spread of Covid-19, caused concern for peoples on countries around the world, so that until March 12, 2020 the World Health Organization (WHO) declared it as pandemic situation [49]. It seems that the spread of Covid 19 has a significant increased from time to time. In order to these situation, the Indonesian government has taken strategic steps by imposing Community Activity Restrictions (PPKM) [3]. The consequence is all activities that involve peoples crowds such as offices, companies, schools, etc. stop and done from home (work from home / WFH) with online way. This is enforced considering due to the peoples death has increased significantly. Map of the distribution of Covid-19 positive cases in Southeast Asia & Indonesia is presented in Figure 1.

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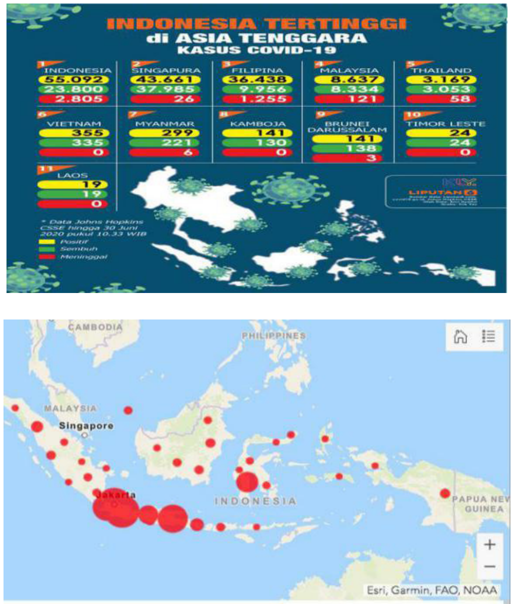

Figure 1. Map of the Distribution of Positive Covid-19 Cases in Southeast Asia & Indonesia

The very fast spread of Covid-19 on the map above, the Indonesia government is taking more serious effort to deal with the spread of Covid-19 so that it does not spread further. In general, there are two ways that the Indonesia government has taken to deal with the Covid-19 disease. *First,* increasing the capacity of the health system through the rapid detection of positive Covid-19 cases, followed by self-isolation to reduce the rate of transmission others. *Second,* tightening the compliance with health protocols through 3M activities (washing hands, maintaining distance, and using masks) and vaccines as a prevention effort.

The successfull implementation of the Covid-19 prevention programs is not only the responsibility of the government, but also requires support from all parties including the society. Societys' participation can be possitive support for government programs as curative and preventive efforts. In the context of increasing the capacity of the health system, as curative way the society should be proactive to self-detection of Covid-19 positive cases quickly and openly. Then self-isolate as a step to reduce the rate of transmission of Covid-19. Meanwhile, as preventive way the society should be run the health protocols obediently with full awareness in daily activities without coercion [41].

Even though the peak of the spread of Covid-19 has passed, it does not mean that we are free from the grip of this virus. The research revealed that the new Covid-19 variant has a more powerful attack power than before, so the current handling of the Covid-19 pandemic is more complex than when the virus first appeared around December 2019 [64]. The complexity of the Covid-19 problem is not enough to be resolved just only in term of the health aspect, but also through other aspect such from education aspect especially science learning because the problems regarding Covid-19 are related to scientific knowledge closely .

The scientific knowledge possessed by a person is a reflection of the level of education he has. Control of Covid-19 cannot be separated from scientific knowledge such as the characteristics and reproduction way of virus (Covid-19), and how transmission from human to others, as well as how vaccines work and build the immunity in the human body, etc. Several research results prove that education or knowledge possessed by a person is one of the factors that also influence in shaping a person's compliance behavior in carrying out health protocols. The results of the study [46] showed that the index of respondents' compliance with the implementation of health protocols was influenced by several factors, such as gender, age, and education level. The results of the study [15] also show that people tend to be less obedient (underetimate and ignore) the health protocols. Among the contributing factors are mental, character, education level, occupation and living environment. People who have a high level of education tend to be more obedient to health protocols compared to those who have a low level of education [41]. Research [5] showed that there is a positive relationship between society knowledge and the compliance with health protocols, especially in the use of masks as an effort to prevent the transmission of Covid-19. Referring to the results of this research, science learning has a very strategic role in the effort to empower the scientific literacy of the society.

Resolving the Covid-19 pandemic is a dilemma. On the one hand, the government is aggressively trying to overcome the pandemic through the implementation of an intensive Covid-19 resolving program, on the other hand, people tend to behave negatively, such as hiding the facts of positive cases of Covid-19, avoiding rapid detection of Covid-19 positive cases, being less orderly in self-isolation, lack of adherence to health protocols, and a doubtful attitude towards the vaccination program. The disobedient behavior is often found, especially in public places, such as markets, places of worship, and malls.

Refer to the high health protocol violation was also stated by The Head Task Force of Covid-19 resolving (Kepala Satuan Tugas Penanggulangan Covid-19) Wiku Adisasmito whwn interviewed on December 3, 2020 that society compliance tends to be low, especially in the use of masks (58.32%) and maintaining distance and avoiding crowds (43,46%). He added that if the conditions like this were allowed to continue, no matter how many health facilities were available, they would not be able to accommodate the surge in positive cases of Covid-19. Even though the government's Covid-19 preventive program has been disseminated through various media, but the implementation of these methods still raises many obstacles. The lack of knowledge and ability of the society in applying the concepts in their daily life, indicates that their scientific literacy tends to be lacking [62]. There are two factors predicted that caused the resolving program of Covid-19 is not optimal yet mainly societys' scientific literacy is low and lack of controlling.

This condition is supported by the scientific literacy achievements of Indonesian students on science literacy tests in international competitions such as the Program for International Student Assessment (PISA) and Trends in International Mathematics and Science (TIMSS) whose trend tends to decrease as shown in Figure 2.

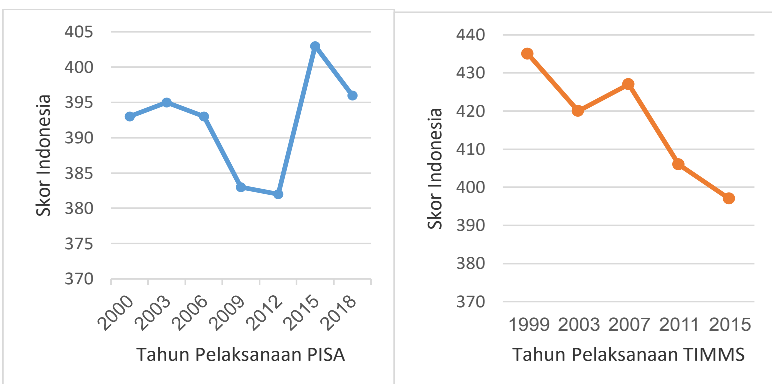

Figure 2. Achievement of Indonesian Science Literacy on PISA & TIMMS

However, the implementation of the resolving program of Covid-19 that has not optimal yet due to several factors such as (1) societys' scientific literacy is low; (2) dissemination information about Covid-19 is ineffective ways so that unclear information; and (3) socialization way that is difficult to understand by society ("too scientific"). In addition, research on Covid-19 is generally only associated with pure science aspect such as medicine, pharmacy, and other health fields, while in the science education aspect has not been much discussion especially related to societys' scientific literacy. This article is intended to provide insight that science learning has a strategic role in improving public scientific literacy, especially its role in supporting the acceleration of the Covid-19 response.

Discussion

Science Learning

Science is a field of science about objects and phenomena of the universe that are obtained scientifically and systematically using the scientific method [39, 25, 58]. In Regulation of the Minister of Education and Culture (Permendikbud) No. 57 of 2014 stated that science is the result of human activities in the form of logically and systematically organized knowledge, ideas, and concepts about the natural surroundings obtained from experience through a series of scientific processes.

Referring to the above definitioan, science can be viewed from three aspects, namely as a way of thinking, way of investigating, and way of knowing [30, 7, 41]. This is relevant to the statement of Trevil & Hazen [55] that science is not just a collection of knowledge, but a continuous process of interaction with the environment through questions about the phenomena of the universe and the answers using the scientific method. Thus science is a science that deals with how to find out information about the universe scientifically and systematically, not only in the form of assignments or knowledge gathering [22]. According to Khalik et al., and Tillery et al.,[25, 53], essentially science includes four aspects, namely (1) the product of science, namely in the form of facts, concepts, principles, propositions, theories, postulates, laws and the like; 2) The scientific process, namely how to identify and relate theory and practice, as a basis for scientific thinking and acting; 3) Scientific attitude, namely scientific attitude as a scientist who develops after doing a series of scientific work, such as honesty, responsibility, tenacity, and hard work; 4) Application of science, namely the application of scientific concepts to solve problems in daily life [4, 60]. The nature of science is further elaborated in science learning objectives and national standards contained in process standards, graduate competency standards and science learning assessment standards. Science learning is aimed at developing the competence of attitudes, knowledge and skills of students as a basis and strengthening abilities in the life of society, nation and state [21]. Meanwhile, in the Regulation of the Minister of Education and Culture No. 20 of 2016 concerning Graduate Competency Standards (Standar Kompetensi Lulusan/SKL) it is stated that every graduate must have competencies that include aspects of knowledge (cognitive), skills (psychomotor), and attitudes (affective) as well as being the focus of assessment in learning [18].

Referring to the description above, learning science should come to its application, where scientific concepts are applied to solve problems that exist in daily life. In the context of the Covid-19 pandemic, ideally the scientific concepts that have been studied can be applied to solve problems related as curative and preventive resolving program of Covid-19 transmission, which has now become a national problem and has even become a global issue. Thus, science should ideally be taught according to the nature of science learning which does not only provide knowledge about scientific knowledge directly, but through a series of science process skills that encourage the development of scientific attitudes, even to the level of its application as a form of scientific literacy [51].

In essence, teaching science is not just providing science knowledge content through a series of science process skills and developing students' scientific attitudes, but must arrive at the level of science application as an effort to foster scientific literacy for students to solve problems in real life. This is supported by Hodson's statement in [12] that scientific literacy enables individuals not only to gain an understanding of the theoretical and conceptual principles of scientific knowledge, but also to develop an understanding of the nature of science and the complex interactions between scientific knowledge, technology, society, and the environment. and develop scientific inquiry and problem solving skills.

Science Literacy

Scientific literacy is one of the basic literacy that demands literacy in the 21st century skills [59]. Often we encounter two similar but not the same terms, namely science literacy and scientific literacy,[62]. It is said that science literacy is related to pure science (natural science), while scientific literacy is literacy that is interpreted broadly including relating to science in general or fields other than pure science.

Organization for Economic Co-Operation and Development (OECD) defines scientific literacy as the possession of scientific knowledge and skills in identifying questions, acquiring new knowledge, explaining scientific phenomena, drawing conclusions based on facts, understanding the characteristics of science, awareness of how science and technology shape the natural environment, intellectual , and culture, as well as a desire to be involved and able to take a stand on science-related issues [37]. Scientific literacy is a science about the nature of science (products and processes of science) that allows a person to be involved in innovation and its implementation to achieve certain goals [50]. In general, scientific literacy is defined as a person's ability to use scientific knowledge and processes, but not only to understand the universe, but also to participate in decision making as a solution to problem solving and its application [47, 10, 17, 8, 33]. Scientific literacy is also interpreted as an individual's ability to apply scientific concepts and make decisions to solve problems that exist in everyday life as well as a sign that someone has good scientific literacy [34, 8, 36, 62]. This is supported by Kristin Klucevsek's statement [28] that scientific information literacy is an important component in the scientific process, which in turn can improve scientific literacy.

If we look closely, the methods that used in thecurative and preventive program for resolving the spread of COVID-19 are closely related to the phenomena in science that studied as science subject matter in schools as contained in the science curriculum at various levels of education. The resolving of Covid-19 is closely related to scientific knowledge about virus, including their characteristics, reproduction way, transmission modes, and how it ransmission to human body and building human immunity. As well as vaccination, it is closely related to scientific knowledge about the vaccine concept, how lack virus working in the human body and it can building the human immunity, and so on. Knowledge of these scientific concepts is very important to understand by society as a scientific explanation when facing problems including transmission of virus as a part of curative and preventive Covid-19 program. The ability to apply scientific concepts to solve problems in daily life, including the Covid-19 problem is an indicator of someone having good scientific literacy [34, 8, 36, 62]. Thus, the successful implementation of curative and preventive program of Covid-19 needs to be supported by good societys' scientific literacy.

In the context of efforts to accelerate the effectiveness of its implementation of curative and preventive Covid-19 program, it is necessary to balance it with good societys' scientific literacy. The society needs to have scientific knowledge, especially scientific explanations about things related to Covid-19, because the scientific knowledge that a person has affects the way that person behaves towards Covid-19. This is relevant to Law, Leung and Xu's statement [29] that knowledge about science is one of the important aspects to be considered in curative and preventive resolving the transmission of Covid-19. Knowledge also influences a person in determining and making decisions on a problem faced including Covid-19 [39]. The results of the study show that scientific knowledge about Covid-19 is one of the factors that affect public compliance in implementing health protocols and public compliance with health protocols can reduce the spread of Covid-19, so as to reduce the morbidity and mortality rates due to Covid-19 [32]. Someone who has good knowledge of information about Covid-19 will be able to determine how he should behave in dealing with the disease and tend to have a positive attitude in dealing with the Covid-19 pandemic [1]. Scientific knowledge about Covid-19 can be a person's basic for behavior in dealing with the problems of the current Covid-19 pandemic. Although knowledge about Covid-19 does not guarantee a person's compliance in carrying out health protocols, someone who has good knowledge about Covid-19 at least has a positive acceptance of information circulating in the community [52].

The role of Science Learning in Building Scientific Literacy

Referring to the definition of scientific literacy above, it seems that in the current era of the Covid-19 pandemic, the topic of scientific literacy is becoming very important and relevant to discuss. This is very reasonable, because if we look closely at the curative and preventive resolving Covid-19, it is closely related to the phenomena studied in science learning materials in schools as stated in the science curriculum at various levels of education. Ways to deal with Covid-19 such as detecting positive cases of Covid-19, self-isolation, vaccination, implementing health protocols through "3M" (washing hands, keeping distance, using masks), and managing body immunity, are actions that are closely related to scientific knowledge. which is scientific knowledge based on the concept of science. Thus, it is impossible to resolving Covid-19 without being based on adequate scientific knowledge. Someone with scientific literacy will be able to make decisions and solve problems in life well. Thus, the implementation of the Covid-19 response needs to be supported by public scientific literacy. People who have scientific literacy will be able to apply scientific concepts as they have been studied in school as scientific knowledge to solve problems including the Covid-19 problem. For this reason, in an effort to effectiveness of curative and preventive Covid-19 program, societys' scientific literacy needs to be empowered continuously.

Empowerment of societys' scientific literacy can be done through education both formal and non-formal education. Educational action through formal education can be done through science learning in schools at various levels of education. Science teachers can provide scientific explanations related to Covid-19 problems according to the characteristics of science material based on the level of students' intellectual development as a form of application of the scientific concepts that have been studied. Thus learning science becomes more meaningful, because it is not only theoretical but can be resolving students' daily life problems practically.

In the context of self-isolation, for example, teachers can provide scientific explanations about the importance of self-isolation and the reason why need 14 days for self-isolation. This explanation is important to understand students so that during this period patients who are exposed to Covid-19 stay at home so as not to infect other people even though their bodies are no longer showing symptoms of illness. In the case of self-isolation, although in general they understand that the purpose of self-isolation can be done by staying at home so as not to come into contact with other people so that transmission does not occur, people tend to lack scientific explanations why they have to wait 14 days. The 14-day period needed during self-isolation is to see the incubation period or the spread of the virus in the body of a Covid-19 patient. This time is crucial because it determines whether the body can successfully fight and recover or fail, causing symptoms of illness. For this reason, patients are advised to stay at home for a period of 2-14 days [19]. Information that is disseminated through various social media to the society is generally not accompanied by a comprehensive scientific explanation and even if there is it tends to be less affordable to the lower middle class. This ignorance encourages people to ignore the applicable provisions. The demands of economic needs are also a contributing factor, so that they demand that they have to work to earn a living for their families. As a result, self-isolation tends to be loose and not properly monitored.

In the context of vaccination, science teachers should not only explain scientifically about the benefits of vaccines as an effort to prevent the transmission of Covid-19, but rather on how the mechanism of the vaccine works in the body so that it can generate immunity against Covid-19. Science teachers need to provide a scientific explanation that how vaccines work is to push the immune system to identify and against the Covid-19 virus by inject the pathogens (molecules of the Covid-19 weakened) called antigens into the body to trigger an immune response. If one day the Covid-19 virus reappears, the immune system will automatically recognize it and attack it aggressively before the virus can spread or cause disease [47]. With this scientific explanation, it is hoped that students will understand that vaccination is important as an effort to avoid being exposed to Covid-19. In addition, science teachers also need to provide scientific explanations that vaccines not only work on each person's body, but are also able to protect the entire human population. If many people vaccinate, community immunity will be formed, so the chance of contracting certain diseases is very low because if Covid-19 does not have a host to live and reproduce, then the virus will die. If community immunity is formed, people belonging to vulnerable groups such as the elderly, infants, children, pregnant women, and people with certain diseases) can live safely, even if they do not vaccinate. Through this scientific explanation, students are expected to understand that vaccines are not only for the benefit of the health of the person being vaccinated but also protect others around them. Through this scientific explanation, it is hoped that there will be no more doubt and fear of being vaccinated among the public. There are no contradiction so that all persons can support the government's vaccine program based on scientific knowledge correctly.

In the context of using masks as part of a health protocol, science teachers should explain not only the benefits of masks to prevent the transmission of Covid-19, but must provide a comprehensive scientific explanation both in terms of cleanliness, period of use (expired date), accuracy of how to use them, how to dispose of used masks, the effectiveness of the function of the mask itself. Science teachers can apply science concepts by providing real examples in the students' daily life at the end of teaching and learning process directly or class discussions. For example, when the teacher discusses the concept of the respiratory system, the discussion can be continued about how the mechanism of Covid-19 attacks the human respiratory system, a healthy lifestyle to protect the lungs from Covid-19 attacks, the importance of using the right mask and mask with health standards. Science teachers need to provide a scientific explanation of the difference in effectiveness between cloth masks and medical masks. The research showed that the filtration effectiveness of medical masks for the wearer was 50%, higher than that of cloth masks which was only 40% [16, 27]. Even if a filtration effectiveness of more than 90% is required, a double mask can be used (outside of a 3-ply cloth mask plus a medical mask on the inside) such as the KN-95 type of mask whose effectiveness reaches 95%. In general, mask wearers tend to pay less attention to and/or less understand the KN-95 writing on the mask. Regarding the discomfort and fear of lack of oxygen when having to wear a mask, science teachers need to straighten it out by giving scientific explanations correctly. Science teachers can explain scientifically that Oxygen (O2) and Carbon dioxide (CO2) gas is 0.03nm in size, so it can still pass through the mask filter freely. Meanwhile, droplets (splashes of air that come out when coughing or sneezing, contain viruses measuring more than 10 nm). Thus the exchange of air (O2 and CO2) can still run, while the explosive drop is retained on the mask. This scientific explanation is needed especially by the general public as the basis for scientific knowledge in using masks, especially when choosing and using masks correctly, because research showed that health protocols can reduce the risk of transmission of Covid-19 [38, 11].

Regarding washing hands as part of other health protocols, science teachers should not enough explain about the importance of washing hands for preventing the transmission of Covid-19, but the explanations given must be scientific and comprehensive way. Science teachers can provide a scientific explanation that the use of soap is very important because the virus (Covid-19) has a fat sheath and can survive on human skin for about 9-11 hours. The use of soap or other disinfectants, causes the fat sheath of the virus to break down and die. Meanwhile, it is recommended to wash hands using running water to prevent all remaining dirt (including viruses) attached to the skin from being carried away by running water.

Non-formal education actions can be carried out by providing scientific explanations through various social media in simple term, so that they are easy to understand, accept, believe and apply. In the context of society compliance with the application of health protocols, providing scientific explanations through various social media is more aimed at building society attitudes or behavior. Attitude is an individual's opinion about a certain situation or situation which is influenced by various factors [32]. The research showed that having good scientific knowledge about Covid-19 is very important in supporting increased perceptions of the effectiveness of protective behavior against Covid-19. Furthermore, perceived threat and severity have a significant impact on behavioral intentions although indirectly [6, 40]. This is supported by Yanti et al. statement [63] that health behavior is closely related to one's knowledge and response or attitude. Good scientific knowledge related to Covid-19 can increase the intention to behave according to government recommendations, increase the level of awareness and understanding of the importance of preventing the transmission of Covid-19 [56] and as a basic for decision making in taking action [35, 57], raise awareness to voluntarily comply with the recommendations for preventing the transmission of Covid-19 [13]. On the other hand, the lack of knowledge leads person to a lack of compliance with efforts to prevent the transmission of Covid-19 [60, 24, 23]. The behave not complying with health protocols can still be changed by emphasizing positive norms to emphasize adaptive health behavior [43]. This is relevant to the Planned Behavior Theory proposed by Ajzen [2] that individual behavior is driven by intentions that are influenced by three factors which include behavior beliefs, normative beliefs, and control beliefs. Individual behavior is also influenced by supporting factors such as: personal, social, and informational.

Conclusion

Based on the explanation above, it can be concluded that the successful implementation of the curative and preventive Covid-19 program cannot be separated from societys' scientific literacy that is closely related to scientific knowledge about science concepts that exist in science learning at various levels of education. Thus, efforts to empower societys' scientific literacy relating Covid-19, science learning has a very strategic role. Building societys' scientific literacy formally through science learning by science teacher with comprehensive scientific explanations and non-formally through providing scientific explanations on various social media is expected to be able to accelerate the government's efforts in resolving the Covid-19 pandemic in order to lead a new normal era.

For supporting the role of science learning in empowering societys' scientific literacy, it is necessary to develop effective science learning models. Various research results have proven that science learning models that are oriented towards discovery, inquiry, problem solving and project-based, are able to encourage the empowerment of students' scientific literacy [31, 26, 44, 51].

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Indonesian Foreign Language (IFL): on the Language Teaching Systemic and Multilingual Approaches

Sudirman AM.[1], Bambang Eko Siagiyanto[2], M. Ihsan Dacholfany[3]

Introduction

Philosophical language learning axiology discussed in this paper is IFL learning, because humanities are found in it. Language learning taught communication skills in various contexts in which moral values, awareness values, loyalty and responsibility are expressed through language learning. In language learning, teachers must follow the second group, that science must be based on moral principles, the rules of humanism, the rules of language, and ethical responsibilities.

This description of generalization needs to be conveyed, because the universal concept of language and axiology in the context of learning need to be understood. Universal language as a symbol system must be equipped with other dimensions of language wholistically and systematically; thus language learning with the concept of universal system would be better for increasing the dignity of our language in ethical and moral behavior [5]. Ethical responsibility does not only involve the proper application of language learning in life, but it must be realized what should be done to strengthen human status and dignity. In the meantime, inter-nation relations are established through language communication tools in IFL learning [29]. The Indonesian Language Program for Foreign Speakers (IFL) is designed to be taught to foreign students. One of the goals of the IFL is for students to have receptive skills (listening and reading) and productive skills (speaking and writing) in Indonesian. When IFL students study in a native speaker environment, directly hearing will affect their learning process. This method is known as immersion method. Learners have many opportunities to practice speaking skills. Likewise the ability to

[1] FKIP-Universitas Muhammadiyah Metro, Sudirman.am57@gmail.com
[2] FKIP-Universitas Muhammadiyah Metro, bambangekos6@gmail.com
[3] Pascasarjana Univestas Muhammadiyah Metro, Mihsandacholfany@yahoo.com

read and write especially reading and writing comprehension at the macro level, students practice in formal classes. For IFL students to study in native Indonesian speakers there is a designed reading textbook by teacher (supplement). The reading is as a model, in line with grammar and other achievements in accordance with curriculum requirements. By this kind of control, the writing ability of students will be in accordance with the ideal demands [19].

In this paper IFL learning systems and multilingual approaches are described. The conventi-onal, contemporary learning system approach and language symbol system (monolingual, bilingual, multilingual) are quite interesting to talk about for the completeness of the IFL learning treasury and its learning techniques. How far can IFL learning issues be examined in this topic?

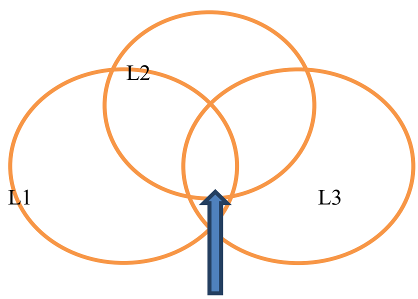
Methods

The material for the study of foreign language teaching in systemic and multilingual approaches uses the note taking (seing) and the descriptive methods. The method of noting (refering) is supported by printed or electronic library studies, to objectively express the education and learning of foreign languages among the learning community; followed by descriptive methods with data collection techniques through carrying out note taking techniques and observations on research data. The results of the study (recording and description) then be continued with the analysis phase. The stages of data analysis are strategically carried out in three stages; providing data, reducing data, presenting data and inducing conclusions that correspond with the study problem in this paper [21].

Result of Study

In this paper the IFL teaching and system approach and multilingual approach are described. The analysis begins with a conventional and contemporary learning approach system, followed by multilingual language learning materials. IFL learning in its application occurs (1) blended vertically and (2) blended horizontally. Blended vertical, occurs in teaching is macro, teaching functions as an ordination, the concept of policy by competent parties; while learning is micro, as subordination played by the teacher in general learning and certain fields of study, such as the IFL (**figure 1**). Blended horizontally, occurs in teaching and learning, the atmosphere of two-way interaction of teaching and learning, students and teachers are "blend" in learning interactions (**figure 2**).

Teaching students is the main task of teaching staff (teachers, creative in designing learning so that students achieve satisfying learning objectives in the learning system. The instructional design system involves the objectives, materials, implementation, and evaluation of each face to face in each semester (**figure 3**). While the contemporary learning system, all the contents of the conventional system are designed into three stages, namely the preparation phase, the implementation phase, and the evaluation phase are poured into the semester learning plan (**figure 8**). The IFL learning material uses a multilingual L1 approach for the L2 target language, and allows L3 to be used as an assistive language. Monolingual speakers (L1) mother tongue to learn language (L2) there has been a bilingual nature; in the L2 area there is local language dominance (L3), so there is a blended multilingual teaching material reflection from multicultural (figure 7). Figure 7 can be implied as a multilingual IFL teaching material, so that the following blended monolingual, bilingual, and multilingual findings are found.



Blended Monolingual in Multilingual as a Reflection Multicultural

Discussion of Study

The development of BIPA/IFL learning programs has increased both domestically and abroad. It is recorded that 219 institutions in 48 countries have implemented IFL learning. The development of BIPA programs in the country is not much different from abroad. This program is one of the programs of the Indonesian government through the Ministry of National Education Development and Language Development (BPPB) as outlined in PP No. 24 of 2009 [31].

Teaching Indonesian for foreign students, or Indonesian as a Foreign Language (IFL) is different from teaching Indonesian as a first language. The difference is caused by the characteristics of students. Adult IFL learners have different language, cultural and learning styles than

Indonesian students. This difference requires the IFL teacher (instructor) to prepare teaching materials, the activities of the learning process in class are relevant to the needs of students. Understanding student behavior, teaching materials, learning approaches, and the evaluation process; then the learning needs are important to meet. Analysis of IFL student learning needs is a prerequisite for sufficient IFL student teaching materials [32].

In this paper the IFL teaching study is described from a system and multilingual approach. So the discussion study begins with a conventional and contemporary learning approach system, followed by the following multilingual learning materials.

Conventional Language Learning System

Conventional Learning Model (classic) is a learning carried out step by step through the procedure shown by the results of special outcomes, it could be as a procedural operational system (SOP). This SOP of learning is an educational concept that determines the direction of learning, because the concept of work experience that has been organized is capable of achieving learning objectives. After the procedure is implemented, the teaching strategy with the instructional delivery method is able to help students achieve their learning goals. Teaching is the treatment process of teachers to students; while learning is technically done by students taught by the teacher in the process of learning interaction [26]. Teaching is macro, ordinate the concept of policy by competent policy makers; while learning is micro, the subordination of the macro ordinate is carried out by the students in general learning and in certain fields of study. The interaction of macro-micro education can be visualized as follows.

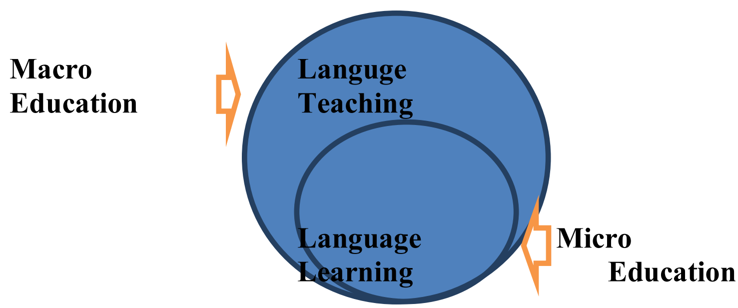


Figure 1: Macro and Micro Educatiaon

Figure 1 above shows the relationship of macro educations as concept of language teaching; while micro education is applied as subordinate learning of language to students. Learning of language is done by the teacher in learning. In addition to the view of macro-micro education there is also the concept of teaching-learning. In the implementation of learning, there is a balance between teaching and learning activities of teachers encountered mixed activities, popularly called blended learning; the term blended learning means face to face arrangement in a formal learning environment, a combined with 'teaching-learning' instructional activities of teachers and students in a conventional learning system pattern. The visuals are figured out below.

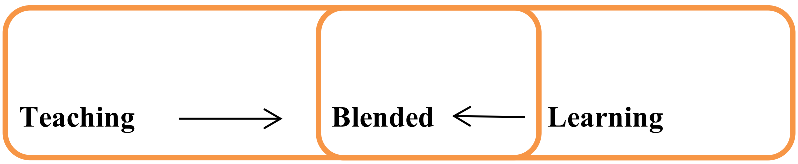


Figure 2: Blended of Teaching and Learning

Figure 2 areas of blended teaching and learning of teaching and learning interactions, between students and teachers mixed in learning interactions [4]. Blended learning is increasingly popular because its approach to effective student accommodation is increasingly diverse in its learning environment, because of the combined teacher-student online teaching power, so that learning in higher education develops understanding, approach and design of learning in this contemporary period [1].

Teaching is the main tasks of educational staff (teachers, lecturers, tutors, instructors). Educators must be creative in designing learning so that students achieve their learning goals satisfactorily. A good learning system method and development of learning systems are needed, such as conventional system innovations to contemporary learning systems. Contemporary learning begins with existing learning, after which innovation is carried out in performing its main tasks.The main task of the teacher are planing, implementing, and evaluating learning design of the applicable system. Learning systems can be developed starting from the input components, processes and outputs. The learning input component involves the characteristics of students, teachers, infrastructure, and learning support tools. Process components are technically used strategies, models, and learning methods. The implication of the component of the process is the acquisition of output or output from the learning outcomes. Before this learning system was carried out as a contemporary system, the earlier three stages of learning began with the classical learning system which is still mostly practiced by educators in the learning system. So the design is still global. Globally, any learning always involves issues (1) objectives, (2) teaching materials, (3) learning media, methods, learning techniques; and (4) evaluation (pretest-posttest) by which it shows the results of learning [17]. One of the four problems is teaching material. The teaching material in language learning in this study is, IFL multilingual foreign language teaching.

The teaching of multilingual languages is attracting the attention of the global world with the phenomenon of multicultural (multilingual) antithesis of conventional learning systems dominated by the object of teaching materials around monolingual and bilingual. For this reason, multilingual language learning teaching materials need to be presented, because the world community is currently demanded by multitalented ways of thinking as a result of the existence of speakers who have multi-intelligences and electrical multimedia facilities. Multiple intelligences of a person are stated to have intellectual abilities reflected by multilingual language abilities.

This intellectual ability is measured with a very limited IQ test, because the IQ test only emphasizes logic and language skills. Yet each person has a unique way to solve the problem at hand. Language intelligence is not only seen from the acquisition of problem solving, but how it can be useful for others, such as multilingual demands due to global multicultural learning [30]. Of course language learning materials need to be considered other aspects of knowledge, such as humanistic, political, and cultural (multicultural) aspects for discourse texts, discourse themes, discourse content analysis and so on. So learning that involves humanistic aspects, political aspects, and cultural aspects requires the following explanation. (a) Humanistic issues relating to humans in general, and the problem of the function of language for humans to express their thoughts and feelings in understanding human civilization and culture, to enhance civilization and human culture supporting themselves, many are used as material for language learning discourse and other learning. (b) Political issues are policies to achieve ideals, for example in Indonesia to achieve a just and materially and spiritually prosperous society. Politically, education policies lead to the ideology of the nation, the 2003 Education Law and the supporting ministerial regulations, such as the policy of Indonesian national language politics; (c) The problem of this culture, for example in Indonesia, the culture is diverse in a single diversity which should always be adapted in the midst of international competition among nations that continues to this day.

To describe and solve these three aspects of the problem, language is needed (a) language knowledge competency, (b) language skills (speaking-listening; writing-reading), (c) positive language attitude towards three dimensions of language, for example in Indonesia there is foreign language, national languages, and local / regional languages; and (d) Appreciation of literary language in general. These four points are very taken into account in language learning, especially in the initial stages of identifying learning problems as the initial need for 'need assessment'. Because after all learning is more prioritizing problem solving, developing concepts, solution construction through procedure that is used to get learning outcomes answer. In general there are five basic principles that underlie learning in the classroom, namely (1) laying out problems that are relevant to the needs of students, (2) compiling learning with regard to the main concepts, (3) respecting the views of students to be appreciated by the teacher, (4) learning materials tailored to the needs of students, (5) assessing learning contextually. The more important issue is how teachers encourage and accept learning autonomy in teacher-student interactions [26].

Based on the description above, it can be concluded that in conventional learning, there component of learning objectives, teaching materials, learning media, learning strategies and methods, and evaluating learning outcomes. Each of these components can be described as follows.

(1) **Learning objectives** are derived from the State's goals, the objectives of educational institutions (institutions of higher, secondary and basic education) as outlined in the curriculum as a reference for their technical implementation in learning. Learning objectives is inseparable from the learning curriculum. The curriculum is a set of plans and arrangements regarding the objectives, content, and learning materials and how to use, guidelines for organizing learning activities to achieve educational goals, because in it a diverse set of experiences is provided by schools for students in school or outside school. Students 'abilities must be possessed based on national standards, the material needs to be studied, learning experiences are undertaken in the achievement of abilities, and evaluations need to be carried out to determine the level of achievement of students' abilities according to national education standards. Thus, the determination of the curriculum including setting learning objectives in subjects constitutes government policy and national language political policy [18].The purpose of learning foreign languages in this paper is learning Indonesian for foreigners in Indonesia. Indonesia knows three dimensions of language, namely

Local Language, National Language, and Foreign Language. So the learning objectives depend on practical interests, such as in IFL, foreign languagesas the mother L1, and Indonesian as L2. Vice versa IFL (Foreign Language for Indonesian Speakers) is still used L1 (first language or 'mother tongue') and L2 (national language), if necessary there is L3 (foreign language). Which one is the focus of it, that's where the determination of teaching material.

(2) **Teaching materials** are national content (local, global), education, the field of science must be given according to the needs of the learner. Like foreign speakers learning Indonesian (L2) as a second language, according to the needs of foreign speakers learning Indonesian. To achieve these objectives, the teaching materials that are delivered are needed learning materials according to consideration of age, level of education, study programs, and the needs of learners in their studies. For example the study of Indonesian for foreign speakers (BIPA / IFL) Bali State Polytechnic, the aim of learning Indonesian-speaking foreign students of tertiary institutions in Indonesia.

Through the 'assimilation' immersion method, the teaching material involves both languages, L2 second language 'foreign language' against the Indonesian L1 target language. Indonesian lecture material (BI) involves humanistic, political, and cultural (Indonesian) problems in Indonesia. Foreign speakers of a foreign language, L2, switch to L1 BI. If necessary, speakers of L2 are sometimes also carried out as L3 for Indonesian territory, there is a local culture, has local wisdom like in Bali, Yogyakara is still used by the local language. So that in this situation foreign speakers also play the role of speakers of L3, can switch codes to L2, and L1. So that foreign speakers are capable of integrated three-dimensional language communication, in addition to L3 (BA), also capable of L2 (BI) and L1 (local language) communication in Indonesia. Thus the target language of foreign speakers is not only BI, but also BD in the archipelago, in addition to studies at universities; studies and tourism in Indonesia are also carried out without the slightest obstacle in their implementation.

In the meantime, the implementation of learning materials makes BI learning more meaningful because it is always associated with the real world. Several advantages of immersion programs, namely (1) BI learning is more effective and meaningful because it is associated with the actual socio-cultural situation. Teaching materials are designed based on interests and provide grades to students; (2) communication in authentic classrooms motivates students to be more transparent in learning the target language L2, L3; (3) fostering creativity, flexibility, so students are able to think of divergences; (4) by mastering lessons (BI, BD), students will be able to understand national, local culture; art owned by local students: (5) the growth of positive competition among IFL students because they have to communicate with local and national students in understanding the lessons, so that the potential to improve the target language skills of BI and BD students will be even better [23].

(3) **Learning media** are needed to achieve the stated learning objectives in the form of print, electronic and multimedia facilities which are currently developing. The media in the perspective of learning instruments is very strategic in determining the success of students' teaching and learning processes, because it can provide learner dynamics. The media can also be in the form of a teacher, textbooks, and the school environment. Specifically, the understanding of the media in the teaching and learning process is defined as graphic, photographic, or electronic tools to capture, process, and rearrange visual and verbal information, because its function is the messenger in learning activities so that messages can be more easily understood and understood by students. Learning media grow and develop in accordance with the development of learning technology, the substance of which is: (a) the form of message channels in learning; (b) various types of components of the learning environment are able to respond to learners to learn; (c) the form of physical devices can present messages and stimulate students to learn; (d) forms of communication can stimulate learners to learn from print media as well as audio, visual and audio-visual; used in student learning strategies [24].

(4) **Learning strategies**, methods and techniques are used in implementing learning by considering their effectiveness and efficiency. So that the implementation of foreign language learning can be effective and efficient, methods and techniques that are appropriate to the character of multilingual language teaching materials are needed. These methods and techniques are language learning strategies, the following alternatives can be considered: (a) total (full) immersion, full (100%) student mixing program is used in mixed languagesin the 'immersion' integration; (b) partial immersion, students' mixing program is not completely, but partial (50%) learning uses mixed languages, consistently mixed languages use first language (L1) and second language (L2); (c) double immersion, the combined immersion of the total (full) immersion program used in two languages (L1 and L2); (d)

two-way immersion. Assimilation of students is used two ways, namely foreign speakers of language communication, first spoken by L1 'mother tongue' + L2 'national language'; second, spoken by speakers L1 + L2 + L3 'local language'.In addition to being a monolingual and bilingual speaker, this program is also a successful multilingual language speaker in academic studies. In reality foreign students have a positive relationship between them in the total (full) immersion in the field of IFL namely language skills, both in reading, writing, listerning, and speaking; because students have used the methods and techniques of total (full) immersion at the most compared to other immersion programs that can be measured in the evaluation of learning [23].

(5) **The evaluation of this learning** is carried out to measure at the initial stage in the form of a pretest as an initial requirement for the plan to prepare objectives, materials, facilities, and learning methods or techniques to be carried out in the durability of learning implementation. After learning is done, it is necessary to do a posttest, to know how far the learning achievement is in its implementation, and then the posttest results are compared with the pretest results as a control variable. There will be answered the achievements made, whether in the form of daily activities, mid-semester, or the end of the semester in language learning. This conventional learning system can be described as follows. The evaluation function helps the development of student learning outcomes on an ongoing basis, so that an evaluation picture is obtained from a systematic, ongoing process to determine quality based on considerations and criteria for making decisions [15]. Based on the description of five points (1) - (5) listed above, it can be summarized in the conclusion as described in figure 3 below.

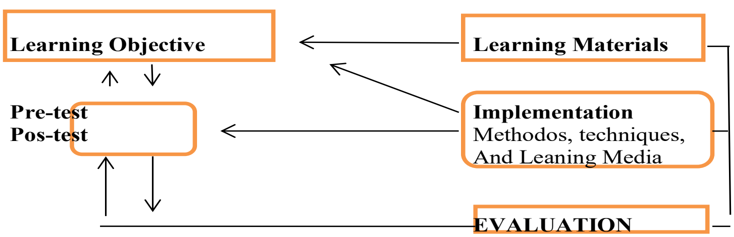


Figure 3: Conventional Learning System (Classic)

Figure 3 shows the learning objectives derived from the education policy of the National Education System Law. The purpose of the initial learning phase is to conduct a pre-test evaluation to explore the mastery of foreign speakers of the IFL to what extent the mastery of the bilingual

/ multilingual language is used, the results of the pre-test are used as a learning plan. In addition to the planned plan of learning objectives, plans for teaching materials, implementation of learning (used methods and techniques, as well as media), the results of their implementation are evaluated as a post-test. The results of the post-test are compared with the results of the pretest that has been implemented, and then the acquisition of these learning outcomes can be measured to what extent the results achieved in learning activities.

Contemporary Language Learning System

Language teaching system as a system, the system involves all elements of the system itself involved interdependence of its elements to achieve goals. The success of the learning system, is the success of the learning system in achieving goals, is students as subjects of learning in achieving goals that have been designed by the designer (teacher). In designing learning requires three main issues that must be planned, namely (a) **planning**, this plan is strived for all elements to function properly; when there are elements that do not function, the system breaks down by itself; (b) **implementation**, the implementation of learning is determined by the manager to complement the procedure and the planned schedule; and (c) **evaluation**, evaluation is carried out to measure whether the implementation has been effective, efficient, and careful in achieving the learning objectives?

The learning system problem has fulfilled the system requirements, because the system already has a goal, to achieve the goal of all the elements of the system already has a system design function, the system process has been driven by the function elements of the inter-system system itself. As it has been understood, that (a) every system has a purpose (b) every element of the system has its own function; (c) every system has components [27]. Referring to the description, the conventional learning concept (figure 3) can be revised in figure 4 (contemporary learning) as follows.

Language Learning System

Planning	Implementation	Evaluation
Learning Students	Learning Objectives Learning Condition Learning Resources Learning Media Learning Strategies, Methods and Techniques	Achievement of Competence student

Figure 4: Language Learning System

Source : Synthesis of Various Referencies

Figure 4 about the language learning system can be simplified into three stages, (1) the planning stages of student language learning; (2) the implementation phase refers to the objectives, learning conditions, learning resources and media, strategies, methods and techniques for achieving their objectives; while (3) the third stage, the evaluation phase to ensure the results of the planned implementation at an early stage.

The three stages above, namely planning, implementing, and evaluating language learning for speakers of IFL, uses a systemic learning approach; then systemic foreign language learning needs to be involved in multilingual learning material in its technical implementation without ignoring monolingual, bilingual, to multilingual level teaching material. For more details learning material in this contemporary language learning system can be explained further in point C below.

Multilingual Learning Materials

Multilingual learning materials are carried out as a result of the existence of multicultural societies, for example Indonesia has a multiculture with a variety of cultures, languages, literatures, and art as a reflection of diverse ethnic groups called unity in diversity. As an illustration of multiculturalism as a multilingual source caused by the lingual unit spoken by Indonesian ethnic children, for example, ethnic children in Indonesia are presented in the following sample.

Largest Ethnic Groups of Indonesian Citizens: 2000 Census (idem)

Ethnic Group Number	**Number (million)**	**Percentage Javanese**
Javanese	83.8	41.7
Sundanese	30.9	15.4
Malay	6.9	3.5
Madurese	6.7	3.4
Batak	6.0	3.0
Minangkabau	5.5	2.7
Betawi	5.0	2.5
Buginese	5.0	2.5
Bantenese	4.1	2.0
Banjarese	3.5	1.7

Figure 5: Largest Ethnic Groups of Indonesian Citizens

Source: Himawan 2017 [8]

Based on figure 5, a sample of ethnic diversity in Indonesia, namely (Javanese 41%; Sundanese 15.4%; Malay 3.5%; Madurase 3.4%; Batak

3.0%; Minangkabau 2.7%; Betawi 2.5%; Buginese 2.5%, Bantenese 2.0%, and Banjarese 1.7% This sample of ethnic diversity is reflected in the diversity of cultures (multicultural) and language (multilingual) .This evidence, the learning of foreign languages using a multilingual approach can be used teaching materials which are multilingual, namely Foreign Languages, National Languages, and Local Languages.The existence of multilingualism as a mirror of multicultural societies should be taken into account in the study of humanities (including language and literature) Indonesia multicultural countries have a diversity of cultures, races, ethnicities, religions and groups all of which are wealth priceless for the nation of Indonesia Multiculturalism is a gift from God inherited from ancestors in this archipelago [12].So that in multilingual (+ multicultural) learning planning it is necessary to take into account the multilingual element of the nation in managing its learning planning.

Multilingual Language Learning Materials Plan

Learning Objectives	Learning Materials	Learning Achievement
Students master multilingual talents in IFL learning	Foreign Language L1 National Language L2 Local Language L3	The ability of students to master multilingual, bilingual, and monolingual

Figure 6: Multilingual Language Learning Materials Plan

Source: AM. Sudirman 2015.

In Figure 6, learning planning starts with (1) planning of objectives, (2) planning of material, and (3) planning of evaluating learning outcomes. Planning goals, students have material competence in learning; multilingual learning material (L1 foreign language 'mother tongue', L2 national language national language, and L3 local language). So that students' achie-vements are able to master multilingual languages (sub-ordinate, bilingual, and monolingual) about the language of a nation. This study is important to do to deal with crucial problems for teachers of Indonesian as a foreign language in facing global challenges so that teaching can be effective and efficient [10].

The acquisition of monolingual, bilingual, or multilingual language speakers depends very much on the empirical environmental factors that influence it. Factors that influence language acquisition, can be personal innate factors, parental upbringing, parental language in the family, neighborhood, peers, and the role of school teachers greatly influence the acquisition of children's language. Other language acquisition factors, such as language activity in the general public, family community, age group, one interest, one talent, one intelligence, one attitude, and one motivational group contribute to one's language acquisition [33]. In addition, it has been said that the meaning of language acquisition is different from language learning. Language acquisition refers to naturally internalized linguistic abilities supported by motivation for communication realized on the use of language forms in linguistic rules. While programmed formal language learning is supported by learning performance motivation [25]. Likewise foreign speakers learn Indonesian in IFL learning, foreign speakers who master their native language from their home country (L1) in learning must adjust their language speech to the target language of Indonesian (L2). The next target language is the local language (L3), as in figure 4 above, ten ethnic children are still actively using their local language; many foreigners are able to speak the local language. Examples of IFL material in Indonesia are as follows.

Multilingual IFL Learning Materials			
L1 Foreign Speakers	L2 Indonesian	L3 Local Language	Information
1	2	3	4
Speech: What sister / brother	Speech: Apa Ayuk / Kakak	Speech: opo mbak? / Mas?	Speakers of L1, L2, and L3 are different language codes
"Sorry, brother or sister, I don't understand English"	"Maaf Mas/ Mbak, saya tidak mengerti bahasa Inggris"	Speech ofjava: **Mas / mbak**	Foreign speakers in L2 use mixed language codes L2 and L3
"Brother / Sister, what are you talking about? You can't use English here, Brother or Sister!	"Mas/Mbak berbicara apa? Di sini tidak boleh pakai bahasa Inggris Mas/ Mbak!	Speechof Java: **Mas / mbak**. This greeting is said twice, at the beginning and end of the sentence text	Foreign speakers in L2 use mixed languages L2 and L3 but there are English L1 interventions
"Brother / Sister,not cool, still using English. Indonesian. Brother / Sister! Indonesian	"Mas/Mbak tidak keren, masih pakai bahasa Inggris. Indonesia Mbak/Mas Indonesia."	Speechof Java: **Mas / mbak**. This greeting is said twice. This L3 function is a marker of local wisdom language for L2 help	Foreign speakers in L2 use mixed languages L2 and L3 but there are English L1 interventions

Figure 7: Multilingual IFL Learning Materials

Source: Nugroho, Hasan, 2016 [20]

In figure 7 it is explained that Indonesian Foreign Language (IFL) is used by tutors / instructors as L1 for foreign students as the language of instruction, after being given the L2 target language Indonesian there is a mixture of L3 due to the tutorial environment by instructors on the island of Java (Javanese language). The above evidences are realized by multicultural speech. Monolingual at L1 (Column 1); bilingual happens in L2 (Column 2); and multilingual L3 (Column 3) because there is a local language, that information is in the information (Column 4). This language learning process requires three communication patterns: one-way communication, limited by two-way communication and multi-way communication [16]. Mistakes and errors in language in figure 6 are common in language skills, perhaps due to minimalist competence or lack of practice in reading, writing, listening-speaking aspects. In addition, IFL learning can result in language contact due to 'multilingualism or bilingualism. Bilingual language mistakes can occur in aspects of language skills, namely listening, speaking, reading and writing skills, both in terms of linguistics, such as phonology, morphology, and syntax, as well as non-linguistic aspects, namely the meaning and content of speech [9].

IFL Learning Strategies Systemic Approach

As in the description of conventional learning and contemporary learning, both are synthesized. However conventional learning systems still need to be taken into account are humanistic, political, and cultural issues in the past era adjusted to the latest developments there are still many discourses about the three diction or three themes that color literacy discourse in various parts of the world. Namely the atmosphere of humanism, the atmosphere of politics, and the atmosphere of culture that can be used as a source of learning materials for language or language for students who need to be designed; either in planning, implementing, and evaluating learning. In the meantime, as an illustrative reference, a learning strategy is needed by utilizing the aspects that have been discussed in the classic learning system, contemporary learning system, and the multilingual learning material above can be planned into the following visuals or pictures.

The learning process is planned in the form of mutilingual student input through the process of system content aspects, leading to the results of student output outcomes, in accordance with the student's goal of mastering multilingual abilities. Aspects of the contents of the system in the form of learning components, because learning activities as a system, it involves the contents of the system components themselves. The learning process involves the contents of the system components are the teacher, students, objectives, materials, methods, tools, and evaluations; all of them are involved in interactions in the process of learning activities to achieve the planned learning objectives [14]. In the latest developments mentioned, the learning system consists of inputs, processes, outputs, and outcomes. Outcome is the impact of graduates on the local, national, regional and international environment. Implementation of learning development in accordance with the concept of competence in the learning community [15] is described as follows.

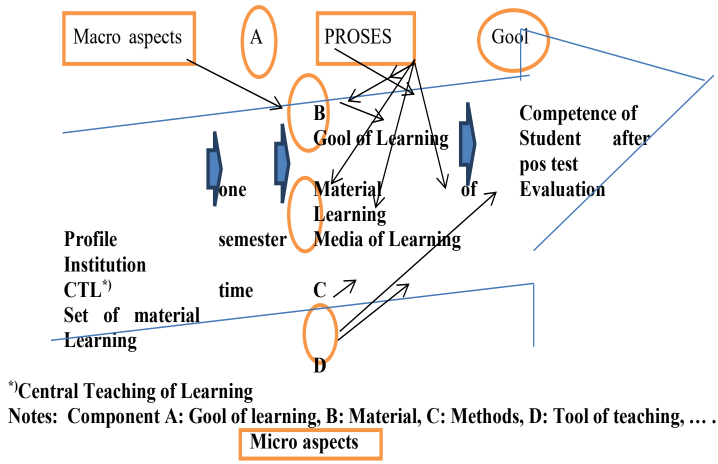


Figure 8: Systemic Learning Approach Strategy

Inside of Figure 8 shows a learning system approach strategy that involves A-D aspects supported by macro-micro aspects of inter-component education in the process of achieving learning objectives.

Conclussion of Study

Based on discussion and analysis of conventional learning, contemporary, multiligual; and the IFL learning strategy above, it can be concluded the results of the study are as follows.

A. Conventional IFL Learning System

Language learning in any country always involves issues (1) objectives, (2) teaching materials, (3) learning media, methods, learning techniques; and (4) evaluation: pretest and posttest of learning outcomes. Language learning always involves humanistic aspects, political aspects, and cultural aspects. (a) Humanistic issues relating to humans in general and the problem of the function of language for humans to express their thoughts and feelings in understanding human civilization and culture, to enhance the civilization and human culture supporting themselves. (b) Political issues are policies to achieve ideals, for example in Indonesia to achieve a just and materially and spiritually prosperous society. (c) The issue of this culture, for example in Indonesia the culture is diverse in a single diversity if it must always adapt in the midst of international competition among foreign countries. To solve the three aspects of the problem in language, it needs (a) language knowledge competence, (b) language skills ‘talk-listening; writing-reading), (c) a positive language attitude towards three dimensions of language, for example in Indonesia there are foreign languages, national languages, and local / regional languages; and (d) Appreciation of literary language in general.

Learning objectives are derived from the State's goals, the objectives of educational institutions (institutions of higher, secondary and basic education) as outlined in the curriculum as a reference for the technical implementation of learning general subjects and fields of study.

Teaching materials are national content, education and scientific fields which must be provided according to their respective study programs in an educational institution.To achieve the objectives and materials to be delivered to students required learning materials that are in accordance with consideration of age, level of education, study program, ...

Learning media are needed to achieve the stated objectives in the form of print, electronic and multimedia facilities which are currently developing.

Learning strategies, methods and techniques are used in the implementation of learning by considering situations and conditions of learning that are effective and efficient.

Evaluation of this learning is carried out measured the initial stage in the form of a pretest as an initial need to prepare the objectives, materials, facilities, and learning methods or techniques implemented in the implementation of learning. After learning is carried out, it is necessary to do a posttest, so that it is known how far the learning achievement is carried out, then the posttest results are compared with the results of the pretest (variable control). There will be answered the achievements made, whether in the form of daily activities, mid-semester, or the end of the semester in language learning. This conventional learning system can be described as follows.

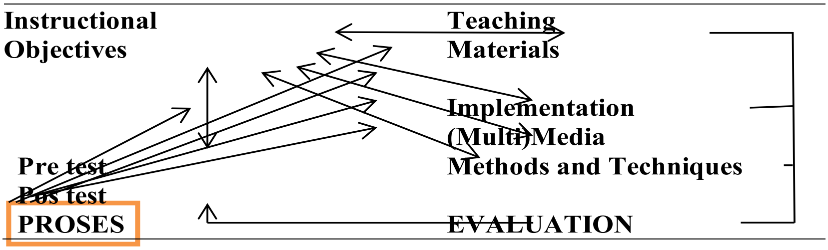


Figure 9: Classic Instructional System

The conventional learning system figure 9 shows that learning objectives are used as a reference for achievement supported by educational material, implemented with learning media, and the achievement is used methods and techniques in accordance with the learning process. The results of the pretest evaluation are used to determine the initial mastery of student competencies, after the learning material is presented, at the end of the study a posttest evaluation is carried out, so it is known how far the results of the learning process are compared with the control variables of the initial pretest acquisition of learning activities.

B. Contemporary Language Learning Systems

The language learning system figure 9 as a conventional learning system, the contents of the components interact with each other, namely: the teacher, students, objectives, material, media, methods, and evaluation. Learning can not be carried out properly without the interaction between the learning components, then between the types of learning components must cooperate with each other so as to create efficient learning [14]. The conventional language learning design needs to be renovated into three stages of learning, namely the problems of planning, implementing, and evaluating; need to be explained as follows (a) planning, this plan is strived for all elements to function properly; when there are elements that do not function, the system breaks down by itself; (b) implementation, the implementation of learning is determined by the manager to complement the president and the planned schedule; and (c) evaluation, evaluation is carried out to measure whether the implementation has been effective, efficient, and careful in achieving learning objectives. All elements of the system have a system design function; the system process has been driven by the function of the system elements between systems. As understood, that (a) every system has a purpose (b) each system has its own function; (c) each system has a component [27].

This contemporary language learning system cannot be separated from contemporary learning methods, when for application in multilingual languages; it can be described as follows. IFL learners have different educational backgrounds and goals in the IFL class. IFL teaching in Indonesia is very much different from IFL classes elsewhere. Through the direct method IFL learners learn Indonesian through the *Darmasiswa* program directly dealing with the socio-cultural environment and native speakers of Indonesian. IFL learners can directly communicate in daily activities, so they learn Indonesian faster in listening, speaking, reading and writing skills. Situations and conditions always change according to the contents of the learning component. Such as teaching materials when speech L1, L2 / L3 is done; through appropriate methods / techniques of learning must be adjusted to the ranking of learning. If the selection of materials is right, then all parties will be more pleasant, cultural content must be presented in teaching materials, thereby adding insight into Indonesian culture; local, national, to global wisdom. In the meantime, the learning process must be dominated by its Indonesian atmosphere [6].

In line with the acquisition of language above, the results of language acquisition LAD (Language Acquisition Device) has the ability to process linguistic data input into grammatical competence, the mechanism of LAD's work in language acquisition through three components: input, processor, and output. Inputs contain primary linguistic data on the speech of adults in certain languages. Processing contains LAD with the above working principles. Finally, the output contains the grammatical competence of the language learned by students in the form of grammar [25]. The IFL learning material supported by LAD is a contemporary linguistic flow carried out in linguistic transformation prioritizing performance and transformation.

C. Multilingual Learning Materials for IFL

Multilingual learning material is carried out as a result of a multicultural society, for example Indonesia has a multiculture called a variety of cultures, a reflection of diverse ethnic groups called unity in diversity. So that in multicultural multilingual learning planning it is necessary to take into account the multilingual elements of the nation itself for its learning planning. Being aware of foreigners makes Indonesian foreign speakers (BIPA) the Indonesian Foregn Language 'IFL' L1 endeavor to improve the language skills of learners in learning for the second language L2. To master IFL, it requires an auxiliary language, which is directly in Indonesian (L2) as the national language, and local language (L3) followed by the respective regional characters colored by national characters which can be switched to the character of foreign speakers. This problem has occurred multicultural, multicultural, and multilingual in instilling the character of the nation in the era of globalization [2]. In planning the learning material, it starts with planning the objectives, planning the material, and planning the evaluation of the expected outcomes. Planning goals, students have material competence in learning; multilingual learning materials have at least foreign languages, national languages, and local languages. So it is expected that students come out in a multilingual language under the subordinate there is a bilingual and monolingual language of a nation.

Multilingual learning material in psycholinguistics is called language acquisition, because the language of acquisition is 'acquisition', which is the process of mastering a child's language naturally when he learns his native language 'native language' (L1). The term learning (learning), the process carried out in a formal level (taught by a teacher) to the target language L2 sometimes occurs bilingual to diagnose language learning difficulties. Thus, the process of children learning to master their mother tongue is the acquisition of L1, while the process of the second learning environment in formal learning classes is L2 [28].The acquisition of children's first language acquisition, is still innate his native language is achieved spontaneously in learning until the development phase. The language of children's environmental influences is called the mother tongue acquired through gradual training. The process of obtaining language through the path through the newborn so that they can understand the meaning of words, sentences and they can also understand how to use them in communication. Mastering the language process of children, first language acquisition is often referred to as the mother tongue first language. Children know how to use mother tongue, the first language acquisition experienced when they are cared for has contributed to the acquisition of interconnected language development.

The process of awareness in language acquisition and language use is all applied in language learning. First language acquisition is the process of children's language acquisition used in daily communication in the family called mother tongue. The exact process of language acquisition is explained by several theories about language acquisition, explained in the flow of theories of behaviorism, nativism, cognitivist, interactionism. These four theories have different perspectives in explaining how children get their first language. One of the dilemmas of the debate on natural language acquisition and the acquisition of foster language, both of these acquisitions are needed guidance, because natural input can be realized spontaneously, while the acquisition of foster language, language acquisition is determined by the learning environment concerned [3].

In the meantime, multilingual communities have a background factor in the choice of language variety of speech communities in determining the range of use of their spoken language. The reason for the choice of language variety is due to social factors, such as jarak hight solidarity / low solidarity 'social distance; 'superordinate / subordinate' social status; context of usage informal formal / informal '; and the social interaction function 'referential function / affective function'. In addition, there is also interaction at the national level in contact with the national language in the realm of education, employment, administration, and foreigners also involving foreign languages.The pattern of language selection of a multilingual speech community is based on the influence of social factors such as: scale of solidarity (familiar and unfamiliar), status scale (superior and subordinate), scale of formality (formal and informal), and communication function (referential and affective). In addition, the variety of choices for language interaction in a particular domain also has an exclusive meaning for speakers of languages, and is also used as a symbol of social identity, such as ethnic, nationalist, professional, age, and demistic / foreign tourists. Symptoms of the choice of language diversity by the community of speakers of this kind, shows a mirror of language and culture that can be used as a medium both in speech or in learning [35].

Speaking of language learning materials, there are three categories of choices for IFL learning materials, namely (1) selecting one of the homogeneous language variations (intra-language variation); (2) code switching (code-switching); and (3) mixing code (code-mixing). All three are potential to be used in IFL learning interactions for instructors, managers, and communication in IFL learning; which needs to be supported by (a) participant partner speech, language acquisition, social status, age, social relations, language attitudes; (b) the situation of communication, formal-informal-informal; (c) the content of the conversation, regarding the topic of the conversation; and (d) interaction functions, such as begging, flattering, supporting, etc [34].

D. Language Learning Strategies Systemic Approach

As in point A about conventional learning and point B contemporary learning needs to be synthesized, the conventional learning system still needs to be taken into account humanistic, political, and cultural issues in the past era adapted to the latest developments there are still many discourses about three diction or three themes which colors discourse literacy in various parts of the world. Namely the atmosphere of humanism, the atmosphere of politics, and the atmosphere of culture that can be used as a source of learning materials for language or language for students who need to be designed; both in planning, implementing, and evaluating language acquisition learning. The acquisition or acquisition of language is interpreted by the development of natural language skills, communicative situations, acquisition of similar languages that increase the knowledge of natural languages, interactive with the natural surroundings [7].

Such natural and communicative teaching materials should be taken into account as a learning reference. The learning, whether conventional or contemporary, is certainly oriented towards multilingual IFL language speakers without ignoring bilingual and monolingual. So the learning process of such material needs to be planned. The learning process is planned in the form of mutilingual and multicultural gifted student input through the process of aspects of the contents of the system both macro and micro, leading to the results of getting output, in accordance with the goal of the student mastering the ability of multilingual talents without ignoring bilingual and monolingual.

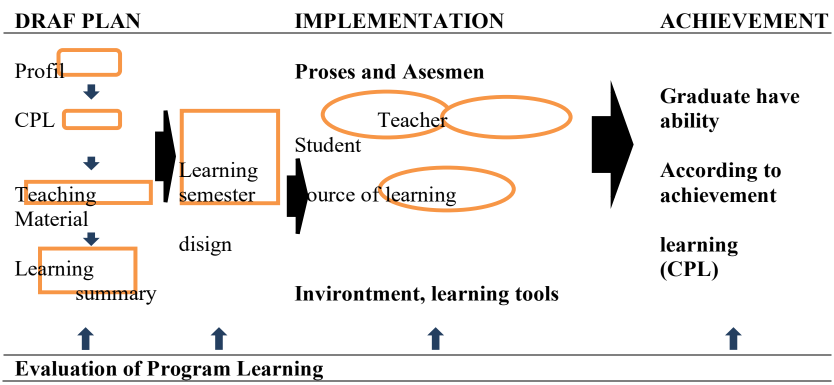


Figure10: Strategy Language Learning Systemic Approachin IFL

In visual Figure 10 there are three aspects, namely aspects of design, implementation, and learning achievements. The draft of semester plan (profile, learning outcomes, teaching material, and summary of learning material) is carried out in the process and assessment (teacher, student, and source of learning) supported by invirontment and learning tools; to achieve graduation in the learning process. Evaluation of the evaluation program is carried out starting from the planning, implementation and evaluation stages of the learning program. The teaching material in figure 10 is L1, L2 / L3. The existence of L1, L2, and L3 mirrors the inter-lingual relationship of reflection from intercultural or intercultural relations - this term is often used in the study of intercultural communication, but has not been formally absorbed in Indonesian. This aspect has an important role in the context of communication, especially in communication using foreign languages as an introduction to the target language from L1 to L2 or L3 as a complement in IFL learning [22]. In addition to a systemic approach such as the IFL learning listed above, a multilingual teaching material approach is also used as follows.

Multilingual Teaching Materials Approach

Preparation	Serving	Evaluation
Monolingual Acquisition	Direct translation method L1 - L2, L3	Swith change code language L1-L2, L3
Acquisition Bilingual	The direct method L1 - L2 / L3	Swith change system code of languge its structure
Multilingual Acquisition	The direct method L1 - L2 - L3	How far the influence L2, L3 to L1

Figure11 :Multilingual Teaching Materials Approach

By this Figure 11 explained, language learning is used by national languages to switch to foreign languages, bilingual occurs from L1 => L2 swith change code characteristict and language. So there was contrast in L1 and L2 utterances, as a diagnosis of the differences in L1 and L2 it was necessary to adjust language skills and instill national character through language learning such as visuals in the following chart.

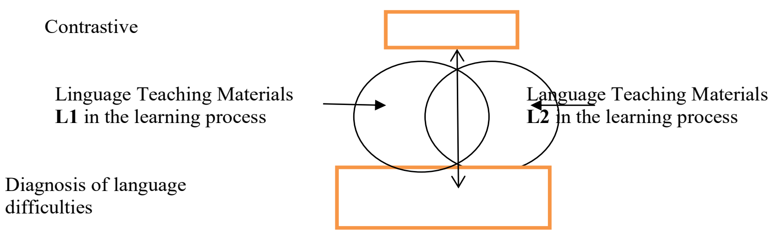


Figure 12: Swith Change Code L1 – L2

Figure 12 can be explained, that through IFL there is inculcation of global language characters that must be assisted by national language characters, through learning national languages to switch to foreign languages, bilingual use of L1 => L2. It is possible that in addition to bilingual code switching, multilingual code switching also occurs, so that it can be used, in addition to using L1, L2, and L3, multi-characteristict and language swith change codes are commonly called interchang characters and linguals. If there is a transition from the three characters (global, national, and local to intervent through language learning, language learning will occur L1, L2, and L3 as visualized below.

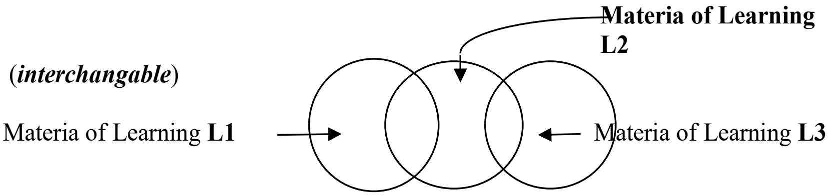


Figure 13: Swith Change Code L2 – L3 to L1

Figure 13 shows swith change code L2 - L3 influenced to L1. Changes in the adoption of L1 to L2 as bilingual speakers; as well as the change of adoption of L1 to L2, and L3 then the speaker involved in this behavior is called multilingual speaker, called multilingual because the speaker's mastery of three or more languages [2]. To support some of the above opinions (figure 9-13), IFL acquisition of target language, i.e. second language through a person's process in first language acquisition. Opinion, second language acquisition refers to the process of individuals or groups learning the mother tongue. By naturalistic flow, the acquisition of innate mother tongue from birth 'mother tongue system'. Differences in language acquisition and learning; acquisition is a subconscious process of fluency in language, while learning is a process of awareness realized in language learning both through the rules and structure of the language [11]; There are three developmental steps, namely text selection, designing core learning activities, and designing language exercises [19].

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Development of Integral Calculus Teaching Materials Based on Open Ended Approach

Syarifah Fadillah[1]

Introduction

Integral Calculus is one of the subjects studied in the mathematics education study program. In calculus, students are required to have good mathematical representation skills so that they can solve problems related to mathematical concepts that involve calculus. According to Jones [1], there are three reasons why representation is one of the standard processes, namely: (1) fluency in translating between different types of representations is a basic ability that students need to have to build a concept and think mathematically; (2) the mathematical ideas presented by the teacher through various representations will have a very large influence on students in learning mathematics; and (3) students need practice in building their own representations so that they have good and flexible ability and understanding of concepts that can be used in problem solving. The use of visual representations is highly recommended in learning mathematics [2].

The ability of students' mathematical representation is very important in learning mathematics, but several studies reveal that there are weaknesses in students' mathematical representation abilities. The difficulties encountered include: (1) students have minimal ability to bridge representations without understanding the common thread between the ideas and concepts of the materials represented [3]; (2) the difficulty of students in bridging representations and flexibly moving from one representation to another [4]; (3) students are often satisfied with different results with different representations, and do not always realize that these results are inconsistent, even contradictory [5].

Most of the students of IKIP PGRI Pontianak are also still experiencing weaknesses in their mathematical representation abilities. Some of the difficulties that the writer finds in the integral calculus course include: difficulties in using various forms of mathematical representations to explain mathematical ideas and solve mathematical problems and

[1] IKIP PGRI Pontianak

difficulties in translating between forms of mathematical representation. To overcome this difficulty, of course, it is necessary to choose a learning approach so that students' mathematical representation abilities increase.

Ruseffendi [6] states that the approach is a path, method or policy taken by teachers or students in achieving teaching goals in terms of how the teaching process or subject matter is managed. One alternative approach to learning mathematics that is expected to improve students' mathematical representation skills is the open-ended approach.

The open-ended approach was developed in Japan since the 1970s. The open-ended approach is a learning approach that uses open problems that can be answered in many ways/methods of completion or various correct answers. With the diversity of solutions and answers, it gives students flexibility in solving problems. Students can explore the knowledge or resources needed to draw conclusions, make plans and choose ways or methods in solving problems, and apply their mathematical abilities so that students are expected to gain knowledge through the experience of finding something new in a problem-solving process.

Several studies have shown that to improve students' mathematical representation skills is to train them to solve problems [7]. The variety of ways of solving and answering problems when students solve open problems gives students a lot of experience in interpreting problems and generating different ideas in solving a problem [8]. This of course will open up the possibility of students using various representations to find solutions to the problems they face so that through learning with an open-ended approach it is expected to improve students' mathematical representation skills.

Teaching materials that are oriented to an open-ended approach are certainly needed in carrying out lectures, therefore this research aims to develop teaching materials that are oriented to an open-ended approach in integral calculus courses. This teaching material will also consider the ability to be developed, namely the students' mathematical representation ability. In addition, this study will also describe the quality of integral calculus teaching materials based on an open-ended approach in terms of validity, practicality, and effectiveness of lectures using the developed teaching materials.

Method

This development research was carried out for one year. The development of integral calculus teaching materials based on an open-ended approach uses a 4-D model of teaching materials development, which consists of four stages, namely define, design, develop, and disseminate [9].

Integral calculus teaching materials are said to be valid based on the assessment of five validators. Integral calculus teaching materials developed are said to be effective if the increase in mathematical representation ability after obtaining integral calculus lectures using these teaching materials is moderate or high (using the normalized gain formula). Integral calculus teaching materials are said to be practical if students' responses to integral calculus teaching materials based on an open-ended approach are classified as good or good enough.

Result and Discussion

The results of the research that will be presented are the stages of developing teaching materials and supporting devices for integral calculus teaching materials based on an open-ended approach starting from the define stage to the develop stage. In the define stage, the need for integral calculus lectures is determined by analyzing the objectives of the integral calculus course and its material limitations, as stated in the curriculum for the mathematics education study program at IKIP PGRI Pontianak.

The design stage is the initial stage of designing integral calculus teaching materials based on an open-ended approach that will be used in lectures. At this stage, the preparation of mathematical representation ability test instruments, the selection of teaching material formats, and the preparation of the initial draft of the lecture syllabus and student worksheets were also carried out.

Teaching materials that have been designed at the design stage are validated by five experts who are considered capable so that information is obtained in the form of input, evaluation, and revision of the model of teaching materials that have been designed. The teaching materials for integral calculus courses that have been revised based on input from the validators are then trial in class.

In general, the five validators stated that the integral calculus teaching materials compiled were valid, but there were several things that needed to be improved before being tested in class lectures. Some improvements that need to be improved include: (1) it is necessary to provide a place to fill in the student worksheet for students to solve problems; (2) reduce some problems (for certain meetings) because it is considered not enough time; (3) some student worksheets that have not been completed with exercises are added with exercises; (4) student worksheets are equipped with the necessary apperceptions so that students can remember the prerequisite material; (5) teaching materials are equipped with answer keys for odd/ even numbered questions, and; (6) improvements to some graphic images. The results of this validation indicate that the quality of teaching materials is met in the aspect of validity.

The teaching materials for integral calculus courses that have been revised based on input from the validators are then trial in class. This stage is the final stage of model development to produce a model of calculus teaching materials as expected. Trial of teaching materials in lectures in the classroom, using the action research method. At the develop stage, the researcher conducted data analysis to assess the practicability and effectiveness of lectures using these teaching materials.

Lectures are carried out in two stages, in accordance with Hashimoto [10] suggestion which says that in learning with an open-ended approach, teachers must be careful in allocating and managing time because it is possible for students to respond with many responses, both as expected and according to expectations. what is not, and all of that must be discussed and concluded. It is therefore recommended that this course be structured in two stages. In the first stage, students work individually in solving problems given by the lecturer at the beginning of the lecture for all students in the class. Each student is given a student worksheet as a place for them to write down their ideas. Student worksheets are collected which are useful for lecturers to prepare conclusions from individual responses. Then in groups of four students, they discuss the results of their individual work and group representatives write down the results of their group discussions. The second stage the results of each group are presented and discussed. Then recovery is concluded.

After the implementation of the action in the first cycle, students were given a mathematical representation ability test. The results of research on the results of students' mathematical representation ability tests after attending lectures using integral calculus teaching materials based on an open-ended approach for seven meetings are presented in Table 1.

Table 1. Students' Mathematical Representation Ability

	Average Pretest	Average Posttests	***N-Gain***	**Category**
Indicator 1	0.36	13.48	0.67	Moderate
Indicator 2	0.14	6.07	0.30	Moderate
Indicator 3	0.25	3.93	0.19	Low
Total	0.75	23.48	0.38	Moderate

From Table 1, it can be seen that the initial ability of students' mathematical representation of integral calculus material is very low, with an average pretest score of 0.75 from a maximum score of 60. After receiving lectures using integral calculus teaching materials based on an open-ended approach for seven meetings at the first cycle there is an increase in students' mathematical representation ability, with a posttest score of 23.43. Calculation of the average increase in students' mathematical representation skills using the normalized gain formula, obtained an average increase of 0.38 classified as moderate.

Students' mathematical representation ability as measured in the test consists of three indicators, namely: (1) students can use symbolic representations in interpreting mathematical phenomena, (3) students can use visual representations (graphics) to explain mathematical ideas, and (3) students can translate from symbolic representations to visual representations (graphics), and use these visual representations to solve problems.

From Table 1, it can be seen that the increase in students' mathematical representation abilities in the first and second indicators is moderate. While the third indicator is low, so the success criteria of this action research have not been met. The research team and observers reflected on the results of the observations to make some improvements before carrying out the second cycle. The results of the research in the second cycle showed an improvement from the results of the research in the first cycle. The results of the student's mathematical representation ability test after taking the final semester exam in the second cycle are presented in Table 2.

Table 2. Students' Mathematical Representation Ability

	Average Pretest	Average Posttests	***N-Gain***	**Category**
Indicator 1	0.29	15.61	0.78	High
Indicator 2	0.22	15.56	0.77	High
Indicator 3	0.10	6.34	0.31	Moderate
	0.61	37.51	0.62	Moderate

From Table 2 it can be seen that the students' mathematical representation ability has increased from the first cycle to the second cycle. In the first cycle the increase was 0.38, while in the second cycle it increased to 0.62 which was classified as moderate. In the first indicator, students can use symbolic representations in interpreting mathematical phenomena, an increase of 0.78 is considered high. In the second indicator, students can use visual representations (graphics) to explain mathematical ideas, an increase of 0.77 is considered high. In the third indicator, that is, students can translate from symbolic representations to visual representations (graphics), and use the visual representation to solve problems, an increase of 0.31 is classified as moderate. These results indicate that the criteria for the success of action research have been achieved.

These results illustrate that integral calculus lectures using an open-ended approach can improve students' mathematical representation skills. This happens because in the open-ended approach students are given the opportunity to solve problems with a variety of answers and various methods/methods, so that various representations of the problem will appear. The open-ended approach has a positive influence on students' logical thinking skills [11]

This is in accordance with the recommendations of the NCTM [12] which suggests that learning mathematics is developed from problem situations. The problem situations that arise in learning must be simple enough to be understood but complex enough to provide diversity in the approach to finding solutions to these problems. Students must be willing to accept opinions from others, whether from individuals, small groups, or large groups in lectures, and be open and flexible regarding the methods used in determining or finding solutions.

The results of this study are in accordance with the research of Inprasita [13], which found that by applying the open-ended approach, students have more opportunities to do something, think, play an active role, do something original, and draw conclusions in their own way. This study also concluded that the ability of students who received learning with an open approach was better than conventional classes. Learning by training students through non-routine problems, which also includes open problems, can improve students' mathematical representation abilities [14] and can improve students' critical and creative thinking abilities [15]

Observations on student activities during integral calculus lectures using teaching materials based on an open-ended approach show that students are actively participating in these lectures. This is in accordance with the opinion of Fatah, *et al* [16] who said that learning using an open-ended approach can help develop creative activities of students. Through this approach, each student has the freedom to solve problems according to their abilities and interests, students with higher abilities can perform various mathematical activities, and students with lower abilities can still enjoy mathematical activities according to their own abilities.

Suherman, *et al* [17] explain that the open-ended approach must ensure the openness of student activities. Furthermore, it is said that what is meant by student activities must be open is that learning activities must accommodate students' opportunities to do everything freely according to their will. Students' activities and mathematical ideas are said to be in harmony, if the students' mathematical needs and thinking can be noticed by the teacher through useful mathematical activities to answer problems. Thus, learning using an open-ended approach does not only provide open problems for students to solve, but in the learning process it must ensure the openness of student activities.

Cooney, et al. [18] suggests that what needs to be considered in making open-ended questions is that an item must elicit a broad response. When the answer to a problem is not singular, it will encourage a broad response to the problem and allow students to explain mathematical ideas in different ways. If this happens, class discussions will run effectively and student communication activities will develop well.

The description of student response data after obtaining integral calculus lectures using teaching materials based on an open-ended approach is presented in Table 3.

Table 3. Student Response to Teaching Materials

No.	Indicator	Variable	Average Score	Criteria
1.	Attention	Motivation and enthusiasm for learning	3.69	Good
		Understand the subject matter and think more critically	3.50	Good
2.	Confidence	Eliminate misconceptions	3.54	Good
		Take important ideas and remember them.	2.54	Adequate
		The number of tasks and the level of difficulty of the task.	2.62	Adequate
		Confidence in learning, work results on student worksheets, and tests.	3.36	Adequate
3.	Satisfaction	Satisfaction with content, quality of writing and images	3.41	Adequate
TOTAL			3.33	Adequate

From Table 3, it can be seen that the students' responses to integral calculus teaching materials based on the open-ended approach are adequate. The results of data analysis regarding the practicality aspect show that integral calculus teaching materials based on an open-ended approach are practically used in the classroom.

Conclusion

The development of integral calculus teaching materials based on the open-ended approach produced in this study has fulfilled the aspects of validity, practicality and effectiveness. Five validators stated that integral calculus teaching materials were suitable for use in classroom learning. The use of integral calculus teaching materials in learning gets a good response from students and can improve students' mathematical representation ability.

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The Effectiveness of Online Learning using Combination of Google Classroom and Zoom on Problem Solving Ability in Microeconomics Course of Economics Education Department in New Normal Era

Sulastri Rini Rindrayani[1]

Introduction

The outbreak of Covid-19 disease demands all educators from the elementary school to university to conduct online learning. Similarly, almost all of the lecturers in Universitas Bhinneka PGRI use online learning to teach. Online learning means 'activities of teaching-learning through internet, and extranet, or even it can be in the form of learning through computer network which is directly connected [1]. In this era, there are many platforms of online learning such as Edmodo, Edublog, Google Classroom and Skype [1]. Among those, the lecturers of Universitas Bhinneka PGRI frequently use Edmodo, Edublog, Google Classroom, Zoom and WhatsApp. The use of online learning is the effort to meet the learning outcome well. Besides, it is expected that the students can understand the material and do the assignments well.

Microeconomics is compulsory course that should be taken by the students of Economics Education Department. This course consists of Microeconomics 1 and Microeconomics 2. Microeconomics 1 has three credits discussing about the consumer behavior while Microeconomics 2 consists of two credits discussing mostly about the producer behavior. Besides, this courses are compulsory courses so that it should be mastered well by the students of Economics Education Department. However, based on the score of assessment in Microeconomics 1, most of the students still got lower score. Students' ability to solve the problem is still low. It is proven by the score in subjective problems, especially on the material related to the graphs of demand, elasticity of demand and

[1] Universitas Bhinneka PGRI Tulungagung

supply. It is known that only 45% of the students can solve the problems correctly as well as completely. The other 30% of the students can solve it correctly, yet it is not complete answer. The last, 25% of students solve the problems incorrectly. Therefore, lecturer should find the solution so that the Microeconomics 1 can be learn online optimally.

Microeconomics learning activities before pandemic of Covid-19 can be done through discussion, group assignment and presentation. The group assignment can be done at home and it should be presented in front of the class. In new normal era of the pandemic of Covid-19, the learning of Microeconomics 1 is given in fully online learning format it means that the all of the learning activities, both direct and indirect learning, are done online [1]. In order to improve the students' ability to solve the problem in Microeconomics 1, the online learning is done using the combination between Google Classroom and Zoom to reach the learning objective optimally. It is in line with the opinions of [1], [2], [3] that Google Classroom is interesting learning media that can be used by anyone freely. This application offers material, quiz and scoring so that learning can be done easily. Meanwhile, Zoom is an application which can be used to have an online meeting or discussion in online face to face. This application has various features, both for office and education usage. It can be used by up to 100 participants in a single meeting. This application has the features for video conferencing, audio calling and text chatting [4]. The result of some research shows that learning using zoom can be effective.

Researches on Google Classroom show that learning using Google classroom is effective to support students' ability in solving problem [6] [7]. Similarly, previous research showed that the online learning using zoom in ARS University during the pandemic of Covid-19 can be done effectively [8]. The same research showed that zoom is the solution in this pandemic since itis flexible, easy to be used and installed [5], [9]. Further, research conducted by Firyanti on 2020 showed that there is a significant difference on the students' learning outcome on online learning using zoom and Google Classroom [4]. Moreover, research by Maharani and Kartini on 2019 showed that Google Classroom is effective to support the students' ability in problem solving [7]. In the other hand, research [10] showed that there is no significant difference of the students' ability to solve problem between experimental and control class. However, some theories and research have shown that Google Classroom and Zoom is effective to optimize the online learning. Based on the background stated above, the goal of this research is to find out the effectiveness of the online learning using the combination of Google Classroom and Zoom on ability in Microeconomics problem solving of the Economics Education Department in this new normal era.

Review of Literature

Problem Solving Ability

The problem solving ability is the ability involving the process of analyzing, interpreting, reasoning, evaluating, predicting and reflecting. So, the problem solving ability is the ability to use the gained knowledge in a new situation by involving high levels of thinking [11]. It is the ability to solve non everyday problem in which the students have to go through some relevant activities in learning, especially the process and strategies [12]. According to Polya, problem solving means a way to find a solution of the problems to meet the goal. However, it is not an easy thing to reach [13]. From some definitions mentioned above, problem solving ability is the ability to use the knowledge gained previously to solve the problem and find the solution of the problem through some processes, that is, analyzing, interpreting, reasoning, predicting, evaluating, and reflecting.

Indicator of Problem Solving Ability

The indicators of problem solving ability are understanding, planning, solving problem and reviewing [11] [10]. Further, other said that indicators of problem solving ability are identifying adequacy of elements and solving problem, finding the alternative solution, implementing the planning and reviewing the answer [12]. In this research, the indicators of problem solving ability are understanding the problem, planning the problem solving, doing the planning and reviewing. Meanwhile, the strategies to solve the problems [13] are a) understanding the problem: read the problem and convince yourself that the problem is understood correctly, b) planning the problem solving; find the relation between known and unknown information so that it is possible to calculate the unknown variables, c) implementing the planning: do what have been planned in the second process, examine all of the steps and write it in detail to make sure that every step has been correct, d) Review: test the solution found, criticize the result, and take a look at the drawbacks of the solution (such as inconsistency, ambiguity or incorrect ways).

Online Learning

Online learning is learning activity using digital aid such as computer, laptop, tablet, smartphone which is connected to the internet. Similarly, we can say that online learning is the learning activity using online electronic media [1]. Online learning used in this research is fully online e-learning format. It means that all both direct and indirect learning is conducted online [1]. Fully online e-learning format is conducted by using Google Classroom and Zoom. The Google Classroom application is available to be downloaded in gadget with Android and iOS. Some features offered by Google Classroom that can be utilized by the teacher among them are adding the material from Google Docs, YouTube, Google form survey, and any other items from Google Drive, giving assignment and grade online without paper, giving announcements and involving students in the discussion. Meanwhile, Zoom is a video conferencing application that is used as long distance communication media. It combines video conferencing, chatting, online meeting and cellular collaboration. This application also helps us to be connected to many people from home. Further, Zoom enables people to have meeting, learning and working online. Zoom gradually becomes the new classes in learning process. Besides, this application also have solution for the learning activities so that schools and universities can run well. [8].

Steps in Conducting Online Learning using the Combination of Google Classroom and Zoom

Online learning using the combination of Google Classroom and Zoom can be divided into five steps:

Table 1. Online Learning Steps

Step	Activity	Learning Media
1	• Lecturer uploads material into Google Classroom (PPT and video) • Lecturer uploads problem based group assignment and delivers the expected learning outcome	Google Clsroom
2	Students download the material, video and group assignment from Google Classroom	Google Classrom
3	In group, students do the assignment as the direction and submit it into Google Classroom	Google Classroom
4	• Students present the assignment given in group using zoom meeting • Dosen gives scores on the students' presentation	Zoom
5	Evaluation of the material presented by the students • Class discussion • Lecturer and students make conclusion of the material	Zoom

Source: Researcher

Research Method

This research was a quasi-experimental research. The population of the research was 84 students in semester 2 of Economics Education Department Universitas Bhinneka PGRI who took Microeconomics 1 course which consists of 2 classes. There were 42 students who were assigned as experimental group and they experienced online learning using the combination of Google Classroom and Zoom. Meanwhile, 42 students were assigned as control group and they experienced online learning using only Google Classroom. Further, the subjective test was used as the instrument to collect data on students' problem solving ability, it consisted of five problems, twenty points for each. Therefore, the maximum score was 100 and the minimum score was 0. For the data analysis, the statistical analysis of Independent T-test was used. The score classification of problem solving ability was as follow:

Table 2. The Problem Solving Ability Score Classification

NO	Score	Classification
1	84-100	Very Good
2	68 -83	Good
3	52-67	Enough
4	36-51	Bad
5	<20	Very Bad

Source: Data that is analyzed

Result of Analysis and Discussion

Independent sample T-test analysis has parametric requirements, that is, normally distributed and homogeneous. To find out whether the data were normally distributed, Kolmogorov-Smirnov test was conducted. In this test, if the significant value of Kolmogorov-Smirnov > 0.05, it can be concluded that the data are normally distributed. Table 3 showed that the significant value of Kolmogorov-Smirnov was 0.56 > 0.05 on experimental class. Therefore, it can be concluded that the score of the experimental class was normally distributed. In addition, in control class, the Kolmogorov-Smirnov test showed the significant value of 0.26 > 0.05. Thus, itcan be concluded that the score of problem solving ability of the control group was also normally distributed.

Table 3. Normality Test

Tests of Normality							
	Class	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistics	Df	Sig.	Statistics	df	Sig.
Problem Solving Ability	Experimental	.134	42	.056	.954	42	.092
	Control	.164	42	.026	.933	42	.036
a. Lilliefors Significance Correction							

Source: SPSS data analysis

To test the homogeneity of the data, test of homogeneity of variance was conducted. If the Levene' statistics was higher than 0.05, it means the data are homogeneous. The result of the test on Table 4 showed that the significant value of Levene's statitics was 0.198 > 0.05. Therefore, it can be concluded that both experimental and control group shows homogeneous data.

Table 4. Homogeneity Test

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
Problem Solving Ability	Based on Mean	1.686	1	82	.198
	Based on Median	.757	1	82	.387
	Based on Median and with adjusted df	.757	1	76.080	.387
	Based on trimmed mean	1.551	1	82	.217

Source: SPSS data analysis

To find out whether any significant difference on problem solving ability of the experimental and control class, the data were analyzed using independent sample T-test. If significant value of t-test lower than 0.05, it means that H0 is rejected and Ha is accepted, there is a significant difference on problem solving ability of experimental and control group. Meanwhile, if the significant value of the t-test is higher than 0.05, it means that H0 is accepted and Ha is rejected, there is no significant difference of the problem solving ability of experimental and control class. Further, the result of data analysis of Independent Sample t-test on table 5 showed that the significant value of t-test was 0.001. Since it is lower than 0.05, it means that the H0 is rejected and Ha is accepted. Therefore, it can be concluded that there is a significant difference on the students' problem solving ability of those who used combination of Google Classroom and Zoom and those who used only Google Classroom.

Table 5. Independent Sample t-test

Independent Samples 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
Problem Solving Ability	Equal variances assumed	1.686	.198	3.527	82	.001	11.262	3.193	4.910	17.614
	Equal variances not assumed			3.527	79.756	.001	11.262	3.193	4.907	17.617

Source: SPPS data analysis

The result of this research showed that the students of Economics Education Department in Universitas Bhinneka PGRI can solve the problems in Microeconomics 1 course through some process: understanding the problems (identifying the goal), planning the problem solving, doing the planning and reviewing, testing the solution, criticizing it and taking a look at the drawbacks of the solution that is similar to the theories of Ulya and Istyadji. The result of this research also supports the research conducted by Fitriyani (2020) that the online learning using Zoom is more effective. Further, it also support the research of Fiyanti (2020) who found that there is difference of the learning outcome of the students who learned using Zoom and Google Classroom. Moreover, it also supports the research of Maharani and Kartini in 2019 who found that Google Classroom is effective to improve the problem solving ability. Therefore, it can be concluded that there is a significant effect of the online learning using the combination of Google Classroom and Zoom on problems solving ability of the students.

The difference of the two samples can be seen from the mean of each sample. The result of the data analysis in Table 6 shows that the mean of experimental class was 69.57 while the mean of control class was 58.31. It means that experimental class's mean score was higher that the control class 58.31 (69.57 > 58.31). Thus, the online learning using the combination of Google Classroom and Zoom is more effective to improve the problem solving ability than the online learning using only Google Classroom. The difference between the experimental class and the control class was 19.43 points (69.57 – 58.31= 19.43). Thus, it can be concluded that the result of this research showed that the online learning using the combination of

Google Classroom and Zoom was effective to improve students' problem solving ability.

Table 6. Mean Score of Problem Solving Ability

Group Statistics					
	Class	N	Mean	Std. Deviation	Std. Error Mean
Problem Solving Ability	Experimental	42	69.57	13.349	2.060
	Control	42	58.31	15.812	2.440

Source: SPSS data analysis

Conclusion

The result of this research showed that there is a significant effect of the online learning using the combination of Google Classroom and Zoom on the students' problem solving ability. It is proven by the result of data analysis using Independent Sample t-test, 0.001 < 0.05. So, it proved that the online learning using the combination of Google Classroom and Zoom is more effective in improving the problem solving ability than the online learning using only Google Classroom. Furthermore, the mean score of experimental was 69.57 while the mean of control class who was 58.31. The difference between the experimental class and the control class was 19.43 points (69.57 – 58.31= 19.43). Based on the result of this research showed that online learning can be used optimally. However, it is affected by the planning in choosing the suitable media for the online learning. The students, furthermore, not only need the learning material but also the explanation on the material given. The concept can be given well to the students well if the students are directly involved on the learning process.

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Globalization and University Students' Motivation towards Learning English in Indonesia

Tono Suwartono[1]

Introduction

The world is becoming more globalized. This condition has affected many human life aspects, including the language for communication. English, which is considered the most international language today, becomes even more central than ever before. Around 375 million people speak English as their first language, while more than doubled use it as their second language. In almost 70 countries, English has received special status to be the official language in addition to their primary languages [1]. The increasing globalization leads to the integration and mutual reliance between multiple cultures, wide spreading connectivity, social technology, economy, politics, and ecology which occur in our daily lives. Just as an illustration, studying overseas has become one among the world phenomena urged by economic desires, cultural interaction, political issues or the easiness of travel [2], [3]. English has become a school subject around the world, and mastering the language also provides an economic benefit, as nowadays, having English skill may offer a competitive edge in a global job market, such as business and tourism [4], [5]. Thus, investigating students' motivation in this regard is crucial.

Studies on motivation in language learning have started to come to light since the notion of integrative and instrumental motivation was first introduced by Gardner and Lambert in the late 1950s. Motivation is important because it influences how active the individual will be in learning the second language [6]. In his model, he discussed two kinds of motivation, the integrative and the instrumental, with much emphasis on the former. The integrative motivation refers to learners' desire to at least communicate, or at most integrate (or even assimilate), with the members of the target language. The instrumental motivation refers to more functional reasons for learning the language such as getting a better

1 Department of English Language Teaching, Faculty of Teacher Training and Education, Universitas Muhammadiyah Purwokerto, Indonesia, suwartononewton@gmail.com

job, a higher salary or passing an examination. Motivation becomes one of the most important factors that influences the process of foreign language learning [7], [8], [9]. Given the realities of the global economy and job market, it is imperative that the students have the right motivation in learning English in order to enable them to participate in the global economy. A number of recent international surveys on university students' motivation towards learning English as a foreign language have been conducted. According to Vaezi, Iranian's undergraduate students had very high motivation and positive attitudes towards learning English and were more instrumentally motivated [10]. Dwaik and Shehadeh revealed that the Arab college learners (Southern Palestine) had strong extrinsic motivation for learning English [11]. Meanwhile, Geddes mentioned that securing a better job was known to be the primary reason among Korean college students learning English [12].

So far, studies on motivation to learn English have been done mainly in the context of English as a foreign/second language. Only few studies have ever dealt with the effects of globalization on EFL learner's motivation. Mehrpour and Vojdani investigated globalization and its impact on students' motivation and attitudes toward learning English as a foreign language in Iran [13]. Findings of the study presented a consistent picture which establishes the idea that new waves of motivational variables have emerged among Iranian EFL learners. Language and language learning motivation have been affected by the increasing connectedness of today's world due to globalization and technological advances. The results of the survey showed that technological, sociological and scientific aspects created or intensified through the process of globalization have affected Iranian EFL learners' motivation to learn English and have made them more instrumentally motivated. These studies represented the need to consider the changing role of motivation and attitude in lieu of the existence of the global village, globalization requirements and technological innovations. As a result, new constructs may be identified in the study of motivation and attitude in English language learning.

In a study of Indonesian middle school students, it was found that aspects of instrumental and integrative motivation were combined in the learners' developing "bicultural identities" [14]. While the learners saw themselves as connected to a global, English-speaking culture, they simultaneously maintained the aspects of the identity in which they were firmly rooted, that is the local Indonesian culture. In line with this, many studies on EFL learners' motivation have changed to a new perspective where learners create international identities while at the same time retain their own cultures [15]. In another study, the effects of globalization and global forces on integrative motivation of Indonesian children aged 11-12 years old, as they begin formal English in an urban junior high school [16]. His main idea revolved the notion of "integrativeness" which he believed to have greatly changed since the rise of globalization process. He argued that as English loses its association with particular Anglophone cultures and is instead identified with the powerful forces of globalization, the desire to integrate loses its explanatory power in many EFL contexts and therefore, the individuals learn English to develop a bicultural identity of their local culture at the same time as a member of the "global culture." Attaining English gives Indonesian young generation a sense of belonging to a worldwide culture and awareness of information, style and events of that. It is speculated that changes in individuals' motivation to learn the language may therefore be partly explained by reference to ongoing processes of identification which, in turn, may change through some social processes like globalization.

The recent study aimed to examine the motivation of college students from all departments under The Faculty of Teacher Training and Education at Universitas Muhammadiyah Purwokerto, in Indonesia towards learning English with respect to globalization. Based upon the situation elaborated above, this study was directed to answer the following questions: (1) To what extent does globalization affect the motivation of university students participating in the study towards learning English? (2) What becomes the strongest motivation for the participating university students towards learning English as a global language?

Discussion

The present study had a globalization perspective on Indonesian university EFL learners' motivation towards learning the most international language on earth today, i.e., English. Results of the study were organized according to the research questions mentioned earlier and discussed as follows.

Effect of globalization on students' motivation towards learning English

The questionnaire administered to collect data for this study were constructed on the basis of indicators from globalization perspective, including, among others, technological, communication, and information issues. Using the questionnaire, overall, motivation of the students participating in this study towards learning English fell into the category of high level. This was indicated with the average score of responses given by the participants to the questionnaire items, either items associated with instrumental motivation or those related to integrative motivation.

As can be seen in Table 1, out of 6 instrumental motivation-oriented indicators of learning English as global language, response given by the participants reached an average score of 4.14 on a 5-point rating scale.

Table 1. Students' instrumental motivation towards learning English as a global language

Aspects	Indicators	No. Items	Total	Average
Instrumental	Technology Mastery	1	1386	4.16
	Access to Information	2, 5, 6, 7, 8, 11, 12, 13	1382	4.15
	Global Communication	3, 4, 14, 16	1352	4.06
	Entertainment	10	1381	4.15
	Businesses	9	1334	4.01
	Int'l English Tests	15	1446	4.34
Average				4.14

Meanwhile, regarding integrative motivation, based on Table 2, the students' motivation towards learning English as a global language averaged 3.97 on the same rating scale basis.

Table 2. Students' integrative motivation towards learning English as a global language

Aspects	Indicators	No. Items	Total	Average
Integrative	Native Speaker	17, 19	1329	3.99
	Cultural	18, 20	1336.5	3.95
Average				3.97

From the limited number of studies that investigated motivation to learn English within the globalization perspective, it was revealed that, overall, globalization had impact on learners' motivation to learn the language, and that the impact has been strong enough. The present study concurred with most earlier studies discussed in the Introduction section above. However, looking closer at type of motivation, regardless of statistic test, the students participating in the study are more instrumentally motivated. Again, the data were in line with the existing literature, where some were presented in the previous section. A very relevant study conducted in Bangladesh showed that Bangladeshi students learnt English for practical purposes like getting high ranking jobs, undertaking higher studies, achieving success in career, etc. and not to assimilate themselves with the culture of the native speakers of English [17].

Quite possible the instrumental motivation of the students to learn English was so strong that they did not have further interest in adding other languages in spite of the fact that language skills diversity was required [18]. In Indonesia, some other foreign languages, namely German, French, Arabic, Japanese, Chinese Mandarin, and Korean) have been offered or introduced. However, becoming a global language, English seems like too strong to compete.

Students' strongest motivation towards learning English as a global language

Based on Table 1, those 6 indicators, namely learning English for mastering technology, learning English for accessing information, learning English for communicating with global communities, learning English for enjoying entertainment, learning English for doing business, and learning English for achieving success in international tests of English successfully shared an equal average score, with the last mentioned (learning English for taking international tests of English successfully) being the highest 4.34. The latter is worth discussing in a little more detail. In Indonesia English has its role as a foreign language in the entire Archipelago, normally with lack of exposure and practice. For Indonesian students, learning English is a matter of fighting for future career and excellent opportunities. All their efforts to prepare for future career challenges is to pass internationally recognized tests as part of the requirements. Quite often, to them this becomes obstacles at the very beginning. Research has shown that many Indonesian tertiary learners of English still face problems in doing international tests of English. Their problems, among others, were fewer basic skills, less practice, and less motivation [19].

As aforementioned in the introduction section, in the Indonesian context, no study on EFL learners' motivation has been conducted with regard to the current role of English as a global language. The existing similar researches have dealt with learners' motivation towards learning English as a foreign language. Anwar, et al., for instance, reported that the students believed learning English would help them with future career advancement [20]. Compared to this study by Anwar, the current research finding was more specific as to which part of future career or employment the students are most concerned with. This brings us insights into a direct, proper preparation the students and related parties have to make to achieve the goal at best.

Different language situation may explain different instrumental motivation the learners have towards learning English as a global language. Viewed from the status of the English language in the regions where the studies were conducted, a study on globalization effect on motivation towards learning English in Senegal, where English is taught as a second language, found that the students' primary instrumental motivation towards learning English was "to be able to speak with others from around the world who speak English as a foreign language [21], or for 'global communication' to borrow the term used in the current study. Thus, learners' instrumental motivation may vary from one country to another.

In dealing with integrative motivation, as seen from Table 2, the level of native speaker-oriented motivation and the target culture-oriented motivation was only slightly different. where the students were more native speakers-oriented. This fact can be associated with the role of English as a foreign language in Indonesia. Being in a foreign language situation, they are introduced to English at later ages and struggle with learning it – a "new" language introduced by some elementary schools (for children ages 6-12) or, taught later at junior high schools (for children ages 12-15) as a compulsory subject. Therefore, some highly motivated learners take their ways to combat barriers to learning, say, by getting themselves closer to native speakers in films, audio recording, foreign broadcasts, or "hunting" tourists, and mingling with foreigners whenever possible.

Finding of the current study is in agreement with Anwar (2020). He mentioned that the students "leaned their English learning orientation on the native speakerism issue." Thus, comparing the two types of EFL learners' integrative motivation, in Indonesia, the students tended to focus more on using English to connect with native speakers of English rather than on adapting to the new target culture associated with the native speakers of the language.

Conclusion

From the study results and discussion, a few main points have emerged. With regard to the research questions, this study yielded a couple of facts. Firstly, globalization has impact on the Indonesian college students' motivation towards learning English. Their motivation to learn the English language is strong and more instrumentally oriented. It is indeed ideal, as they have their own national language, Indonesian, to be proud of and to promote. Secondly, the strongest instrumental motivation among college students participating in this study towards learning English as a global language is to prepare themselves for international tests of English. Based on the research results, recommendations are warranted to vitalize training and development programs. Language programs which aim primarily to serve and prepare for international standardized tests of English, such as TOEFL and IELTS, should be intensified.

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Development of Law in The Field of The Tourism Industry in Bali During The Covid-19 Pandemic

Upik Mutiara[1]

Introcution

Efforts to improve legal development in the investment sector are a national legal program, considering that law in the investment sector is not only the work of the government but all governments, both central and regional, have the responsibility to jointly create a legal culture and a good economic culture. The investment climate not only guarantees profits for entrepreneurs and the sustainability of the country's development, but more than that, investment must have an impact on the community both economically, socially and culturally. District and City Governments, wanting to attract more foreign investors to invest in Indonesia, must shorten the bureaucratic chain. Because the length of the bureaucracy will be high cost and uneconomical as well as time-consuming, which in turn will weaken Indonesia's competitiveness in the global market. It is very natural, if we immediately fix this so that it will not be left behind by neighboring countries. The government must be able to raise the confidence of potential investors so that they want to invest in Indonesia.

This trust is highly coveted by investors, especially foreign investors. In addition to restoring this trust, the government must also complete the infrastructure. Because, the availability of infrastructure is also a condition for the creation of investment. Another thing that is no less important is the issue of industrial relations or labor issues, which in fact have high quality and legal certainty that protects the existence of investors. According [6] stated that:

The main issue in licensing that many business actors complain about usually refers to the export-import process of commodity goods, the process of managing business legalities which requires very many requirements with convoluted and bureaucratic procedures so that it takes a long time and requires no small cost. It does not stop there, often the

[1] Master of Law Study Program, Graduate Program, University of Muhammadiyah Tangerang, upikmutiara2020@gmail.com

form of licensing produced is inefficient due to the many overlapping regulations between central agencies and Regional Government Work Units (SKPD) and do not apply nationally.

Discussing the above, a common thread can be drawn that the development of law in the investment sector is a very complicated and complex matter, the vision as a great nation in terms of the utilization of natural resources and human resources that are more humane and just, absolutely requires a law that is constructed with ideals. and institutions so that it becomes a good and competitive legal system.

The Covid-19 pandemic is the most impactful disease outbreak in the history of Bali tourism. The number of tourist visits to Bali dropped drastically to 82.96%. This lack of tourists has implications for the closure of tourism businesses in Bali which results in financial losses of Rp. 9.7 trillion every month (BPSPB, 2021; Provincial Government of Bali, 04/09/2020). For example, during the five months between February-June 2020, Bali suffered a loss of IDR 48.5 trillion (BBC News Indonesia, 30/07/2020). In addition, Covid-19 has also caused 71,313 to 76,200 people to lose their jobs, either temporarily furloughed or laid off (BBC News Indonesia, 30/07/2020; PPB, 04/09/2020). Without tourist visits and the inoperability of the airport, Bali's tourism will be completely closed in April-June 2020. This condition requires special policies and appropriate actions to overcome this problem to restore Bali tourism.

Starting in July 2020, according to the results of consultations with the Central Government, the Bali government will reopen Bali tourism during the pandemic, especially for local Balinese and archipelago tourists so that tourism is alive and vibrant again. Another important policy taken in the effort to restore tourism is about health standards that must be applied by tourism service providers to provide comfort to those who are on vacation. In addition, the government has also re-promoted tourism destinations in Bali through the We Love Bali program to attract tourists to visit Bali. However, these policies and efforts have not been able to restore Bali tourism. Lately, investment cases often occur, so there is a need for a study of investment, especially in investment law, especially in the tourism sector in Bali.

Discussion

The Role of Investment Law in Tourism in Bali

During a pandemic like this, of course, it has an impact on the tourism sector, especially the decreasing level of investors entering to invest in one of the tourism sectors. One of the areas that has developed tourism is the Bali area. This island is a promising tourist spot. So before the pandemic, very many wanted to travel on the island of Bali. In arranging between investors and tour owners is to know what investment law is. In our investment law, Article 22 of Law No. 25 of 2007 concerning investment provides that investors are given the right to use land rights in the territory of Indonesia. Land rights that can be used by investment for investment activities are:

a. Hak Guna Usaha (HGU)

b. Building Use Rights (HGB)

c. Right of Use [1]

The rights to the land can only be renewed after an evaluation is made that the land is still being used and managed properly in accordance with the circumstances, nature and purpose of granting rights. Basically, Bali also has a lot of investment in land, especially villas and views of tourist attractions built by business people. The role of investment law in the tourism business during a pandemic like this is to assist in knowledge to understand the rules contained in investment law, especially in tourist areas.

Tourism in Bali During the Covid-19 Pandemic

According [5] the influence of tourism on economic growth by analyzing the number of tourists and foreign exchange tourism against the rupiah exchange rate in Indonesia in 2014, shows that tourism affects economic growth, and tourism growth (tourism foreign exchange and the number of tourists) and the exchange rate have a reciprocal causal relationship. back. This is as a result of the increase in tourism foreign exchange which increases (appreciates) the rupiah exchange rate. The results also show that the appreciation or depreciation of the rupiah will encourage an increase or decrease in tourism foreign exchange and the number of tourists at different times and there is a positive relationship and reciprocal influence between the number of tourists and tourism foreign exchange.

Tourism has become one of the main contributions to economic growth in many developing and developed countries. Tourism contributes to economic growth through various channels including foreign currency earnings, attracting international investment, increasing tax revenues and creating additional jobs [7]; [1]; [4]. The development of tourism also encourages and accelerates economic growth. Tourism activities create demand, both consumption and investment, which in turn will lead to the production of goods and services. During the tour, tourists will carry out shopping transaction activities, thus directly causing demand for goods and services market. Furthermore, tourists indirectly generate demand for capital goods and raw materials to produce to meet tourist demand for these goods and services. In an effort to meet tourist demand, investment is needed in the fields of transportation and communication, hospitality and accommodation, the handicraft industry and the consumer product industry, the service industry, and restaurants [8].

The development of tourism as an industry cannot be separated from demand and supply. Some future tourism trends include a growing interest in tourism. Tourists increasingly want real experiences with tourism and lifestyle, as well as consumers. To understand about Balinese Cultural Tourism taken by the government in the face of the Covid-19 pandemic and the reactions of local people to the policy of handling Covid-19 in Bali. This is done in an effort to accelerate the handling of this pandemic, because it is an urgent policy that must be immediately taken by the Bali Provincial Government (PPB) in an effort to restore Bali tourism, which has slumped since being hit by a global infectious virus at the end of December 2019.

With the PSBB policy, it clearly affects visitors/tourists from abroad who want to enter Indonesia, especially in Bali. It also affects investment. Due to the lack of visitors, investment is also sluggish, in fact there are many cases of fraud against Balinese residents, namely fraud cases in the field of fraudulent investments in this pandemic season. On average, the modes used by the cooperatives and the bankers suspected of being invited to cooperate are almost the same. The community of potential victims was seduced and lured by an asset rescue program in the form of cybercop deposits under the guise of a cooperative.

> *"Their method is to offer a 1 percent deposit investment interest and 3 percent cashback by the manager or marketing of the cooperative so that the community can save assets that are already directly responsible for the BPR and other banks," Budiartawan said* [5].

Basically, the average person does have debts at BPR or at other banks that are offered a system to save their assets. Even though that is their only mode of committing crimes under the guise of investment, especially in this difficult season of the pandemic, it will certainly happen in various other regions in Indonesia. The Bali Provincial Government issued a new regional regulation, namely Regional Regulation 5 of 2020 concerning Standards for Organizing Balinese Cultural Tourism which is an amendment to Regional Regulation Number 2 of 2012 concerning Balinese Cultural Tourism. This regional regulation complements Regional Regulation Number 2 of 2012 which previously only focused on the use of Hindu-based Balinese culture which was imbued with the Tri Hita Karana philosophy which was used as a cultural tourism attraction in Bali, both presented naturally (authentic attraction) and deliberately packaged and presented. For tourism or staged attractions [2]. Now Regional Regulation Number 5 of 2020 in detail regulates the Standards for the Implementation of Balinese Cultural Tourism to direct the development of higher quality Balinese cultural tourism, especially in tourism destinations, the tourism industry, tourism marketing and tourism institutions. In addition, this regulation also emphasizes the use of local wisdom and Balinese culture as a tourist attraction.

The preparation of Standards for the Implementation of Balinese Cultural Tourism adopts the philosophy of Tri Hita Karana and local wisdom of Sad Kerthi. Tri Hita Karana is the three causes of human happiness, namely a harmonious and balanced vertical relationship between humans and God as well as horizontal relationships between humans and each other and humans with nature or their environment which can be carried out and achieved through the implementation of five ritual activities or called panca yadnya, It consists of Dewa Yadnya (sacrifice for God), Human Yadnya (Sacrifice for Humans), Rsi Yadnya (Sacrifice for Priests), Pitra Yadnya (Sacrifice for deceased humans) and Bhuta Yadnya (Sacrifice for evil spirits).

The closure of access, attractions and tourism facilities resulted in the number of visits by domestic and foreign tourists to Bali dropping sharply. Moreover, since the issuance of Regulation of the Minister of Law and Human Rights (Permenkumham) Number 11 of 2020 dated March 31, 2020 which officially prohibits the arrival of foreigners to Indonesia including Bali to carry out tourism activities, the number of foreign tourist visits to Bali has decreased very drastically. (Table 1). Covid-19 has temporarily shut down the sparkling Balinese cultural tourism for three months (April-July 2020) until the reopening of Bali tourism for local tourists on July 09, 2020 which resulted in the termination of employment, especially tourism workers.

In general, the number of international tourist visits to Bali in 2020 decreased compared to 2019. In 2019, foreign tourist visits to Bali during the first semester (January - June) tended to increase, where in January there were 455,570 people who visited the Island of the Gods. . Then it increased until it reached 549,516 tourists in June and continued to increase sharply until it peaked in August, precisely during the high season, reaching 606,412 people. The last four months have tended to decline and are below six hundred thousand tourists.

Table 1. Number of foreign tourist visits to Bali per month in 2019 -2020

No.	Bulan	2019	2020
1	Januari	455.570	536.611
2	Pebruari	437.456	364.639
3	Maret	449.569	167.461
4	April	477.069	379
5	Mei	486.602	36
6	Juni	549.516	45
7	Juli	604.323	16
8	Agustus	606.412	12
9	September	590.398	8
10	Oktober	567.967	63
11	November	497.925	53
12	Desember	552.403	150
	TOTAL	6.275.210	1.069.473

Source: BPSPB, 2021

Along with the implementation of the policy regarding the adaptation of new habits, then on September 29, 2020 this Ministerial Regulation was amended by Minister of Law and Human Rights Regulation Number 26 of 2020 concerning Visas and Stay Permits during the New Customs Adaptation Period with the aim of providing opportunities for foreigners to enter Indonesian territory including Bali by using several types of stay permits such as service visas, diplomatic visas, visit visas, limited stay visas, official residence permits, diplomatic stay permits, limited stay permits and permanent residence permits with the terms and conditions of the health protocols that have been established by the Covid-19 handling agency established by the government.

However, visa-free visits and visa-on-arrival visits for 169 countries as stipulated in Presidential Regulation of the Republic of Indonesia Number 21 of 2016 dated March 2, 2016 regarding Visa-Free Visits are still temporarily suspended until there is an official decision from the ministry or the institution responsible for carrying out the handling of Covid-19 in Indonesia stating that the global Covid-19 disaster is over.

Investment Law

Investment law arrangements in general in Indonesia are based on Law no. 25 of 2007 concerning investment, which broadly distinguishes foreign direct investment (FDI) and indirect investment. Investment law regulation in particular, for example in banking law, both regulated in Law no. 7 of 1992 jo. Law No. 10 of 1998 concerning banking, as well as according to Law no. 21 of 2008 concerning Islamic banking, which requires a business license as a commercial bank and as a people's credit bank as well as a sharia commercial bank as well as a sharia people's financing bank. In addition, there is also fraudulent investment or investment fraud, which is a business activity in the form of collecting funds from the public which is contrary to the provisions of banking law, because it violates Article 46 of Law no. 7 of 1992 in conjunction with Law no. 10 of 1998 concerning Banking, as well as violating the provisions of Article 59 of Law no. 21 of 2008 concerning Islamic Banking, and qualified as a crime. The criminal law according to Article 378 of the Criminal Code threatens investment activities as a crime of investment fraud.

Stupid investment or also called investment fraud is a reality that is often encountered in society related to the practice of collecting funds from the public illegally, so it is more related to the provisions of Criminal Law. The term "bodong" is a term popularized by the mass media, which according to the Big Indonesian Dictionary, "Bodong" is defined as "the center pops out." Etymologically, bodong is a Sundanese term which is also referred to as an investment fraud. On that basis, investment fraud is the realm of Criminal Law which can be studied based on the provisions of fraud in the Criminal Code (KUHP).

Protection of the public as investors is very important, because people as investors are easily tempted, persuaded and deceived by fraudulent investment activities, either because of low legal awareness, ignorance, or because of the desire to get results without trying legally. Legal protection by using the provisions of Article 378 of the Criminal Code, Article 46 of Law no. 10 of 1998 in conjunction with Law no. 7 of 1992 concerning Banking, and based on Article 59 of Law no. 21 of 2008 concerning Islamic Banking, is legal protection related to law enforcement. However, efforts to prevent fraudulent investments from arising or rampant are in addition to being with the OJK, but also inseparable from efforts to educate the public, increase public understanding and awareness, which are part of preventive efforts.

The victims of fraudulent investments are generally people who already have excess funds, but are still not careful and are easily persuaded to invest their funds in companies that are not clear, companies that are relatively new and have not been tested for their existence as a business entity. In the context of law enforcement against fraudulent investments, it is also related to corporate crimes (corporate crimes) as stipulated in Article 46 paragraph (2) of Law no. 10 of 1998 in conjunction with Law no. 7 of 1992 concerning Banking, as well as those stipulated in Article 59 paragraph (2) of Law no. 21 of 2008 concerning Islamic Banking.

A limited liability company as a legal entity led by a board of directors, which is a position within the institution that is run mainly by a person referred to as a director, is the executive and leader of the company. When it is said that corporate crime or corporate crime, according [3], he explained that currently corporations or business entities in the business world can be held criminally responsible for criminal acts or unlawful acts committed by corporate agents who are dotted on behalf of the corporation.

With the proliferation of fraudulent investment activities, law enforcement efforts are not the only efforts that can be expected to eradicate fraudulent investments, but preventive efforts such as in the context of increasing public legal awareness, educational efforts (education) either through training, counseling or socialization are an important part which must be realized. Customers who are victims of investment fraud have suffered a lot of financial losses, so an understanding of investment activities by the public is very important. According [4], there are several ways to avoid investment fraud, including:

1. Look for information related to investment offers from various sources, either through friends or professionals who have been aware of the offer, so that from as much information as possible it is done before a decision is made.
2. Ask questions and get answers in writing like about the track record so far.
3. Ask questions and get answers in writing like about the track record so far.
4. Learn to be a critical thinker so that most of the persuasion of investment fraudsters is ignored.
5. If the investment offer makes lofty promises of high returns above the market average in a relatively short period of time, chances are that the offer is nothing but promises.

As the author has stated, that understanding and legal awareness of the community towards investment activities is very important, it means that the community must have intelligence, not be easily persuaded by grandiose promises with large profits or rewards in a short period of time, because in reality, even though they are physically limited liability companies or cooperatives, legal entities may be just a cover to convince the public that the managers of investment activities have legality.

Conclusion

During the Covid-19 pandemic, tourism everywhere is still sluggish due to the impact of the pandemic, especially tourism in Bali. Owners of tourist attractions must also know investment law, especially in collaborating with other parties, because of the many cases of fraud under the guise of investment, not only in tourism, but also in other fields, such as fraudulent investment based on fraud or loan solutions. So that potential victims become interested in offering solutions. In the Covid-19 pandemic season like this, we must be selective in choosing and be careful in investing, both in investment in the tourism industry such as lodging and fraudulent loan investments that are rife in various places. There is a need for in-depth knowledge and studies of investment law so that people are not deceived by fraudulent investments that often occur in the community. For the sake of creating an investment climate that can support the development of the Indonesian economy, especially in the tourism industry

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Supply Chain, Marketing Channels, and Cashew Nuts Market Performance in Central Regency, South East Sulawesi

Wa Ode Al Zarliani[1]

Introduction

The role of the agricultural sector is seen in the receipt of foreign exchange through exports, the use of labor as raw materials for domestic industries [1]. Cashew is a commodity that until now is one of southeast Sulawesi's leading commodities that annually experiences an increase in demand both in foreign countries. With such conditions, cashew is one of the leading and excellent commodities. Based on statistical data of Southeast Sulawesi Province in 2018, cashew production in Southeast Sulawesi has fluctuated in the last three years. The data shows that in 2015, the cashew production is 32,863 Tons, while in 2016 is decreased significantly to 23,190 Tons. In 2017, the cashew production was increased compared to the previous two years, with 34,907 Tons. Cashew is one of the subsector crops supporting the primary agricultural sector in the economy [2]. Therefore it needs to be maintained by improving the product quality and marketing chain [3].

The dynamics of cashew marketing challenges encountered by processing farmers and traders when entering the market field are price fluctuations [4], changes in cashew supply, competitive trading among traders, and low prices obtained by farmers/processing farmers. This circumstance relegates farmers to the role of price receivers rather than price determinants [5]. Additionally, cashew nut farmers must struggle with poor infrastructure, financial constraints (capital), and a lack of technological adoption. This dilemma is aggravated by farmers' restricted access to information, which means they cannot access the actual price development [6], [7]; otherwise, cashew nut demand is expanding to fulfill local, national, and worldwide markets. In facing this challenge, it is required to undertake a study and more analysis on the cashew marketing

[1] Department of Agribusiness, Faculty of Agriculture, Universitas Muhammadiyah Buton

channel, which encountered being one of the fundamental problems in Cashew nut marketing in Southeast Sulawesi.

The population in Lakudo subdistrict, particularly in Moko village, is made up of cashew farmers who also engage as processing farmers. Farmers in Moko Village are unique in that they operate as cashew producers but do not sell cashews to village collecting traders or inter-island traders. Instead, the cashews produced are kept in their own house to fulfill marketing functions: drying cashew while waiting for the selling price is lucrative. Even if demand grows, the Moko farmers will purchase cashew logs from inter-island traders and farmers to conduct production activities themselves in converting cashew to cashew nut with a high selling value at the right time.

This study evaluates the cashew nut supply chain, marketing channels, and market performance in Moko village. This study employs both quantitative and qualitative methods. Quantitative analysis is used to assess market performance, which is determined by marketing margins, the profits of each marketing agency, marketing efficiency, technical efficiency, and economic efficiency. In contrast, qualitative analysis is used to understand the marketing channel pattern and the cashew nut supply chain.

Discussion

Market Performance is the outcome of the efforts of enterprises, both processing producers and traders, in the marketing process. In this instance, it is critical to identify marketing channels; market performance may be determined by analyzing margin, marketing expenditures, profit, mileage, and the volume of cashew nuts disseminated in the distribution of cashew nuts to the end customer. Thus, the marketing channel is the path taken by a commodity from processing producers through marketing agencies and finally to the ultimate customer. In this situation, marketers, or traders, perform marketing functions such as drying, grading, sorting, and packing. While farmers and processors do not perform marketing functions, the quality of cashew nuts produced masinh contains a high moisture content and various cashew nut sizes, whereas traders make cashew nuts with high moisture content and sort cashew nuts to make a variety of cashew nut sizes/classes. As a result, the Lakudo sub-district has built the following cashew nut selling routes:

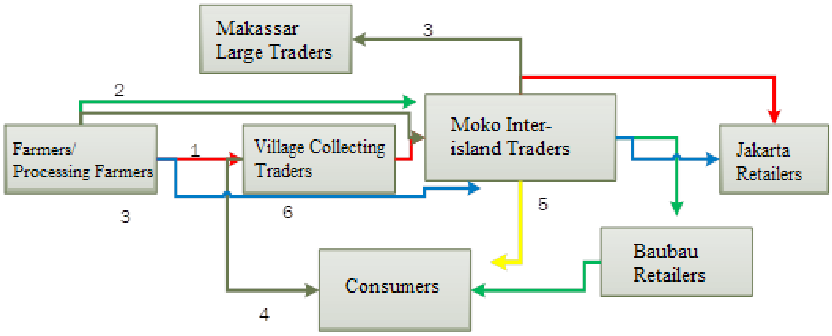

Figure 1. Cashew Nut Marketing Flow in Moko Village

Marketing Channel Pattern 1

Traders involved in the marketing channel pattern 1 are processing farmers/processors, village collecting traders, inter-island traders and Jakarta retailers. This pattern depicts that the shelled cashew nut product produced by the processing farmers will then purchased by village collecting traders. Furthermore, the village collecting traders carry out drying activities to reduce the water content frow the shelled cashew so it will not be easily damaged/moldy. When the product ready, the village collecting traders sell cashew nuts to inter-island traders, then inter-island traders sell cashew nuts in the city of Jakarta, primarily to retailers who buy ready-to-eat cashews and white cashews. The retailers in question are Toko Surya, Marisa Lestari and Timur Jaya.

Tabel 1. Analysis of margins, costs and profits of marketing agencies in cashew marketing channel pattern 1

No	Market Players	Price (IDR Kg^{-1})	Total Margin (IDR Kg^{-1})
1.	Farmers/ Procesing farmers		
	Selling price	132.500	
2.	Village Collecting Traders		
	Purchase price	132.500	22.500
	Sack	70	
	Plastic	48	
	Depreciation cost	2.025	
	Drying cost	150	
	Packadging	150	
	Total cost	2.443	
	Selling price	140.000	
	Margin	7.500	
	Profit	5.057	
3.	Inter-island Traders		
	Purchase price	140.000	
	Selling price	155.000	
	Margin	15.00	
	Packacdging wages	150	
	Drying wages	150	

	Sack	82
	Plastic	28
	Depreciation cost	2.100
	Shipping cost	1.375
	Labor wages	40
	Transportation	250
	Unloading fee	100
	Sortation cost	1.000
	Phase 1 Cost	5.125
	Packdge	250
	Packdging	150
	Labor wages	150
	Warehouse transportation	80
	Retailers transportation	667
	lorry wages	167
	Phase 2 Cost	1.464
	Total cost	6.589
	Profit	8.411
3.	Jakarta Retailers	
	Purchase price	155.000

Analysis for margin, costs and profits of village collecting traders

At the farmer / processor level, the average selling price is IDR 132,500 / kg, with a price range of IDR 120,000–IDR 145,000 / kg. Village collecting traders pay a total cost of IDR 2,443 / kg for marketing operations, which includes drying costs of IDR 150 / kg, packing costs of IDR 150 / kg, shrinking costs of IDR 2,025 / kg, purchasing sacks at IDR 70 / kg, and plastic at IDR 48 / kg. Village collecting traders are not responsible for transportation or cashew nut labor expenditures in this scenario since family members perform these operations and the village collector's house and the inter-island trader's house are just 30 meters apart. At the village collector level, the average selling price of cashew nuts is IDR 146,000 / kg, with a price range of IDR 142,000 - IDR 150,000 / kg, resulting in a marketing margin of IDR 10,000 / kg and a profit of IDR 5,057 / kg.

Analysis for margin, costs and profits of inter-island traders pattern 1

Information Table 1 shows that the purchase price for cashew nuts at the level of inter-island traders is IDR 140,000 with a price range of IDR 130,000 – IDR 150,000 / kg. In the process of marketing cashew nuts, inter-island traders pay a total cost of IDR 5,125 for phase one which includes transportation costs to Baubau IDR 250 / kg, packaging, IDR 150 / kg, drying IDR 150 / kg, sack IDR 82 / kg, plastic IDR 28 / kg. , shrinkage costs IDR 2,100 / kg, container costs IDR 1,375 / kg, labor wages of 40 kg. loading and unloading IDR 100 / kg, inter-island traders pay a second phase fee of IDR 1,464 including transport costs to warehouse IDR 80 / kg, packaging IDR 150 / kg, labor wages IDR 150 / kg, lorry wages IDR 167 / kg, transportation to retailer IDR 667 / kg, packaging 250 / kg, the total cost incurred in the process of selling cashews to retailers is IDR 6,584 / kg.

The selling price of cashew nuts to retailers is IDR 150,000 - IDR 160,000 / kg with an average IDR 155 / kg price. Based on the selling price and the purchase price, a marketing margin of IDR 15,000 / kg is obtained, with a profit received of IDR 8,411 / kg.

Marketing Channel Pattern 2

Tabel 2. Analysis of margins, costs and profits of marketing agencies in cashew marketing channel pattern 2

No	Market Players	Price (IDR Kg^{-1})	Total Margin (IDR Kg^{-1})
1.	Farmers/ Processing farmers		
	Selling price	137.500	
2.	Inter-island Traders		
	Purchase price	137.500	22.500
	Transportation	300	
	Labor wages	40	
	sack	70	
	Plastic	48	
	Depreciation cost	2.063	
	Drying cost	150	
	Packadging	150	
	Sortation cost	1.000	
	Total cost	3.821	
	Selling price	150.000	
	Margin	12.500	
	Profit	8.679	
3.	Baubau Retailers		
	Purchase price	150.000	
	Selling price	160.000	
	Packadge	350	
	Packadging wages	250	
	Total cost	600	
	Margin	10.000	
	Profit	9.400	

Marketing channel pattern 2 shows farmers/processing farmers selling cashew nuts product to inter-island traders without going through village collecting traders. Furthermore, the cashew nuts are sold to retailers in Baubau. However, the amount of sales is only small and not continuous. Inter-island traders will make deliveries to Baubau when there is a demanding range of 20 - 50 Kg. In this condition, it can be explained that the primary destination for inter-island traders for sending is outside Sulawesi to carry out the processing activities of the cashew and partly to buy cashew nuts from the village collecting traders / processors.

Analysis for margin, costs and profits of inter-island traders pattern 2

Traders involved in marketing cashew nuts in pattern 2 are processing farmers, inter-island traders, and Baubau retailers. The average purchase price for cashew nuts at the inter-island traders level is IDR 137,500 / kg with a price range of IDR 130,000 - IDR 145,000 / kg. Inter-island traders in Moko Village sell the cashew nuts to retailers at a selling price of IDR 150,000 / kg. In selling cashew nuts, the total cost incurred is IDR 3,821 / kg, marketing margin is IDR 12,500 / kg, and the profit received is IDR 8,679 / kg.

Analysis for margin, costs and profits of retailers pattern 2

Information Table 2 shows that Baubau retailer (Rumah Makan Harapan) buys cashew nuts from inter-island traders for IDR 150,000 / kg. In the process of selling cashew nuts, retailers pay a total cost of IDR 600 / kg including packaging costs of IDR 350 / kg, packaging wages of IDR 250 / kg, marketing margin at the retailer level of 10,000 / kg, with a profit rate of IDR 9,400 / kg. The margin, cost and profit analysis results show that retailers get higher profits compared to inter-island traders. This is due to the large number of costs that inter-island traders must incur and the condition of the occurrence of fluctuations is felt more by inter-island traders, while the prevailing price at the retailer level is stable. Furthermore, it can be explained that the price changes that prevail at the retailer level do not experience fluctuation as well as the amount of cashew nuts that consumers buy is only one to two kg. This situation is supported by the results in the field that the selling price of cashew nuts at the retailer level did not change significantly.

Marketing Channel Pattern 3

Traders involved in marketing pattern 3 cashews in Moko Village are farmers/processing farmers, inter-island traders and Makassar Large Traders. The margins, costs and benefits of each marketing agency can be seen in Table 3.

Tabel 3. Analysis of margins, costs and profits of marketing agencies in cashew marketing channel pattern 3

No	Market Players	Price (IDR Kg^{-1})	Total Margin (IDR Kg^{-1})
1.	Farmers/ Procesing farmers		
	Selling price	112.500	
2.	Inter-island Traders		
	Purchase price	112.500	35.000
	Transportation	300	
	Labor wages	40	
	sack	82	
	Plastic Bag	28	
	Depreciation cost	1.688	
	Drying cost	150	
	Packadging	150	
	Sortation cost	1000	
	Total cost	3.438	
	Selling price	122.500	
	Margin	10.000	
	Profit	6.562	
3.	Makassar large traders		
	Purchase price	122.500	
	Selling price	142.500	
	Sending price	1.467	
	Labor wages	100	
	Total cost	1.567	
	Margin	20.000	
	Profit	18.433	

The cashew nut marketing channel pattern 3 shows that farmers/ processing farmers sell cashew nuts product to inter-island traders who also act as a cashew nut producer. After the cashew nut is ready to be sold, the inter-island traders will carry out seilling activities to large traders in Makassar (Benteng Mas Company), the number of cashews sold in sales is large shipment reaching 5 tons in every shipment.

Analysis for margin, costs and profits of inter-island traders pattern 3

Processing farmers sell the cashew nut to inter-island traders with an average selling price of IDR 112500 / kg with a price range of IDR 105,000-120,000 / kg. The average selling price of inter-island traders to the Benteng Mas Makassar Company is IDR 122,500 / kg, with IDR 115,000 - IDR 130,000 / kg. In addition to buying from processing farmers, inter-island traders also carry out pengacipan activities. In marketing these cashew nuts, inter-island traders spend a total of IDR 3,438 / kg. Costs incurred include transportation / transportation to Baubau IDR 300 / kg, labor wages IDR 40 / kg, sorting IDR 1,000 / kg, bagging cashew IDR 10,000 / kg cashew nuts, drying IDR 150 / kg, packaging IDR 150 / kg, sacks. IDR 82 / kg, plastic IDR 28 / kg, shrinkage IDR 1,688. Based on the epidermis cashew nuts' purchase price and selling price, a margin of 10,000 / kg was obtained, and the profit received was 6,562 / kg.

The marketing process of white cashew nuts by inter-island traders and Makassar large traders (Benteng Mas Company) is related to transactions carried out by Makassar traders who come directly to the inter-island traders. The whole cost starts from Baubau port including the cost of the container, the wholesaler bears the labor costs. The selling price ranges from IDR 135,000 - IDR 150,000 / kg with an average price of cashew nut shells of IDR 142,500. Costs incurred IDR 1,567 / kg, marketing margin of IDR 20,000 / kg with profits received of IDR 18,433 / kg.

Marketing Channel Pattern 4

Marketing channel pattern 4 indicates a simple marketing funnel. The pattern depicts that the cashew nut product purchased from processing farmers will directly be resold to the consumers by village collecting traders. In this condition, the village collecting traders accept cashew nuts at home. Sales made are incidental, meaning that village collecting traders carry out sales activities to direct consumers. However, this is not the main objective. Consumers who make purchases are employees who are domiciled in Baubau but work in the Central Buton Regency. The cashew nuts produced by the village collecting traders are addressed to inter-island traders with family ties (siblings).

The marketing channel pattern 4 involves processing farmers and village collecting traders. Processing farmers sell the cashew nuts they produce at an average purchase price of IDR 132,500 / kg with a price range of IDR 120,000 – IDR 145,000 / kg. In this condition village collecting traders have spent IDR 2,773 / kg to produce cashew nuts ready for sale. Costs incurred include drying costs, IDR 150 / kg, sacks IDR 70 / kg, packaging costs IDR 150 / kg, plastic costs IDR 28 / kg, depreciation cost IDR 2,025. Village collection traders carry out direct sales to final consumers at IDR 145,000-IDR 150,000 / kg. At the time of sale to the final consumer there is a packaging cost of IDR 350 / kg so that the total expenditure is IDR 2,459 / kg, marketing margin is IDR 17,500 / kg, profit received is IDR 15,041 / kg. The margins of costs and profits of village collecting traders can be seen in Table 4.

Tabel 4. Analysis of margins, costs and profits of marketing agencies in cashew marketing channel pattern 4

No	Market Players	Price (IDR Kg^{-1})	Total Margin (IDR Kg^{-1})
1.	Farmers/ Procesing farmers		
	Selling price	132.500	
2.	Village Collecting Traders		
	Purchase price	132.500	15.000
	sack	70	
	Plastic Package	350	
	Depreciation cost	2.025	
	Drying cost	150	
	Packadging	150	
	Plastic Bag	28	
	Total cost	2.773	
	Selling price	147.500	
	Margin	15.000	
	Profit	12.227	

Table 4 shows that, the marketing margin obtained is smaller than the marketing channel pattern one, pattern two, pattern three, the costs incurred are IDR 2,459 / kg and the profit received is IDR 15,041. Margin analysis provides information that the profit received by village collecting traders/processors is higher when selling cashew nuts directly to consumers than selling cashew nuts to inter-island traders. However, the amount of cashew nuts sold to end consumers is only a small part and occurs incessantly or at times and is uncertain and is not the main objective so that the profit received is also small when compared to sales of inter-island traders selling cashew nuts in large quantities. The amount of cashew nuts that are sold directly to the final consumer is IDR 70 / kg in one season.

Marketing Channel Pattern *5*

The cashew nut marketing channel pattern 5 demonstrates that processing farmers sell their own cashew nuts to inter-island traders. Inter-island traders then sell cashew nuts directly to end consumers, which primarily marketing destination is for sales are retailers located outside Southeast Sulawesi. In addition, inter-island traders accept cashew nuts purified during the marketing process. Therefore, the selling price of cashew nuts in the marketing channel pattern 5 is the same as the marketing channel pattern 4.

The marketing channel for cashew nut pattern 5 involves farmers/ processing farmers and inter-island traders. Processing farmers sell the cashews to inter-island traders at an average selling price of IDR 137,500 / kg. In marketing functions to the ready-to-sell cashew nut stage, inter-island traders pay a total cost of IDR 3,811 / kg. includes packaging costs IDR 150 / kg, drying IDR 150 / kg, shrinkage costs IDR 2,063 / kg, sacks IDR 70 / kg, plastic IDR 28 / kg, sorting IDR 1,000 / kg, packaging IDR 350 / kg. The selling price is IDR 145,000-IDR 150,000 / kg with an average selling price to consumers of IDR 147,500 / kg. Marketing margin IDR 10,000 / kg, profit received IDR 6,189 / kg.

The results of the market margin analysis show that inter-island traders receive greater profits when compared to the profits obtained in channel one, pattern two, and channel three. However, if you calculate the amount of profit received, the number of cashews sold is more significant. This is because the process of selling cashews directly to consumers is 100 kg in one season. The margins, costs and profits of inter-island traders are presented in Table 5.

Tabel 5. Analysis of margins, costs and profits of marketing agencies in cashew marketing channel pattern 5

No	Market Players	Price (IDR Kg^{-1})	Total Margin (IDR Kg^{-1})
1.	Farmers/ Procesing farmers		
	Selling price	137.500	
2.	Inter-island Traders		
	Purchase price	137.500	10.000
	Packadge	350	
	sack	70	
	Plastic Bag	48	
	Depreciation cost	2.063	
	Drying cost	150	
	Packadging	150	
	Sortation cost	1.000	
	Total cost	3.811	
	Selling price	147.500	
	Margin	10.000	
	Profit	6.189	

Marketing Channel Pattern 6

Marketing channel pattern 6, farmers/processing farmers sell the cashew nuts they produce to inter-island traders, Moko Village, then inter-island traders carry out marketing function activities such as drying, sorting, grade, packaging. The cashew nuts are then sold to retailers in Jakarta.

Inter-island traders buy cashew nuts from processing farmers at prices ranging from IDR 120,000 - IDR 146,000 / kg with an average IDR 133,000 / kg. In marketing the cashew nuts, inter-island traders carry out marketing function activities. The activities of the marketing function carried out by inter-island traders in Moko Village when selling cashew nuts to Jakarta retailers incur the same total costs both for packing, drying, sorting, drying and the transportation equipment used. The marketing function activities incur costs. stage one IDR 5,025 / kg and stage two IDR 1,460 / kg. The total cost incurred is IDR 6,484 / kg. The selling price of these cashew nuts to retailers is around IDR 135,000 - 160,000 / kg, with an average price of IDR 147,500 / kg. Based on the selling price and the purchase price, the marketing margin was IDR 14,500 / kg, and the profit received was IDR 8,016 / kg. The margins, costs and profits received by each marketing agency are presented in Table 6.

Tabel 6. Analysis of margins, costs and profits of marketing agencies in cashew marketing channel pattern 6

No	Market Players	Price (IDR Kg^{-1})	Total Margin (IDR Kg^{-1})
1.	Farmers/ Processing farmers		
	Selling price	133.000	
3.	Inter-island Traders		
	Purchase price	133.000	14.500
	Selling price	147.500	
	Margin	14.500	
	Packaging wages	150	
	Drying wages	150	
	Sack	82	
	Plastic	28	
	Depreciation cost	2.100	
	Shipping cost	1.375	
	Labor wages	40	
	Transportation	250	
	Unloading fee	100	
	Sortation cost	1000	
	Phase 1 Cost	5.025	
	Package	250	
	Packaging	150	
	Labor wages	150	
	Warehouse transportation	80	
	Retailers transportation	667	
	lorry wages	167	
	Phase 2 Cost	1.464	
	Total cost	6.484	
	Margin	14.500	
	Profit	8.016	
3.	Jakarta Retailers		
	Purchase price	147.500	

Cashew Nut Marketing Efficiency

There are six cashew nut marketing channels in Moko Village. Based on the information in Table 7, it is obtained that different marketing efficiency values between patterns 2, 4, and pattern 5, but in patterns 1 and 3 have the same efficiency values. The margins, selling price and marketing efficiency of cashew nuts are presented in Table 7

Tabel 7. Magin, costs and efficiency of cashew marketing in Moko Village

Marketing Channel Pattern	Marketing Margin	Trader's selling price	EP = 1 – M/He x 100%
Pattern 1	22.500	155.000	86
Pattern 2	22.500	160.000	85
Pattern 3	35.000	147.500	77
Pattern 4	15.000	147.500	90
Pattern 5	10.000	147.500	93
Pattern 6	14.500	147.500	90,2

Based on the information in Table 7, it shows that pattern 1 receives a total margin of IDR 22,500 / kg which is distributed to village collectin traders in Moko Village IDR 7,500 / kg or 33.33 percent of inter-island traders IDR 15,000 / kg or 66.67 percent. The difference in the marketing margins at the village-level traders and inter-island traders is the number of activities of marketing functions carried out by inter-island traders. This is done to be able to produce quality cashew nuts with a long shelf life of about six months with the destination of marketing is the city of Jakarta. However, in this situation, the final consumer is the purchase of retailers from inter-island traders of Moko Village. The results of the marketing efficiency analysis of pattern one obtained an EP value of 85 percent, indicating an efficient cashew nut marketing system, which means that 85 percent of consumer payments are also felt by cashew nut producing processing farmers.

The second pattern marketing channel received a total marketing margin of IDR 22,500 / kg distributed to inter-island traders of IDR 12,500 / kg or 55.56 percent and retailers of Baubau City IDR 10,000 / kg or 44.44 percent. In this condition, it can be explained that the cashews being sold are in the form of cashew nutshells. The last consumer in this marketing route is the Makassar wholesaler selling price. The findings of the marketing efficiency analysis acquired a value of 86 percent. This score represents the efficient marketing of cashew nuts. Based on the analysis of pattern one and pattern two marketing channel patterns receive the same total margin but obtain a different marketing efficiency value with the marketing efficiency value of pattern one is more efficient than the efficiency of solid pattern marketing. This is because the selling price at the retail level of pattern one is cheaper when compared to the selling price of inter-island traders to retailers.

The three-pattern marketing channel receives a total margin of IDR 35,000 / kg which is distributed to inter-island traders of IDR 10,000 / kg or 28.6 percent and wholesalers of Makassar City IDR 25,000 / kg or 71.4 percent. The results of the marketing efficiency analysis obtained a value of 77 percent indicating that the cashew nut marketing system that was formed was efficient, which means that 77 percent of retailer payments were also enjoyed by processing farmers.

The marketing channel pattern 4 receives a marketing margin of IDR 15,000 / kg. This marketing channel is a one-level marketing channel that involves only one s to reach the end consumer. The results of the efficiency analysis show that the EP value is 90 percent. The value of the marketing efficiency in pattern four is due to the shorter marketing chain and smaller marketing margins when compared to the marketing channels of pattern 1 <2 and 3.

Marketing channel pattern 5, inter-island traders receive a total margin of IDR 10,000 / kg. In this condition, the traders sells cashew nuts directly to the consumer. The results of the analysis showed that the marketing efficiency value was 93 percent. This value indicates that the cashew nut marketing system formed is efficient, which means that 93 percent of consumer payments are also enjoyed by processing farmers.

The marketing channel of the five inter-island traders received a total margin of IDR 14,500 / kg, the total cost incurred to the retailer (end consumer) was IDR 6,484 / kg with a profit rate of IDR 8,016 / kg. Therefore, the analysis results obtained a marketing efficiency value of 90.2 percent, which means that the cashew nut marketing system is efficient.

In general, the cashew nut marketing system formed in Moko Village, Lakudo District, Central Buton Regency is efficient, indicated by the value of marketing efficiency greater than 50 percent. Among all the cashew nut marketing channel patterns, pattern five gets a EP value of 92 percent greater when compared to pattern 1, pattern 2, pattern 4 while pattern 3 gets an EP value of 77 percent. The low value of marketing efficiency is due to the length of the marketing chain that is formed, the amount of costs incurred so that it has a direct impact on the marketing margins received [8], [9] Marketing channel pattern 5 is a marketing channel that is less economically efficient than other channel patterns because retailers differentiate products which cause high marketing costs resulting in an increase in selling prices at the consumer level. With the existence of a high selling price, it is directly proportional to the level of profit received, the higher it is. From the results of the analysis carried out, it can be explained that the benefits received by each marketing agency vary according to the amount of costs incurred. This explanation is in line with the opinion of Nurland [10], which states that the profit of each trader varies depending on the size of the role or activity and the risk received or the size of the cost in marketing a product.

The findings are in line with the opinion of Asmarantaka [11] which states that marketing agencies that differentiate products can increase the profits received. The more differentiated a product is, the greater the power the traders has over the consumer. This explanation is emphasized by Tomek [12], Malau [13] Philip Kotler, [14] which states that differentiation of a product carried out by business actors at a certain level can affect productive activity in controlling price-fixing factors and competing to make creative innovations in products and provide ample opportunities for producers to manage and determine market strategies. on the other hand, product differentiation imposed by a marketing agency can be an inhibiting factor for the market [15].

In general, it can be concluded that the more differentiated the products sold by the traders, the higher the selling price offered by the traders, which means the greater the marketing margin received. This situation causes the marketing system to be less efficient.

Technical efficiency and economic efficiency

The technical efficiency index and economic efficiency for each marketing channel are different. According to the information in Table 8, it shows the marketing channel pattern 1b covers a distance of 1822.82 km, the total cost is IDR 9,032 / kg, resulting in the smallest technical efficiency index of 5.05, which means that every one kilometer of distance costs IDR 5.05 to market every one kilogram of beans. cashew nuts while the economic efficiency index is 1.49, it means that for every one rupiah it costs to market one kilogram of cashews, you will get a profit of IDR 1.49.s

Marketing channel pattern 2 with a distance of 46.22 km, a total cost of IDR 4,421 produces a technical efficiency index of 97.11, which means that every one kilometer of distance costs IDR 97.11 to market one kilogram of cashews. In contrast, the economic efficiency index is 1.36 means that each one rupiah in costs incurred to market one kilogram of cashews will receive a profit of IDR 1.36.

Pattern 3 marketing channel covering a distance of 420 km produces a technical efficiency index of 12.09, which means that every one kilometer of mileage costs IDR 12.09 to market one kilogram of cashews, while the economic efficiency index of 4.99 means that every one rupiah costs to market one kilogram of cashews will receive a profit of IDR 4.99.

Tabel 8. Technical and economic efficiency in cashew marketing channels in Moko Village, Central Buton Regency, 2018

Cahannel Pattern	Marketing Costs (Vij)	Final Weight (Wij)	Transport Distance (dij)	Total Profit (Σπijk)	Technical Efficiency (Tij)	Economic Efficiency (Eij)
1	9.032	0,97	1822,82	13.468	5,05	1,49
2	4.421	0,985	46,22	18.079	97,11	1,36
3	5.002	0,985	420	24.995	12,09	4,99
4	2.773	0,985	1	12.227	2.815	4,41
5	3.811	0,985	1	6.189	3.869	1,62
6	6.484	0,985	1822.82	8.016	3,61	1,24

The technical efficiency index in the marketing channel pattern 4 is 2,815, which means that every one kilometer traveled costs IDR 2,815 to market one kilogram of cashews, while the economic efficiency index is 4.41, which means that every one kilogram of costs incurred to market 1 kilogram of cashews will receive a profit of IDR 4.41.

The technical efficiency index in the marketing channel pattern 5 is 3,869, which means that every one kilometer traveled costs IDR 3,869 to market each kilogram of cashews will earn IDR 3,869.

For the marketing channel pattern 4, the technical efficiency index value is 3.61, which means that for every one kilometer of marketing, one kilogram of cashew nuts costs IDR 3.61 while the economic efficiency index value is 1.24, which means that every one rupiah costs incurred in marketing one kilogram cashew nuts will earn IDR 1.24.

Based on the results of the technical efficiency index analysis, pattern marketing channel 1 is 5.05, pattern 2 channel is 97.11, channel pattern 3 is 12.09, channel pattern 4 is 2.815 and channel pattern 5 is 3.869 and pattern 6 is 3.61. Of the overall marketing channels with the lowest technical efficiency index, pattern 6 is the marketing channel, so it can be concluded that it is the most efficient. This 6 pattern marketing channel has the farthest distance among other marketing channels but has the lowest technical efficiency index of 5.055. This situation illustrates that the long distance state will not cause the marketing channel to be technically inefficient. This is due to the large volume of sales, transportation of products based on the bulk system to reduce marketing costs. This explanation differs from the opinion of Calkins and Humeiwang [16] in their research findings that the marketing channel with the closest distance produces the lowest technical efficiency index so that it can be declared the most efficient.

According to the information Table 8 shows that over all of the five marketing channel patterns that have the largest economic efficiency index are found in the channel pattern 3 marketing channel of 4.99. This situation illustrates that channel pattern 3 is the most efficient marketing channel compared to pattern marketing channels 4, 5, 1 and channel marketing patterns 2.

Suply Chain Analysis

In the process of procuring cashew nut products, until the stage of sending cashew nuts to consumers, there are 3 streams which are one integrated unit. A supplay chain study begins with coordination, scheduling, and control of the procurement of raw materials, products, inventory, and product delivery. To produce cashew nuts ready for delivery, of course, go through a process of coordination between processing farmers and inter-island traders and processing traders regarding the amount of cashew nut supply, the prevailing price, the quality of the cashews produced, including the time of sale. This condition is adjusted to the readiness of retailers who will buy, including ship services that will transport cashew nuts. Cashew nut supply availability and quality will affect the selling price. The traders will carry out additional activities including drying, sorting and packing according to the grade requested by the retailer. It is classified as super jumbo, jumbo, broken and shredded cashew nuts in the cashew nut class. Inter-island traders will make deliveries only after an agreement has been reached with the buyers, including a price agreement preceded by extensive coordination and communication, including a direct meeting between the supplier and the recipient of the supply, but an should follow the agreement. Cooperation contract based on law in front of a notary so that it has legal force when one party does not do what is agreed in the contract can be followed up legally. Thus both parties obey the cooperation contract because there are sanctions received.

Conclusion

This study concludes 4 findings, first, there are 6 marketing channels applied at the research location, namely marketing channel pattern 1 (Farmers/Processing Farmers → Village Collecting Traders → Inter Island Trader → Jakarta Retailers), marketing channel pattern 2 (Farmers/Processing farmers → INTER-ISLAND TRADERS → Baubau retailers), marketing channel pattern 3 (Processing farmers → INTER-ISLAND TRADERS → Makassar Large Traders), marketing channel pattern 4 (Processing Farmers → Village Collecting Traders → Consumers), marketing channel pattern 5 (Processing farmers → INTER-ISLAND TRADERS → Consumers), marketing channel pattern 6 (Processing Farmers → Inter-Island Traders → Jakarta Retailers). Marketing Channel Pattern 6 is the most chosen channel occurring in the Marketing field. Second, based on marketing margins and marketing efficiency, pattern 5 marketing channels are the most efficient (93%) compared to other channels. From the technical efficiency, pattern 6 is the most efficient marketing channel at 3.61 while from economic efficiency, pattern 3 is the most efficient (4.99) compared to other marketing channels. The cashew nut supply chain network has been preceded by coordination and communication from various market players including processing farmers, village collecting traders, inter-island traders, retailers from various regions in the city of Jakarta, Makassar, Baubau. The cashew nut supply chain network is a systematic sequence that has been established and intense communication starts from scheduling the procurement of raw materials, processing, coordination, price information, the amount of supply available and needed, delivery services to the certainty of product delivery. This supply chain is preceded by various agreements, but they are not yet strong because they are not based on a legally enforceable contract so that things could happen - losses from one of the members of the supply chain, both for processing farmers and retailers.

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Poor Recovery Instrumental Activities of Daily Living Among Depressed Elderly Following Hip Fracture Surgery

Wantonoro[1]

Introduction

Hip fracture incidence increased following world aging population [4]; [11]; [19] . Surgical treatment including internal fixation or arthroplasty are standard to restore the function and the decrease in secondary complications [12]; [13]; [22] . However, study shown that surgical treatment is followed frequently by complications, such as dislocation, infection and, risks of death [7]; [9] . Hip fracture injuries identified serious healthcare problems affecting the elderly [4]; [16] . Survival elderly with hip fracture was reported experiencing loss of functionality, including the instrumental function [14]. In addition, mortality risks up to 50% of this population was reported [6]; [26] . It is shown that older person who received hip still have a problem after hospital discharge.

Depressed status [8]; [10] was found as the problem and also predictor of the outcomes for this population, including instrumental activities of daily living (IADLs) [29], [15]; [27]. Study reported that up to 47% of the older people with hip fracture was depressed [23]. The goal for the medical staff is to give the elderly people the ability to live independently, including for the depressed elderly who had received hip surgery. Indonesia differs substantially from the developed country in the health care system, clinical practice, culture and social organization, such as the insurance program and public facilities. Identified specific intervention are needed in order to handle depressed elderly with hip fracture in following specific area.

The information from a functional assessment provides objective data to assist targeting individualized rehabilitation needs or to plan for development for specific services in home services such as nursing care program, home-maker services, personal care, or continuous supervision

[1] Nursing Department, Universitas 'Aisyiyah, Yogyakarta. Indonesia, oneto_ns@yahoo.com

for this vulnerable population. Information of recovery IADLs among depressed elderly following hip fracture surgery may help the health care providers predicting the prognosis of the patients more precisely, providing a reference for timing of outcome assessment, and assisting them in developing a timely management approach to shape, control or change the course of the instrumental ability after hip fracture.

This paper reported our study in exploring the changes of recovery IADLs among depressed elderly following surgical hip fracture during the first 6 months. Longitudinal study outcome IADLs was collected at 1st, 3rd and 6th months after hospital discharge. IADLs were assessed by using the Indonesian version of Lawton and Brody's with Cronbach's alpha 0.66. A summary scored ranges from 0 (low function, dependent) to 8 (high function, independent). General accepted rule is that Cronbach's alpha of 0.6 - 0.7 indicates an acceptable level of reliability [25]. The geriatric depression scale (GDS) short from the Indonesian version was used to measure depression status. The Institutional Review Board of the local orthopedic hospital (TU.02.02/II.3.1/0568/2017) approved the conducted study. Thirty-four respondents with depressed status had completed the Indonesian version of Lawton and Brody's questionnaire for 6 month follow-up. The sample age ranged from 50 to 88 with a mean of age of 69.67 (SD=9.26) years. Generalized estimating equations analysis (GEE) was conducted [15]. Finally, the result showed depressed status statistic significantly predicted poorer overall IADLs during the six months after hospital discharge (β= -.29; p=.037).

Discussion

Longitudinal changes of outcomes after surgical treatment of elderly with hip fracture have been examined extensively on the previous study. [15]; [17]; [14]. The patterns of longitudinal changes in IADLs in a sample from Indonesian (Java area) elderly were identified in this study, especially for the depressed elderly. Depressed status predicted poorer overall IADLs. It is consistent with the previous studies, that depression is an important factor associated with physical activity outcomes and recovery of all evaluated domains physical and psychological problem [20]; [4]. Studies have been reported depression arising after hip fracture had a negative effect on the daily activity level for elderly with hip fracture [1]; [5]; Phillips et al., 2013). In addition, negative psychiatric impacts such as depression was reported to increase the risk of various chronic diseases, such as osteoporosis, stroke, diabetes, and dementia [11].

The first 6 months is the crucial time for depressed status in older person with hip fracture surgical treatment. Nurse professionals need to pay attention to older patients with hip fracture with lower emotional-social support and older age variable [23]. It is implied, psychological treatment is recommended in early treatment for the older person who received surgical treatment. Services for elderly with mental health problems such as depression need adequate multidisciplinary approach of management and integration of services as a problem solved or effectiveness intervention [3]. Nurses are on the frontline of care, nurse-patient relationship trust was identified as a necessary prerequisite, including for the elderly [2]. In addition, the family role is an independent predictor of depression in the elderly [18]; [24]. Nursing care need to include family member in order to prevent depression incidences and to implement management depression for the elderly, including those who had hip surgical treatment. Multidisciplinary approach and supported public and home facilities or environment are important for good outcomes [21].

Conclusion

Specific attention needs to be paid to the high-risk groups including the elderly who had hip surgical treatment and were depressed. In addition, earlier depressed intervention program, developing the best approaches such as home-based program exercise or modification of home facilities in order to improve changes of instrumental activities for elderly after hospital discharge are recommended for future study.

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A Year of Pandemic: The Claiming of Herbal Medicines Against COVID-19 Infection

Yos Adi Prakoso[1], Agustina Dwi Wijayanti[2], Yuli Purwandari Kristianingrum[3], Asih Rahayu[4], Puja Audri Oktavianis[5]

Introduction

The world is suffering from the pandemic of coronavirus disease – 19 (COVID-19) infection. It has been observed in 2019 in Wuhan, China, and being a pandemic for several months [1]. The COVID-19 is found in every country including Indonesia. The COVID-19 pandemic impacts the socio-economic and geopolitics among the affected countries [2]. It's making on the changing of social behavior of citizens. The changing of social behaviors are including social distancing and implementation of health protocol. That was conducted to prevent the spreading of COVID-19 due to the high morbidity and mortality of this virus [3].

COVID-19 causes an infection within the respiratory system, including hypoxemic respiratory failure and thromboembolism with an unclear mechanism [4]. Several studies report that COVID-19 infection can be treated using lopinavir [5], monoclonal antibody [6], baricitinib, ribavirin [7], angiotensin-converting enzyme inhibitor [8], and the other emerging options [9]. Besides, there is a lot of article on the internet demonstrate that the herbal remedies could be used as the treatment against COVID-19 infection, and it becomes popular including in Indonesia. Society believes herbal consist of useful natural properties for increase the healing mechanism related to the infection [10].

[1] Faculty of Veterinary Medicine, University of Wijaya Kusuma Surabaya, East Java, Indonesia, 60225, e-mail: yos.vet.docter@gmail.com
[2] Dept. Pharmacology and Pharmacy, Faculty of Veterinary Medicine, University of Gadjah Mada, Yogyakarta, Indonesia, 55281, e-mail: tinabdy@ugm.ac.id
[3] Dept. Pathology, Faculty of Veterinary Medicine, University of Gadjah Mada, Yogyakarta, Indonesia, 55281, e-mail: yuli.purwandari.kristianingrum@gmail.com
[4] Faculty of Veterinary Medicine, University of Wijaya Kusuma Surabaya, East Java, Indonesia, 60225, e-mail: asihrhy24@gmail.com
[5] Faculty of Veterinary Medicine, University of Wijaya Kusuma Surabaya, East Java, Indonesia, 60225, e-mail: audri2610@gmail.com

In advances, the claiming of herbal medicine against COVID-19 shows the trend of increasing during the first year of the pandemic. It is proved by the various number of related published papers in several databases including NCBI, etcetera. This study aimed to explore the trend of published scientific papers with the main topic is the utilization of herbal remedies for COVID-19 therapy.

Methods

This systemic review was conducted in accordance with preferred reporting items using the PRISMA method. The author searched the published paper from PubMed using keywords as "herbal for COVID19". The paper was filtered by the year of publication that focused on the 2020th. The published paper before and after 2020th was excluded from the observation.

The collected paper was classified based on the type of paper, either research/original paper or review paper. The screening was conducted by the author through the titles and abstracts. The number of research and review papers was counted and tabulated. Further, the research paper was classified regarding the type of study (in vitro, animal model, clinical studies), intervention group (herbal, combination with non-herbal), comorbid category (with, without). The collected data was analyzed qualitatively.

Results and Discussion

The result showed that there are 366 papers related to the keywords have been published in the PubMed database in 2020th. From 366 papers, a total of 336 papers were excluded due to the mismatch of the title and abstract to the criteria. Further, there are only 30 paper falls within the criteria (consist of the term of herbal utilization and COVID-19 therapy). Unfortunately, the twenty-seventh papers were review papers and the rest (3 papers) were a clinical trial. There is no pure experimental paper was found in this review (Figure 1).

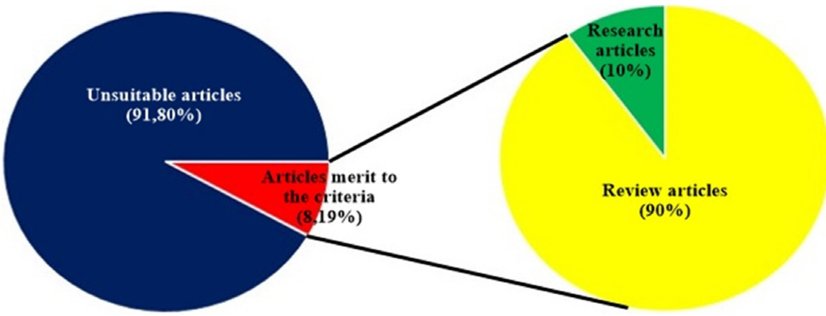

Figure 1. A total of published papers in PubMed during 2020th were found using keywords: "herbal for COVID19".

Further, the clinical study papers were screened to explore the content and its correlation regarding the utilization of herbal as a treatment for COVID-19. Based on the finding, the randomized clinical trial was conducted by previous authors. All of the authors used the formulation consist of several herbal ingredients. The herbal were selected because they were commonly used as therapy. The herbal has the potency to increase the cellular (leucocytes, lymphocytes) and immune response (T cells and Ig), decrease acute-phase protein, increases the prognosis of patients (Table 1).

Table 1. The summary of included studies published in 2020

Author	**Tested herbal**	**Result**	**Ref**
Rangnekar *et al.*	Formula contained: *Zingiber officinale, Embelia ribes, Glycyrrhiza glabra, Terminalia chebula, Tinospora cordifolia, Asparagus racemosus, Emblica officinalis, Piper longum*	Decreased viral load after 4 days treatment, increased immune response (Th1, Th2, Th17, IL6, NK, IgM, IgG) in day 30	[11]
Xiao *et al.*	Huoxiang Zhengqi, Lianhua Qingwen	Both herbal do not show any differences to the western therapy (chemical drugs), however it decreased disease severity	[12]
Wen *et al.*	Xuebijing 50 mL and 100 mL	Increased total leucocytes and lymphocytes, decreased CRP and ESR, increased prognosis of treated patients, Xuebijing 100 mL have greater potency than the others	[13]

Moreover, the trend of claiming happened due to society's assumption regarding the herbal ability in immune modulation. It was observed from a found review article in PubMed. The herbal potentially inhibits disease pathogenesis because they consist of antioxidants [14]. Antioxidants modulate the immune system, and it is known as an immunomodulatory mechanism [15]. Besides the antioxidant content, the other factors that influence COVID-19 inhibition are the ability of herbs to increase immune and cellular response. In this review, we found several herbal that being suspected to potentially promote healing in COVID-19 patients, such as *Echinacea*, *Cinchona*, *Curcuma longa*, *Curcuma xanthorrhiza* [16], etcetera. Further, several selected herbal potency was embedded in Table 2.

Table 2. The ability of herbal as a complementary medicine

Abilities	**Ref**
Promote lung computed tomography	[17]
Reduce disease progression	[18]
Increase prognosis via the supportive mechanism	[19]
It suspected decrease viral load	[20]
Inhibit viral attachment	[21]

There is a lot of weakness from all those herbal claiming. Mostly, those claims are not produced from the research about herbal ability against COVID-19 but based on the research of herbal against the other type of viruses in general. From the one health aspect, there are several impacts from this claiming including positive and negative side. This trend of claiming positively increased the use-value of herbal as the complementary medicine. In contrast, it is not observed regarding the toxicity effects of herbal medicines. So that, the human becomes an object of a clinical trial, indirectly. This opinion relates to the reality of the invention or development of drugs over a long period, especially during the development of antiviral drugs. For example, the development of an antiviral drug against human immunodeficiency virus (HIV) needs 33 years (1981-2014) from the clinical study until the drug is licensed [22].

Drug development includes several processes such as synthesis, in vitro model, in vivo model, preclinical study, clinical study, until it is highly produced and distributed [23]. Those processes sufficiently long, complex, and expensive due to the biological target must efficient and specific in treating a disease or infectious agent [24].

In Indonesia itself, herbal medicines are classified as herbs, standardized herbal medicine, and phytopharmica. Herb (unstandardized herbal medicine) is a traditional medicine that has been utilized in societies for a long time with no standardization ingredient. Standardized herbal medicine is the traditional medicine that has been tested in preclinical studies, however, the phytopharmaca is the traditional medicine that has been tested in clinical studies [25]. Based on this regulation, the herbal ingredient that has been claimed as COVID-19 therapy is categorized as either unstandardized herbal medicine. Because of the limitation of scientific evidence regarding the utilization of herbal medicine as COVID-19 therapy either in preclinical or clinical studies. So that, the preclinical and clinical study is necessary to be conducted to analyze and prevent the massif toxicity impacts of the herbal during this pandemic. The toxicity impacts in this context relate to the organ toxicity, individual response, adverse effects, and herb-drug interaction inside the body [26].

The development of herbal therapy cannot be prevented in society due to the various number of herbal medicine in Indonesia. So that, public awareness regarding the utilization of herbs as the COVID-19 therapy must be built. Further, society should be aware of these several points including the safety issue of herbal [27], herbal medicine is not food that can be consumed excessively and continuously [28], the relativity and complexity of herbal medicine safety [29], and the weakness of herbal medicine studies [30].

Based on our findings above, research on herbal medicine safety should be conducted to assure societies. The research of herbal safety includes the test of toxicity and stability. The local government and World Health Organization (WHO) either must control and provide fair regulation during the authorization and production of herbal medicine before it is being distributed to consumers.

Conclusion

The trend in claiming herbal medicine against COVID-19 infection increased during the pandemic. Unfortunately, the trend of claiming was commonly synthesized by the hypothesis of herbal contains antioxidant promotes healing of COVID-19 infection with limited pieces of evidence. The safety issue becomes the most point of view in the context of therapy using herbal medicine. The public should be aware of the safety of herbal medicine, herbal medicine as a drug, the relativity, and complexity of herbal medicine safety, and the weakness of herbal medicine safety.

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A Year of Pandemic: The Claiming of Herbal Medicines Against Covid-19 Infection

Yos Adi Prakoso[1], Agustina Dwi Wijayanti[2], Yuli Purwandari Kristianingrum[3], Asih Rahayu[4], Puja Audri Oktavianis[5]

Introduction

The world is suffering from the pandemic of coronavirus disease – 19 (COVID-19) infection. It has been observed in 2019 in Wuhan, China, and being a pandemic for several months [1]. The COVID-19 is found in every country including Indonesia. The COVID-19 pandemic impacts the socio-economic and geopolitics among the affected countries [2]. It's making on the changing of social behavior of citizens. The changing of social behaviors are including social distancing and implementation of health protocol. That was conducted to prevent the spreading of COVID-19 due to the high morbidity and mortality of this virus [3].

COVID-19 causes an infection within the respiratory system, including hypoxemic respiratory failure and thromboembolism with an unclear mechanism [4]. Several studies report that COVID-19 infection can be treated using lopinavir [5], monoclonal antibody [6], baricitinib, ribavirin [7], angiotensin-converting enzyme inhibitor [8], and the other emerging options [9]. Besides, there is a lot of article on the internet demonstrate that the herbal remedies could be used as the treatment against COVID-19 infection, and it becomes popular including in Indonesia. Society believes herbal consist of useful natural properties for increase the healing mechanism related to the infection [10].

[1] Faculty of Veterinary Medicine, University of Wijaya Kusuma Surabaya, East Java, Indonesia, 60225, e-mail: yos.vet.docter@gmail.com
[2] Dept. Pharmacology and Pharmacy, Faculty of Veterinary Medicine, University of Gadjah Mada, Yogyakarta, Indonesia, 55281, e-mail: tinabdy@ugm.ac.id
[3] Dept. Pathology, Faculty of Veterinary Medicine, University of Gadjah Mada, Yogyakarta, Indonesia, 55281, e-mail: yuli.purwandari.kristianingrum@gmail.com
[4] Faculty of Veterinary Medicine, University of Wijaya Kusuma Surabaya, East Java, Indonesia, 60225, e-mail: asihrhy24@gmail.com
[5] Faculty of Veterinary Medicine, University of Wijaya Kusuma Surabaya, East Java, Indonesia, 60225, e-mail: audri2610@gmail.com

In advances, the claiming of herbal medicine against COVID-19 shows the trend of increasing during the first year of the pandemic. It is proved by the various number of related published papers in several databases including NCBI, etcetera. This study aimed to explore the trend of published scientific papers with the main topic is the utilization of herbal remedies for COVID-19 therapy.

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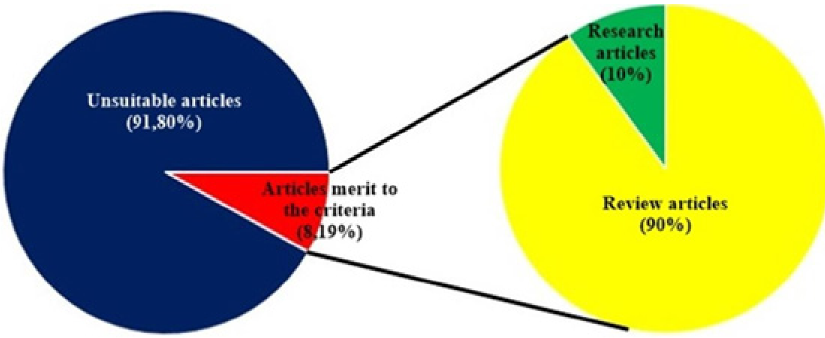

Figure 1. A total of published papers in PubMed during 2020^{th} were found using keywords: "herbal for COVID19"

Further, the clinical study papers were screened to explore the content and its correlation regarding the utilization of herbal as a treatment for COVID-19. Based on the finding, the randomized clinical trial was conducted by previous authors. All of the authors used the formulation consist of several herbal ingredients. The herbal were selected because they were commonly used as therapy. The herbal has the potency to increase the cellular (leucocytes, lymphocytes) and immune response (T cells and Ig), decrease acute-phase protein, increases the prognosis of patients (Table 1).

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Wen *et al.*	Xuebijing 50 mL and 100 mL	Increased total leucocytes and lymphocytes, decreased CRP and ESR, increased prognosis of treated patients, Xuebijing 100 mL have greater potency than the others	[13]

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Conclusion

The trend in claiming herbal medicine against COVID-19 infection increased during the pandemic. Unfortunately, the trend of claiming was commonly synthesized by the hypothesis of herbal contains antioxidant promotes healing of COVID-19 infection with limited pieces of evidence. The safety issue becomes the most point of view in the context of therapy using herbal medicine. The public should be aware of the safety of herbal medicine, herbal medicine as a drug, the relativity, and complexity of herbal medicine safety, and the weakness of herbal medicine safety.

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THE PANDEMIC

A LEAP OF FAITH

Imagine where we are in 2019. We are still living in best possible way, we gather, we socialize, and we celebrate plenty of things together with our loved one without worry. The 2019 is just two years ago, but it certainly feels like longer than that. Now, we are at the year of 2021. The pandemic has been with us for 17 months now. The countries all over the world loosen and tighten its border as the pandemics evolve into certainty when the vaccinations held. Indeed, the catastrophic of the pandemics didn't just leave us behind, many of us losing our loved one and in grief. Yet we are still hopeful of the future especially when Science nurtured our thinking while God is with all of us at heart.

This book chapter is an example. It is glad to see the spirit, where many scholars are racing to contribute. We see, scholars are continuously work together to contribute to the world. One paper I was taken into is where the researcher conducting research in Islamic economic while balanced it together with a teaching in psychology. Islam, as most of the Indonesian religion, comes at the forefront when facing a pandemic. We seek God for protection, help, and guidance as we must. One of the research papers in this book mentioned that Islamic economy can be contribute well to the economic reset that initiated in World Economic Forum 2020. I do personally believe that.

Bildung
+6281227475754
Bildung
@sahabatbildung
bildungpustakautama@gmail.com
www.penerbitbildung.com

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UNIVERSITAS MUHAMMADIYAH MALANG