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SOCIETY 5.0

FOSTERING SPIRITUALITY AND HUMANITY

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Postgraduate Program University of Muhammadiyah Malang



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Proceedings of International Seminar:
Society 5.0
Fostering Spirituality and Humanity

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TABLE OF CONTENTS

Stock Decision Investment of Millennial Generation in Covid 19 Pandemic __1

Asri Jaya, A. Ifayani Haanurat, Nur Santi

Corporate Action and Decision Making in Stock Transaction __10

Ifayani Haanurat, Asri Jaya, Nurlina, Jam'an

Index and Coefficients of Reliability on Educational Online Tests by Repeated Measurement __18

Bulkani

Reconstruction of Education Public Relations Function in Society Era 5.0 __28

Daryono

Ethical Education Model in Wulang Reh __41

Esti Ismawati, Warsito, Yusdianto, Kun Andyan A

Integrating Mirt into Ordinary Linear Regresion Modeling in Generating New Prediction Model __49

Faiẓ Zulkifli, Zulkifley Mohamed, Nor Afzalina Azmee, Rozaimah Zainal Abidin, Akhsanul In'am & Ahmad

Community Empowerment Responsive to Law-Abiding Culture in Era 5.0 __63

Farhana, Raihan

The Role of The Law in Partnership to Develop Cooperatives is The Form of Justice in The Welfare State __69

Hamdan Aẓhar Siregar

Social and Financial Capitals for the Building of Society 5.0 __79

Ilona Pasteruk

Improving Hijaiyah Letter Reading Skill Through Index Card Match Method on Children 5-6 Years Old __89

Iswan, Herwina Bahar

Uncertainty of Sustainability of Marine and Fishery MSMEs in Coastal Areas and the presence of Maritime Autonomous Surface Ships in the Era of Society 5.0 __116

Maya Dewi Dyah Maharani

Digitalization and Quality of Life: Problems and Inequalities in The "Digital Society" (Society 5.0) __136

MSW, Sona Minasyan

Enhancing the Capabilities of the Cosmetic Industry through Technical Guidance on Good Manufacturing Practice __146

Mulki Siregar

Redesign The Synchronous Blended Learning: Interception Self-Transcendence from Positive Psychology __155

Dr Nek Mah Binte Batri, PhD, Fiqh., PhD

Use of Student Language in Whatsapp __164

Netty Nurdiani

Analisis Prospek Society 5.0 di Sektor Ekonomi Pertanian Asean __174

Nugrahini Susantinah Wisnujati

The Role of Service Quality to Increase Customer Satisfaction of Bank Syariah Mandiri Jember __181

Nurul Qomariah and Yayan Ayu Lestari

A Comparative Study: Folktale Structure of *Malin Kundang* (Indonesia), *Si Tanggung* (Malaysia), and *Nakhoda Manis* (Brunei Darussalam) __200

Prima Gusti Yanti, Astri Pebrianti, Fairul Zabadi

Development of Character Education Teaching Materials Their Relevance to the Era of Society 5.0 __209

Ronggo Warsito, Septiana Wijayanti, Dhiva Maulida RN

The Aggressiveness of Youth Impact of Information During a Pandemic in the Age of Society 5.0 __218

Sudjivanati, Nindita Pinastikasari

The Contribution of the Interview Test in The New Student Admission System __234

Supriatnoko and Anwar Mustofa

Phonological Variation of Basa Cerbon Absorption Vocabulary from Sundanese Language __242

Supriatnoko

The Vowel Inventory in Patani Malay Dialect: An Analysis of Distinctive Features __247

Suraiya Chapakiya

Restoration of Pancasila Values in Coastal and Archipelagic Management in The Era of Globalization __258

Untoro

The Influence of Social Media Marketing (4C) Using Instagram on BananaBim's Repurchase Intention __263

Zakiyah Zahara

Stock Decision Investment of Millennial Generation in Covid 19 Pandemic

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ABSTRACT

The purposes of this study are to examine and obtain empirical evidence of the behavior of individual investors in making stock investment decisions. This type of research was qualitative research with a phenomenological approach with interview techniques. The results of this study indicate that subjective norms greatly influence an investor's investment decision making, perceptions of behavioral control also influence the investment decision making of an investor, and accounting information is fully used by investors in making investment decisions. Based on the research findings, it is concluded that student investors of millennial generation KSPM members are rational and sophisticated investors because they use accounting information as an analytical tool to make decisions.

Keywords: Investment, Perceptions of Behaviour, Accounting Information.

Introduction

The era of globalization requires humans, especially millennials, to be able to compete and always improve their quality to face the challenges of life. Currently, many millennial generations have quite high incomes. Also, the millennial generation is actively looking for other additional income through business activities. However, a high income or a running business venture today does not guarantee a bright future. The millennial generation is required to be able to manage the funds they currently have to realize financial freedom in the future. One of the best financial management is to invest the income you currently get in the form of investments. One form of investment that is currently booming is a stock investment. Based on data from the Indonesia Stock Exchange (IDX), it is noted that in the last 5 years there has been a surge in investor growth for the Millennial Generation. Currently, millennial generation stock investors have even reached 60 percent of the total stock investors on the IDX.

The COVID-19 outbreak has had a serious impact on almost all countries in the world, including Indonesia. The impact is not only in one area but in almost all existing activities. The coronavirus or coronavirus disease 2019 (Covid-19) has made the economies of all countries is worsening. In Indonesia, the coronavirus caused economic growth to decline by -5.32% in the second quarter, even in the third quarter of 2020, Indonesia experienced a recession with economic growth still -3%. One aspect of concern amid the spread of the Coronavirus is a stock investment. After this virus was discovered, the JCI trend is down. Because at that time issues emerged regarding Covid-19 which began to spread from Wuhan to Japan, Korea, and the State of Singapore which is closest to Indonesia.

In the decision-making process of investing in stocks by an investor, various factors can influence, including information, news, politics, issues, rumors, security, external factors such as the global market, as well as consideration of investors' confidence in investing in the capital market, especially stock investment [5]. The purposes of this research are to determine the behavior of individual investors, both from the aspects of subjective norms, behavioral control, and aspects of accounting information in making investment decisions during the Covid-19 pandemic.

Theoretical review

Subjective Norms

In particular, in the theory of planned behaviour, subjective norms about behaviour are defined as individual perceptions of social pressure to do or not. The result of displaying a behaviour is part of the approval or disapproval of another person or group. Thus, this subjective norm can be said that an individual in carrying out a behaviour needs thoughts or opinions from other people [2]. In general, the more individuals think that their social reference recommends doing a behaviour, the more likely that individual will feel social pressure to do that behaviour and vice versa, the more individuals think that their social reference recommends not doing an act, the individual will tend to feel social pressure not to do this behaviour. Subjective norms refer to the social pressure felt by individuals to perform or not perform the behaviour. This is related to the belief that the motivation or opinion of other people can encourage or hinder behaviour [5].

Perceptions of Behaviour Control

Conceptually, perceptions of behavioural control are expected to moderate the influence of intention on individual behaviour, so that a strong intention will produce behaviour only if the perception of behaviour control that is owned by the individual is also strong [2]. Beliefs about supporting and inhibiting factors to carry out behaviour are based on the individual's previous experience of behaviour, the information that the individual has about a behaviour obtained by observing the knowledge possessed by himself and others known to the individual, and also by various other factors that are known to the individual. can increase or decrease individual feelings about the level of difficulty in carrying out a behaviour. Perceptions of behavioural control as a function based on beliefs are called control beliefs, namely individual beliefs about supporting and/or inhibiting factors to carry out a behaviour (salient control beliefs) [1]. Specifically, in planned behaviour theory, perceived behavioural control is defined as an individual's perception of the ease or difficulty of carrying out a behaviour. Perceptions of behavioural control are determined by a combination of individual beliefs regarding supporting and/or inhibiting factors to carry out a behaviour (control beliefs), with the strength of individual feelings on each of these supporting or inhibiting factors (perceived power control). In general, the more individuals feel the many supporting factors and the few inhibiting factors to be able to perform a behaviour, the individual will tend to perceive themselves as easy to do the behaviour: conversely, the fewer individuals feel the few supporting factors and many inhibiting factors to be able to perform a behaviour, then individuals will tend to perceive themselves as difficult to do this behaviour [1].

Accounting Information

Accounting information is the process of measuring, analyzing, recording, and, reporting all economic events that affect the assets of a company. Decision making always involves taking an alternative action among the many alternatives available. Therefore, decision-makers always try to collect information to reduce the uncertainty they have in choosing alternative actions [8]. Useful accounting information must have the quality of relevant and reliable information, have value in increasing knowledge, increase confidence about the profitability

of the realization of expectations in conditions of uncertainty and change the decisions or behaviour of users. have value in increasing knowledge, increase confidence about the profitability of the realization of expectations in conditions of uncertainty: and change the decisions or behaviour of users. To be useful, the information in financial reports must be able to help predict future returns on investment. Using historical cost, financial statements do not show the expected future value directly. Financial reports can still be useful for investors if the predictions of good news or bad news that persist into the future [6]. States that there are two ideas used to develop decisions, namely: 1) Investors use current financial statement information to predict future earning power. The prediction of earning power will be used to predict the return on investment in the future. 2). Investors use current financial statement information to predict future cash flows [6]. This approach is consistent with ideal conditions. In this regard, it can be concluded that financial reports can still be useful for investors even though they do not report them directly in future cash flows, using the basis of calculating present value. The essence of the relationship between current and future financial statements is the conditional probabilities $P(GN / H)$ and $P(BN / L)$. This probability is called the information system.

Shares Investments

Investment is a sacrifice in the form of postponing current spending to get better returns in the future [4]. The investment can be defined as investment activity in a business field that aims to get additional income [10]. Investment is a contract against the nominal money or resources at present, to expect the amount of profit to increase in the future [9].

Decision-making

Investment decision making is the process of choosing the best option from several options that are under the influence of interrelated conditions in the process of determining investment argues that determining investment decisions is a way of determining options for existing alternative decisions, and choosing from these alternatives as desired.

Decision making is the most appropriate action, a systematic approach to current and action-taking. The Theory of Planned

Behaviour (a theory of reasoned action) which was first put forward by Ajzen 1991, this theory is a development of the previous theory, namely Theory of Reaction-Action which assumes that a person takes action based on their conscious intention, which is based on rational calculations about potential effects. of their behavior, and about how others will perceive that behavior. This theory provides a framework for studying attitudes toward behavior. An action is all forms of reflection of the results of the decision-making process in his mind, so that humans are used to making a decision. From problem identification to choosing the best solution, this is called the decision-making process.

Research methods,

This study used a qualitative method using a phenomenological approach. This research focused on the behavior of individual investors in making shares investment decisions consisting of: subjective norms, perceptions of behavioral control, and accounting information using student informants who are members of millennial generation the Makassar Capital Market Study Group (KSPM). Data collection techniques were carried out in natural settings (natural conditions), primary data sources and data collection techniques were more on participant observation, in-depth interviews, and documentation. The interview is conducted using informal, unstructured, unscheduled, and spontaneous conversations so that informants did not process or prepare answers in advance so that informants could explain as it is. The data analysis technique was carried out through three levels, namely: data reduction, data presentation (data transcript), and concluding (verification) [7].

Results and Discussion,

The Behavior of Individual Investors in Shares Investment Decisions in Covid Pandemic 19

One of the requirements for making investment decisions is the availability of information. The problem is that the available information is not all relevant to the interests and objectives of each investor. Meanwhile, investors are required to be able to make decisions quickly and accurately. Because, if you are late or make a wrong decision, you lose the opportunity to get the expected benefits. Investment decision making is also closely related to investor behavior. Behavior is an

evaluation, feelings, a person's tendency towards something. Behavior puts a person in a frame of mind to get closer and like something, or distance oneself and dislike something

In this research, the behavior is divided into three, namely subjective norms, perceived behavioral control, and accounting information.

1. Subjective Norms

Based on the results of the research conducted, it is stated that subjective norms influence the investment decision making of an investor. All informants in this study stated that the influence of social pressure or the opinions of others can change their views and help in making their investment decisions. Although the opinions and suggestions of others after the pandemic are reconsidered before concluding, they still need opinions from people who acknowledge. Attitudes towards making shares investment decisions can be positive because they are formed from the experience and knowledge of investors as well as the experiences of others.

2. Perceived behavioral control

Conceptually, perceptions of behavioral control are expected to moderate the influence of intention on individual behavior, so that a strong intention will produce behavior only if the perception of behavior control that the individual has also strong. Perceptions of controlling investor behavior have indicators, including self-confidence, capital support, and technology support.

Based on the results of the study, it is stated that self-confidence and technology are very clear in influencing an investor's decision making. This is following the concept of planned behavior theory which states that perceptions of behavior control are based on individual beliefs about supporting factors or factors inhibiting the intention to perform a behavior. Strong self-belief, capital support, and technical support will support the high intention of investors to make a decision, such as a decision to choose a stock. Conversely, when investors' self-confidence, capital support, and technology support are weak, then the investor's intention to invest is low.

3. Accounting Information

Accounting information is the process of measuring, analyzing, recording, and reporting all economic events that affect the assets of a company. Information is needed by humans to reduce uncertainty in

decision control. Decision making always involves taking an alternative action among the many available alternatives [8].

The results showed that accounting information is needed in making an investor's decision. With various intensities, informants stated that they continued to use accounting information in any situation. One form of financial information is accounting information in the form of financial reports. The accounting information in the financial statements must be of high quality to present the actual conditions of the company's financial performance. They believe that the company's healthy financial statements can provide high returns in the future. Furthermore, if the investor's response is specified to the accounting information submitted by the company to the market, it is necessary to study the signaling theory. If adjusted to the signaling theory, it can be explained again that if there is positive accounting information submitted by the company to the market, investors get the positive signal and encourage to purchase. Conversely, if investors receive negative signals from the company, they will respond negatively by selling.

From the three discussion results that explain the behavior of individual investors in making shares investment decisions represented by members of the capital market study group (KSPM), it shows that investors in making investment decisions consider accounting information (company fundamentals). However, investor psychology is reflected as an enhancer in decision making. The results of this study also prove that student investors of KSPM members are rational and sophisticated investors because they use accounting information as an analytical tool to make decisions.

During the Covid pandemic, 19 students tended to choose investment is risky, but able to give high returns. In the stock market, companies engaged in construction, telecommunications, and food and beverage are the main demand of current investments. By analyzing the fundamental aspects of the company's financial statements, it will be reflected whether the company is worth investing in or not. One of the references is the company's capital expenditure, the higher the value, the higher the possibility for the company to continue to grow and automatically generate large returns for investors.

Conclusion

The behavior of individual investors represented by members of the capital market study group in Makassar in making stock investment decisions when viewed from the aspect of subjective norms greatly influenced investor decision making both before and after the pandemic.

The behavior of stock investors in making investment decisions also tends to be influenced by confidence, capital, and technology as supporters in making investment decisions.

The behavior of stock investors in making investment decisions tends to be influenced by their analytical techniques. Accounting information as a useful value for individual investors becomes a reference in their decision making. The quality of accounting information affects individual investor investment decision making.

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Corporate Action and Decision Making in Stock Transaction

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ABSTRACT

The total shares traded on the Indonesia Stock Exchange (BEI) in the first semester of 2019 showed that foreign investors have around 60% ownership. This ownership increased compared to the composition of investors in 2017 by 51% and in 2018 up to 52%. This increase proves that the fundamentals in Indonesia are in good condition, but on the other hand an increase in the number of foreign investors is eroding local investors, this phenomenon is pushing the IDX to continue to work to increase the number of local investors, so that funds can survive in Indonesia and can be invested domestically. Therefore this research aimed to look at the decisions of local investors in Makassar in increasing their share ownership, by considering three components of corporate actions. Using a quantitative approach, the results of this research shown that dividends affected decision making, this means that dividend variable is an important indicator for novice investors in making stock transaction decisions. The right issue and stock split variables show positive or influential but not significant results, meaning that novice investors are aware of right issues and stock split but do not make it an indicator in deciding to buy shares, this proves that novice investors are still unsure of incomplete information from the management at a company that conducts rights issue and stock split, investors are also still unsure of the uncertainty in the future. The findings of this research shown that signaling theory is not applicable to novice investors in the city of Makassar, novice investors only want to get dividend payments from companies that distribute dividends to shareholders.

Keywords: *Corporate Action, Dividen, Right Issue, Stock Split, Signalling Theory*

Introduction

The Investment Coordinating Board (BKPM) recorded the realization of investment in 2019 of Rp 395.6 trillion, showing a 9.4% increase compared to 2018 of Rp 361.6 trillion. While the BEI's May 2019 report showed a positive growth in the number of investors to 1.9

million, compared to 2018 an increase of 19%, and total shares traded in terms of foreign investor shareholding by 60% but still better than the last five years was 70%, this shows the role of domestic investors is increasing, although in terms of ownership value is still greater foreign investors. This increase in investors is still dominated by foreign investors, due to improved foreign confidence in the Indonesian economy, the multiplier effect of investment in the capital market is not large because what is taken is only capital gains, but it would be better if local investors are larger so that it would later have a positive impact on the economy.

Foreign or local investor confidence in the Indonesian economy is illustrated by the company's financial statements that go public. The company is said to be healthy or liquid if the profit component increases and the debt does not exceed the company's capital or assets of more than 60% compared to the debt, in addition the company's performance will increase if it takes a corporate action, because between corporate action and the policies decided by the company are closely related to the division dividends, either cash dividends or stock dividends, also in the decision to take stock split or right issue actions [1]. Therefore, this study wants to explain the purpose of Corporate Action, especially dividends, stock splits and right issues that are used to determine people's interest in deciding the purchase of a stock.

Review of Literature

Corporate action is an action that in its performance increases by showing both short-term and long-term performance, therefore corporate actions are responded to very positively by market participants [2]. Corporate action has a variety of forms and variations, including dividend distribution, stock split or issuance of new shares, and rights issue [3].

1. Dividends

Dividends represent profits or profits of the company obtained in the previous or current period provided by the company (issuer) to shareholders in the form of cash. The amount of dividend received is determined in the agenda of the general meeting of shareholders (GMS). Dividends are distributed according to the profit obtained and the percentage distributed in accordance with the results of the GMS are paid as cash dividends and dividends in the form of shares.

Dividend distribution becomes a consideration of investors in making decisions in the purchase of shares [4][5].

The company's dividend distribution policy, there are 4 types including: a) A stable dividend policy; b) Dividend policy by setting a minimum dividend amount plus an extra amount. This policy stipulates a minimum amount of rupiah dividends per share per year; c) Dividend policy by setting a constant dividend payout ratio. Companies that implement this policy set at 50%, meaning that the amount of dividend per share paid annually will fluctuate according to the development of net profits earned each year; d) Flexible dividend policy [6].

1. Right Issue

Right issue is an effort made by the company to increase capital, aims to increase the percentage of shareholder ownership or to increase the number of shares outstanding. In other words, it gives the investor the right to buy new shares by first ordering shares [7][8]. The reasons companies do right issues are 1) reduce costs, because right issues do not use under writers (underwriting services). 2) Increase the frequency of trading, meaning that the number of company shares outstanding will increase, thereby increasing stock liquidity[9].

Right issues provide benefits to shareholders, so it is easy to maintain the proportion of share ownership with the aim of protecting the declining value of shares, but also has the risk of a decline in share prices and dividends. A decline in stock prices will occur if the share price is sharper than the theoretical price and if after the rights issue is not made an increase in the number of shares and not followed by an improvement in company performance will result in a decrease in dividends [10].

3. Stock Split

Stock split is a breakdown of the nominal value of shares into smaller or increasing number of shares outstanding where the nominal value of shares decreases, for example the nominal value of one share into two shares, so that the initial par value of shares is divided into two [11] [12]. The reason companies do stock split is based on two theories, namely Signaling Theory and trading range theory. Signaling theory explains that a stock split is able to provide substantial information about increasing future returns. Whereas trading range theory says stock split can increase stock trading liquidity. This means that the

company considers if the share price is too high then it is less attractive to trade. On the other hand the reasons for stock splits are to increase trading liquidity where the stock price is not too high, increase the number of shares outstanding, minimize the risks that occur, and apply investment diversification [10][13][9].

Stock splits can be carried out by means of a split factor, which increases the number of shares outstanding due to a decrease in the nominal value of a single share, and how to split down, namely a decrease in the number of shares outstanding and an increase in the nominal value of a share. The existence of a stock split announcement will give a positive signal to the market, the welfare of investors is considered to be increased if company managers are able to convey good prospects. Conversely, a stock split will have a negative impact if the company is unable to provide invalid signals [14][9].

Research Method

This study used a quantitative approach to the type of explanation, collecting data in the form of surveys, questionnaires, documentation and literature studies in the capital market. The population were the novice investors in Makassar about 200 people, and the sample was determined as a) 80 people. b) Has been an investor for ± 3 years; c) not involve as security employee; d) Does not act as a stock dealer. The data analysis technique was carried out in two stages, namely the data validity test using the validity test and the reliability test, as well as the hypothesis test with multiple linear regression.

Results and Discussion

The results of the study to see Corporate Action and decision making in purchasing shares, are obtained:

1. The effect of dividends on decision making in purchasing shares

The first hypothesis shows that dividends have a positive effect on decision making in buying shares, at a significance value of 0,000 testing which is below the significance level of 0.05, the dividend rate can be used as an indicator in making stock purchase decisions. This is in line with [15] research that the impact of dividend announcements on stock prices illustrates the positive impact during announcements and after dividend announcements, according to The Bird in Hand theory which states that investors feel more secure to earn income in

the form of dividend payments rather than waiting for capital gains [15].

Based on The Bird in Hand theory, dividends are better than retained earnings because profit balances will never be realized as dividends in the future. The cost of equity increases when dividends are reduced, this is because an investor will provide higher returns and certainty of reinvestment and risk considerations. Conversely, the cost of equity will decrease along with an increase in dividend payments because investors are less sure of the receipt of capital gains that should have come from retained earnings balances compared to dividends received.

The results of this study based on the dividend theory that dividends affect decision making, therefore investors are more interested and feel safe if they get dividends compared to capital gains because dividends are fixed according to the AGM every year. This means that investors only want to get dividend payments as shareholders because they hope for additional value.

2. The influence of the rights issue on decision making in purchasing shares

Right issue variable shows positive but insignificant results with the number 0.622 which is above the 0.05 significance level, so it cannot be used as an indicator in making stock purchase decisions because it does not make investors make decisions in buying shares despite having a positive effect. That is, the right issue exists or is accepted does not affect the decision making in purchasing shares.

The results of this study are in line with the research that there is no difference in abnormal returns before and after the announcement of a rights issue, which means that the announcement of a rights issue does not significantly influence stock returns [16]. This research is supported by signal theory or signaling theory, that every action supports information because of asymmetric information. So based on signal theory shows that management has more complete and accurate information, so that if management conveys information to the market, the market will react to that information as a signal.

Based on the theory of the Signal reinforces that the rights issue does not affect the decision to buy shares, because there is information that is sometimes incomplete from management in companies that conduct rights issues or increase the number of shares with Pre-emptive Rights (HMETD). This means that the corporate action component of

the rights issue adds shares to previous shareholders for investors who are interested but not for investors who just want to buy shares.

3. Effect of stock split on decision making in purchasing shares.

Stock split variable shows a positive but insignificant influence with the number 0.847 being above the 0.05 significance level, therefore the stock split variable cannot be used as an indicator in making stock purchase decisions because it does not make investors take decisions in buying shares despite having a positive effect. This means that a stock split exists or is accepted does not affect the decision to buy shares.

The results of this study are in line with [17], which states that there is no difference in the trading volume of shares before and after a stock split in small, large, growing and non-growing companies, and there is no difference in abnormal return of shares before and after a stock split [17]. This research is supported by stock split theory, with the reason companies do stock split based on signaling theory and trading range theory. Trading range theory explains that the high price of a stock is one of the motivations of companies to do a stock split [18]. Signaling Theory explains every action supporting information because of asymmetric information. Asymmetric information is a condition of a party having more information than another party, for example company management has more information than investors in the capital market, this is in line with the opinion that the signal theory explains why companies present information to the capital market.

This means that many investors are not interested in corporate actions of stock split companies because of information delays and the price levels formed are not enough to guarantee a successful split due to business uncertainty, split stock price levels place the company in a group that has a low share value resulting in declining trust investors of these shares, increasing the number of stock splits will increase service costs (servicing costs) for shareholders. So, based on signaling theory and trading range theory, it reinforces the results of this study that stock split has no effect on decision making due to uncertainty in the future. Stock split events at the stock price cause no profits received by shareholders, although there is an additional amount per share by the shareholders.

Conclusion

Dividends have a positive and significant effect on decision making in purchasing shares in Makassar. Right issue has a positive but not significant effect on decision making in buying shares in Makassar, and variable stock split is positive but not significant results in decision making to buy shares for investors in Makassar.

It is recommended for further research to use all components of corporate action, namely dividends, right issues, tender offers, mergers, reverse stock, and stock split, as well as acquisitions. It also adds to the sample selection criteria, which have been investors for at least five years in the Capital Market or not a novice investor, as well as expanding the area of investors, not only Makassar, but entire South Sulawesi.

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Index and Coefficients of Reliability on Educational Online Tests by Repeated Measurement

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ABSTRACT

This article aims to describe the meaning of index and coefficients of reliability also how to obtain high-reliability coefficients on online educational tests. This is very important because online tests are widely used in the blended learning process in the new normal era during the Covid-19 pandemic and Society 5.0 the method used is a literature study by examining library materials relevant to the writer's thoughts. Based on the classical score theory, it is concluded that (1). The reliability index compares the variance of the observation score against the true score, representing the online testee's true ability, which is practically impossible to calculate because it requires a true testee score, (2). The reliability coefficient is the correlation coefficient between one observation score and another score of observation. It can be calculated from the correlation coefficients of several online tests that are the same and unidimensional and given repeatedly. (3). The reliability coefficient can also be determined from the correlation coefficient between parts of an online test and other equivalent and unidimensional parts.

Keywords: *index, reliability coefficient*

Introduction

The Covid-19 pandemic that has occurred has changed the order of life in various sectors. In education, the effect has a profound impact on schools. Most of the schools are closed, or the learning model is turned into an online learner model. According to UNESCO's data reported by the BBC news agency, more than 1.6 billion or 90% of the student population must be dismissed from schools and universities to curb the spread of Covid-19. In fact, according to these data, the Covid-19 pandemic could push around 117 million children into poverty, so that 9.7 million of them are threatened with permanently dropping out of

school [1]. In Indonesia, this impact is more pronounced. The Ministry of Education and Culture is trying to overcome the pandemic's impact in several ways, including by changing the curriculum into an emergency curriculum, subsidizing internet quota for teachers and students, and accelerating digital transformation.

After the Covid-19 pandemic, the world will be faced with a new normal era and then enter the era of Society 5.0. The rapid change from conventional learning to online and blended learning. The problems faced in the world of education and learning are related to the limitations of the internet network and the need for internet data, as well as the technical implementation of its learning.

The socio-cultural change from offline learning to online has forcibly changed the learning culture. The sudden change from offline learning to online leaving questions about the effectiveness of online learning. Online learning that is not carefully planned can result in not optimal results [2]. Some research found that one of the negative impacts of e-learning learning for students was the lack of quality communication and socialization between the students and lecturers. Besides, the students also tend to experience boredom and experience decreased motivation [3]. One of the weaknesses of online learning systems is the lecturer supervision of student learning activities [4] and students' lack of motivation to discuss online [5].

Weak supervision from lecturers to students in online learning also has an impact on the weakness of supervision in the process of evaluating learning outcomes. In online learning, evaluation of learning outcomes can be done using online tests, portfolios, and self-assessments [6]. Each of the assessment models has advantages and disadvantages, both theoretically and practically. The tests tend to be easier to use with relatively constant levels of objectivity and consistency of results, while portfolios and self-assessments can measure more comprehensively. The weaknesses of the portfolio include its low reliability due to inconsistent results [6]. Also, there are difficulties in controlling class conditions when carrying out the test, which causes a decrease in teacher confidence in the accuracy of measurement results [7]. Some questions that often arise due to this control function's weakness include how confident the teachers are that the measured learning outcomes have the accuracy or reflect the testee's actual abilities or test takers? How consistent are the learning

outcomes obtained from these measurements? For this reason, this article will describe the meaning of the index and reliability coefficient, as well as the methods that can be used to obtain a high-reliability coefficient on online tests.

Research methods

The research method used is a literature study, an explanation that links the results of the writer's thoughts with existing literature. In this context, the writer collects and studies several relevant literature sources; then, the writers try to compare them with the writer's thoughts to achieve the research objectives. Thus, the library's function, in this case, is not merely a support for the theoretical framework of research but is used as a source of research data.

Results and Discussion

Reliability is seen from the Classical Score Theory

Reliability is a measure that represents the level of consistency, or consistency of measurement results by using certain instruments. The word reliability comes from the word reliable, which means constant and trustworthy [8]. Reliability is also significant as a level of confidence [9]. The more consistent the measurement results of an instrument, it means that the higher the reliability of the instrument. Therefore, the level of confidence in the measurement results is also higher. The word of consistent can be interpreted as determining the measurement results obtained using the same thing measuring instrument on people, time, and conditions. Tests are used in various places with the same purpose; thus, the test results must be comparable between places and between times [10].

In practice, reliability can be checked in two ways: testing the instrument before use and checking when the instrument is used [11]. Before the instrument is used, the instrument is tested in situations and a population with similar characteristics to the target test takers or taste. From the test results, the reliability of the instrument can be checked. Another way is to check the response of the instrument when it is used.

The basis for the concept of reliability in this article is classical score theory. In educational measurement, there are two theories used as a measurement paradigm, namely the classical score theory and the

modern score theory. The main characteristic of a classical theory is the attachment between the tester's characteristics and the question items on the test. The two of them depend on each other. This means that we cannot describe the test takers or testee's characteristics without mentioning the test items' characteristics. On the other hand, we cannot name the characteristics of the test and the items without mentioning the test takers' characteristics furthermore, in modern score theory, as an example is to use the item response theory (IRT) approach, the testee's characteristics are relatively constant and stable even though the characteristics of the test items change. However, the IRT still under development. Currently, the classical score theory approach is widely used to check the instrument's reliability [11].

The measurement results in classical theory are still stochastic and probabilistic; this is due to the possibility of errors and refraction found in the measurement results [11]. In general, the measured score, or often referred to as the observation score (X), will consist of a component of the true score (T), which describes the actual ability of the testee, and a component of refraction or error (E). The relationship between them can be expressed in the equation:

$$X = T + E$$

The main objective of measuring learning outcomes is to find the true T score, In fact, the true T score is latent and cannot be measured directly, so that what can be observed is the X observation score. Thus, the main challenge in measuring learning outcomes is compiling and using tests or test items that produce the smallest possible E component so that the $X \approx T$ score. Tests that have high reliability will tend to produce small error components.

Why is replication measurement?

Replication measurements can be defined as using the same or equivalent online test repeatedly. In classical theory, if a 1st testee takes the same online test for the first time, or takes a test that has been split into one equivalent sub-test, then we will get the following observed scores:

$$X_{11} = T_{11} + E_{11}$$

If the same participant takes the same online test for the second time, then we will get the following observation scores:

$$X_{12} = T_{12} + E_{12}$$

Thus, if the same participant takes the same online test for the j^{th} replication, we will get the observation score for that participant as follows:

$$X_{1j} = T_{1j} + E_{1j}$$

From the above equation, statistically, variation is only possible in the X_{1j} and E_{1j} scores. This is because in classical theory, the actual ability of a testee, or the *true* T score, it should have been fixed at a specific time and in certain circumstances. Thus, $T_{1j} = \text{constant}$ applies. This means that theoretical, a testee's true ability is relatively constant even though he has done as many times as k test replications. Of course, this assumption is valid if there are no technical problems such as internet network interruptions.

The same thing happened to the second, third, and so on until the i^{th} participant. Thus for some testee from the 1st to the i^{th} , who did the test repeatedly from the 1st to the j th test, we would get the equation:

$$X_{ij} = T_{ij} + E_{ij}$$

To determine the variance of each component of the score, we must determine the mean value (μ) for each component of the score with the number of test participants as many as i people and the number of replications of k times, obtained:

$$\mu X_{ij} = (\sum X_{ij})/N$$

$$\mu T_{ij} = (\sum T_{ij})/N$$

$$\mu E_{ij} = (\sum E_{ij})/N$$

where N represents the multiplication of the number of testees and the number of online test replications.

Statistically, if a testee does an infinite number of times the same or equivalent online test, then or $j \rightarrow \infty$, thus the mean *error* score E will be close to zero. This happens because the assumption that the error occurs is random so that the movement of the error score is in the numbers $+\mu E_{ij}$ and $-\mu E_{ij}$. The distribution of the *error* score will also follow the Normal probability distribution pattern; this applies:

$$\mu E_{ij} = 0$$

In addition, if a testee takes the same or the equivalent test online j times, then the *true* T score should be constant because the objects

being measured are the same. Thus, in effect, the T_{ij} is constant for each testee. For an infinite number of replications of the test or using the equivalent test, with $\mu E_{ij} = 0$ and T_{ij} constant, this applies:

$$\mu X_{ij} = T_{ij}$$

This means that if we do as many replications of the online test as possible, or use the online test equivalent as much as possible in the measurement, then the mean of the X observations will be the same as the true score of each testee. This is what underlies the concept that testees' actual ability will be described more comprehensively if they are measured using replicated tests, either with the same test or equivalent. However, in practice, it is impossible to perform an infinite number of replications of the test on the same group of the testee.

How to Get an Equivalent Test

Repetitive or replications tests in this context are defined as giving the same test repeatedly, or it can be several parts of the test that are equalized even though only one test is given. The drawback of repeatedly giving the same test is the carry-out effect that caused testee to tend to do the test correctly on subsequent tests because they have memorized and understood the test's contents. This drawback can be overcome by using several equivalents or equivalent tests. Practically, two ways can be done to obtain an equivalent test: (1). Balancing item by item, and (2). Halve a test into equivalents[11]. For the first method, suppose we compile the A test with items $A_1, A_2, A_3, \dots, A_k$. We also compiled a unidimensional test B with test A, and with items $B_1, B_2, B_3, \dots, B_k$. To make test questions A and B equal, then we match the similarity of measuring dimensions between items:

Item A_1 is checked for equivalence with point B_1

Item A_2 is checked for equivalence with point B_2

Item A_3 is checked for equivalence with point B_3

Item A_k is checked for equivalence with point B_k

The second way is to split a test into two parts, for example, into unidimensional odd and even parts. Suppose we compose a test A, then we divide it into odd and even numbers. We will get the following equalization pattern:

Item A_1 is checked for equivalence with item A_2

Item A_3 is checked for equivalence with item A_4

Item A_5 is checked for equivalence with item A_6

Item A_k is checked for equivalence with item A_{k+1}

This method of dividing the test into odd-even is more practical because we only need to carry out one test, although still assuming that we carry out the test repeatedly.

Reliability Index of Replication Measurement

Technically, reliability can be divided into two, namely the reliability index and the reliability coefficient. The reliability index refers to the meaning of the comparison between the variance of the observed score (δ^2_x) to the *true* score (δ^2_T) obtained by the test takers[11][12]. In another definition, the reliability index can also be interpreted as the correlation coefficient between the measured score X and the testee actual ability score[11]. In both definitions, we must look for the true T score component before we determine the reliability index.

In classical theory, the relationship between the measured score or the observed score of X and the *true* T score is represented by the equation $X = T + E$, where E is the *error* component or refraction of the measurement results. Based on this equation, the reliability index (ρ) of a test is $\rho = \delta^2_x / \delta^2_T$. The more equivalent δ^2_x and δ^2_T , which also symbolizes the smaller *error* component E, the higher the reliability index number. In the case of $\delta^2_x = \delta^2_T$ because $E = 0$, then the reliability index reaches 1.00 or perfect.

Statistically, the variance (δ^2) is significant as the mean of the squared score deviations[13][14]. The definition can be expressed in the formula:

$$\delta^2 = \Sigma (X_i - \mu)^2 / N, \text{ where } N \text{ is the size of the population.}$$

Based on the definition above, we can determine the formula for the variance of the measurement score or the X observation score on a test result as follows:

$$\delta^2_x = \Sigma (X_i - \mu_x)^2 / N, \text{ where } N \text{ is the number of testee population.}$$

Because we can get the X score of observations from the test results, practically, we can calculate the value of δ^2_x .

While the *true* T score variance is as follows:

$\delta^2_T = \Sigma (T_i - \mu_T)^2 / N$, where N is the testee population. This means that to determine the true T score variance, we must first know the

true score for each testee or T_i . Based on the classical theory, this is not possible because it is the true score T that we are looking for. If we already know the testee's true abilities, then we no longer need to look for the reliability of the test[11]. Thus, it is practically impossible to obtain a test reliability index because we cannot obtain the δ_T^2 value. The equation for the reliability index $\rho = \delta_X^2 / \delta_T^2$ is just an abstract mathematical equation.

Reliability Coefficient of Replications Measurement

The reliability coefficient is defined as the correlation coefficient between a test and another test that is the same or equivalent on the same testee. Another definition states that the reliability coefficient is the correlation between an observation score and another observation score[9][11][12]. In this concept, what is meant by repeated testing is giving a test repeatedly with a relatively short period, or a test that has been divided into several equal parts is carried out.

Theoretically, replicated tests on the same testee will produce the same *true* T score for each test, as long as they are unidimensional. For example, if we give the testee the same or equivalent test A and test B in a not too long time to the *i-th* testee, both tests should produce the same *true* T_i score. Thus that applies:

$$T_{1A} = T_{1B}$$

$$T_{2A} = T_{2B}$$

$$T_{iA} = T_{iB}$$

Since $T_{iA} = T_{iB}$, the correlation between T_{iA} and T_{iB} is 1.00, or $\rho_{TAB} = 1,00$. If we suppose that the *error* score E is small or close to zero ($E \approx 0$), then the observed score X tends to approach the *true* T score in the equation $X = T + E$. In this condition, the correlation coefficient between the observed score of X and the *true* T score will be close to 1.00. Since $\rho_{TAB} = 1,00$, the coefficient between the X observed score of the A test result and the B test result will also be close to 1.00. Thus, if the *error* E is small or close to zero, then the correlation coefficient between the observation score from the A test (X_A) and the observation score from the B test (X_B) also represents the correlation coefficient between the observed score X and the *true* score T . It can be said that the correlation coefficient between the observed scores on two replicated or equivalent tests, tests A and B, can be used to check

the strength of the relationship between the observed scores and the *true* scores. If the correlation coefficient between the results of test A and test B is close to 1.00, it means that the error score E is close to zero. The implication is that X's observed score is more reliable in describing the testee's *true* T score. This concept underlies the theory to obtain a steady picture of measurement results with high-reliability coefficients; it is sufficient to give the same or equivalent two tests repeatedly to the same test participants.

Conclusion

There are two concepts of reliability in classical theory, viz the reliability index and the reliability coefficient. The reliability index refers to the comparison between the observed score X against the *true* score T, which represents the actual ability of the online testee. In practical terms, it is impossible to calculate the reliability index. In contrast, the reliability coefficient is the correlation coefficient between an X observation score with another X observation score. The reliability coefficient can be determined by finding the correlation coefficient from several online tests that are the same and unidimensional and given repeatedly. The reliability coefficient can also be determined from the correlation coefficient between an equivalent and unidimensional part of an online test. The correlation coefficient is close to 1.00, indicating that the measurement results are trustworthy.

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Reconstruction of Education Public Relations Function in Society Era 5.0

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ABSTRACT

The function of education public relations management should be reconstructed to adapt to the era of Society 5.0. On the one hand it is to respond to competition between educational institutions while on the other hand it is to accelerate access to technology and information in carrying out its strategic functions. The research objective is to explain how and what should be in the reconstruction of public relations functions in education in the era of Society 5.0. The research method used field research methods with a qualitative approach, namely direct observation of the research subject (Public Relations Education) and combined with literature study. The reconstruction of the public relations function in the era of Society 5.0 is directed at the response to competition among educational institutions and to accelerate access to technology and information in carrying out strategic functions. The public relations function of education is placed in a strategic realm which is then aligned with the highest management of the institution. So that the public relations function of education is inherent in the management of educational institutions. Meanwhile, Society 5.0 society, which in fact is a participatory society, needs to be realized to be able to experience the benefits of technology and information in various aspects of social life, in this case education. In its implementation, the reconstruction of the public relations function of education in the era of Society 5.0 was carried out by planning, organizing, actuating, controlling, and evaluating. The reconstruction of the public relations function is directed at the utilization and integration of the virtual world and the real world by utilizing technologies such as IoT (Internet of Things), robots, and artificial intelligence (AI), Augmented Reality (AR) in serving humans so that people can feel comfortable and enjoy life.

Keywords: *Reconstruction, Management Function, Public Relations Education, Society 5.0.*

Introduction

The public relations function of education should be reconstructed to adapt to the Society 5.0 era. On the one hand, it is to respond to competition between educational institutions, while on the other hand

it is to accelerate access to technology and information in carrying out its strategic functions [1]–[3]. Fungsi manajemen humas pendidikan dalam memberikan pelayanan terbaik merupakan wujud perhatian serta responsif terhadap persaingan antar lembaga di era Society 5.0. The public relations function of education in providing the best service is a form of attention and responsiveness to competition between institutions in the era of Society 5.0. The public relations function is not optimal if information through technology is not right on target. The intended target is the community as the stake holder. Furthermore, external support for education public relations programs can occur if the information conveyed is comprehensive with regard to the progress and achievements of their students, both related to the curriculum and the learning process.

On the other hand, the public relations function of education has an important role for educational institutions. Public relations education should be able to collaborate in building a harmonious relationship between the institution and the community. The function of public relations in education in institutions is to support efforts to foster harmonious and reciprocal relationships in order to obtain adequate understanding and acceptance, both the institution and the community. It is appropriate that public relations education is not seen as a technical function and a medium of contact but rather a strategic function. Technology and information managed by public relations education are fundamental to the level of institutional management. Although in practice there are still various functions of public relations, namely government relations, community relations, media relations [2]. Educational institutions by placing their public relations function as a strategic function can then adapt and be responsive to the needs of the times. Amid the rapid onslaught of technology and information, it gave birth to a new society, namely the technology society and the information society. This society is classified as a society that is critical of information exposure through easily accessible technology. This society is no longer a passive society that is easily influenced by information that is not based on data. This change in society should have been responded quickly by institutions in placing their public relations function as a strategic function. Therefore, the public relations function of education can be optimal in carrying out its role in educational institutions.

Educational institutions as agents of change in creating the nation's generation have a central position in developing the quality of the younger generation. Educational institutions that are directly connected to the community, both internally and externally, are a bridge between educational institutions and their communities. Public relations education is at the vanguard in maintaining the reputation of an educational institution. Optimization of public relations education in its strategic role will have a significant impact on the achievement of goals. Of course, this goal can be realized through the support of education management in providing full opportunity and authority to public relations education in carrying out its strategic steps. The placement of public relations education in a management structure provides an objective description of the urgency of the existence of this function. The placement of this position also determines the effectiveness in implementing the public relations education work program in the strategic realm. The demands of the times and the needs of the technology and information society are a necessity for public relations education to be able to adapt quickly. The public relations function cannot run optimally, among others, because its functions and roles are not integrated to the level of top management leaders or top management as strategic decision makers [2], [4]–[9].

Several functions of public relations in education have been described. First, the function of education public relations as a management function in determining the needs and attitudes of the community, the function of education public relations as a function of harmonizing educational institutions with the community, and the function of public relations education as a function of planning and implementing work programs to gain support and public trust [1], [4], [10]. Second, education public relations function as a communication technician function, education public relations function as an expert prescriber function in solving problems faced, education public relations function as a communication facilitator function to ensure two-way communication between educational institutions and the community, education public relations function as a facilitating function of the solving process the problem with coordinating with the management of educational institutions strategically [2], [4], [6], [10]. Third, the function of education public relations as an internal function in building and maintaining a conducive relationship between

education managers and the community of educational institutions, the function of education public relations as a publicity function, namely the availability of education public relations information to be informed through internal and external media, the function of education public relations as an advertising function, namely to reach out. the public at large, the function of education public relations as a function of creating news and events with positive opinion values, the function of education public relations as a function of public affairs, namely building and maintaining relationships in terms of public policy, the function of public relations education as a function of lobbying, namely establishing and maintaining relationships in terms of law and regulations that have been established, the public relations function of education as an issue management function is to be proactive in anticipating, identifying, evaluating, and responding to public policy issues, and the public relations function of education as a function of relations. gan investors, namely building and maintaining beneficial relationships with stakeholders in terms of optimizing public interest [3], [4], [6], [8].

The reconstruction of the public relations function of education needs to be done, especially in response to the era of Society 5.0. The context of the reconstruction of the public relations function in education is then adjusted to the needs, adaptation and acculturation contained in the conception of Society 5.0. Several definitions of Society 5.0 have been described. First, Society 5.0 places humans at the center of innovation and technology integration in improving the quality of life, sustainable social responsibility [11]–[14]. Second, Society 5.0 responds to the evolution of technology, information and communication that has brought drastic changes in creating new values and becoming a pillar of industrial policy in various countries. At least five things are offered in the conception of Society 5.0, namely (a) digital transformation, (b) the challenges faced, (c) society 5.0, (d) community improvement 5.0, and (e) industrial initiatives [15]. The purpose of the five conceptions offered in Society 5.0 above is to create a society that enjoys life to the fullest. The main focus of Society 5.0 is on society in using technology for economic growth and technological development [15]–[17]. Third, Society 5.0 places society at the center of balancing economic progress with solving social problems with an integrated system of cyberspace and the real world [18]. The goal

of Society 5.0 is to create a society where people truly enjoy life and feel comfortable. Fourth, Society 5.0 places society as the focus of interest and convenience in using advanced technology, IoT (Internet of Things), robots, and artificial intelligence (AI), Augmented Reality (AR) actively in life, industry, health care and other fields. [15]–[17], [19]. Fifth, Society 5.0 is a development of the 4.0 concept by paying attention to relevant social aspects and challenges with a focus on society to innovate in responding to technological transformations based on humanitarian principles [20], [21]. The description of the definition of Society 5.0 above leads to the use of technology in various aspects of social life that can be felt by humans and make humans happier.

The reconstruction of the education public relations function in the era of Society 5.0 was more in response to competition between educational institutions and to accelerate access to technology and information in carrying out its strategic functions. This paper then becomes the basis for determining the objectives of how and what should be done in the reconstruction of public relations functions in education in the era of Society 5.0.

Research methods

This research method uses field research methods, namely direct observation of research subjects (Public Relations of Education) and combined with literature study to obtain theoretical material and some conceptions of research material with sources from research journals and some data from the government.

The research approach is a qualitative approach. Qualitative research procedures produce descriptive data in the form of sentences or writings from other researchers as reinforcement of explanations in articles and field data that the authors refer to.

Discussion

The reconstruction of the public relations function of education in the era of Society 5.0 is directed at the response to competition between educational institutions and to accelerate access to technology and information in carrying out its strategic functions. This means that the public relations function of education is placed in a strategic domain which is then aligned with the highest management of the institution. So that the public relations function of education is inherent

Society 5.0 Fostering Spirituality and Humanity

in the management of educational institutions. Meanwhile, Society 5.0 society, which in fact is a participatory society, needs to be realized to be able to experience the benefits of technology and information in various aspects of social life, in this case education. The following will present a flowchart in the reconstruction of the public relations function of education in the era of Society 5.0.

Reconstruction of Education Public Relations Function in Society Era 5.0



George R. Terry (1972) Education Management Function Flowchart which has been modified

Planning

Society 5.0 is the concept of a human-centered and technology-based society in the integration of cyberspace and the real world to enjoy life and feel comfortable [15], [18], [19], [21]. The concept of Society 5.0 was born as an answer to the concept of the industrial revolution 4.0 which is considered to have the potential to degrade the role of humans. The Society 5.0 concept was initiated in Japan in 2019. The Society 5.0 concept is an integration of the virtual world and the real world by utilizing technologies such as IoT (Internet of Things), robots, and artificial intelligence (AI), Augmented Reality (AR) in serving humans so that society can feel comfortable and enjoy life. Society 5.0's presentation is more on values and new lifestyles created through the development of technology and information so that later it

can minimize the existence of gaps in humans and economic problems in the future.

Planning carried out in the reconstruction of public relations in education in the era of Society 5.0 is more about meeting community needs, community attitudes, harmonizing educational institution policies and formulating and implementing work programs to increase community participation in educational institutions.

Public relations for education can then anticipate various problems in the era of society 5.0, especially in anticipating the negative views of society towards educational institutions. This is done at the planning stage so that the public relations function is more on a strategy in educational institutions which is then aligned with the highest management of the institution. Because the public relations function of education is in line with the highest management of the institution, public relations in planning must pay attention to two-way communication between educational institutions and the community. The use of technology such as IoT (Internet of Things), robots, and artificial intelligence (AI), and Augmented Reality (AR) can then be an alternative if the two-way communication has been studied comprehensively and thoroughly.

The planning of public relations education is further directed at utilizing technology such as IoT (Internet of Things), robots, and artificial intelligence (AI), as well as Augmented Reality (AR) in serving humans so that people can feel comfortable and enjoy life. The following is a reconstruction of education public relations planning in the Society 5.0 era. First, education public relations are capable of being a mediator in conveying information both internally and externally. Second, education public relations is able to support and support work programs related to local to global publications. Third, education public relations is able to create a positive image of the institution.

Organizing

People in the era of Society 5.0 are typically intelligent, critical, and have high literacy in living the dimensions of life [11], [15]–[18], [21]. Technology in all levels of life should be served as much as possible for the benefit of humans, and for the sake of balancing nature in the world. Society in the Society 5.0 era achieved a high convergence between the virtual world and the real world. In its organization, people in the Society 5.0 era have sensors in large-scale information,

namely analysis in real space which is then accumulated in cyberspace. In cyberspace, large-scale data is analyzed by artificial intelligence (AI) and the results of the analysis are fed back to the real world in various forms. Community organizing in the Society 5.0 era according to the Japanese government [12]–[14], [16], [18], [19], [21], namely: (a) Drones are applied for goods delivery, as a property survey and support shipments disaster logistics around the world, (b) household appliances such as refrigerators implanted artificial intelligence (AI) so as to support daily life, (c) elderly people became a problem in itself for the Japanese government so that robots and other forms of solutions emerged, (d) robots as a reliable work partner in any condition, (e) cloud as a more convenient shopping and traveling solution, and (f) future technology for unmanned driving.

Community organizing 5.0 should integrate the virtual world and the real world. As a group of humans who have emotional intelligence and knowledge integrity as God's creatures, they are able to solve problems through a system that integrates technology and is human-centered in balancing economic progress and minimizing inequality in human life. Following is the organization of the public relations function in the Society 5.0 era. First, creating a harmonious and conducive internal relationship. This is done to build and maintain a good and mutually beneficial relationship between management of educational institutions, lecturers and employees, as well as students in educational institutions. Second, the publicity of educational institutions. Publicity of educational institutions is carried out by education public relations to provide sources of information that have been provided so that the information has its own news value. Method In placing messages in this media is a message in which the media is an uncontrolled method because this information source does not pay the media for loading the information. Third, advertising that can reach the wider community. This advertising is directed at massive media and has a clear identity by paying for the space and time of placing the information. The method used is a controlled method of placing messages in this medium. Fourth, Press Agency, where news creation and news-value events are produced to attract mass media and get public attention. Fifth, public affairs is a special part of public relations education in building and maintaining educational institutions' relationships with local communities in the context of collaboration in determining policies. Sixth, lobbying is an

effort to establish and maintain connections, especially with the aim of influencing the formulation of established programs and policies. Seventh, issue management is carried out to anticipate, identify, evaluate, and respond to public policy issues that affect educational institution relations. Eighth, investor relations are carried out to build and maintain beneficial and mutually beneficial relationships with shareholders and other parties in financial communication in order to optimize certain market values.

Actuating

Society 5.0 creates new patterns in the order of people's lives [11], [12], [14]–[21]. The influence of technology and cyber has changed people's mindset. Society 5.0 teaches humans to be able to integrate life between the virtual world and the real world in a good and balanced manner, so that there will be harmony with the improvement of human life. In Society 5.0, the new value created through the development of technological advances can minimize human gaps and economic problems. Technological developments are the key to realizing the Society 5.0 concept. In Society 5.0, society takes advantage of technological advances and sophistication. Society 5.0 changes the pattern of life in harmony with technology. Technology was created to make it easier for humans to make ends meet.

The role of public relations in education in educational institutions is very important, therefore every educational institution requires the performance of public relations education to carry out work programs. Public relations education communication can use technology such as IoT (Internet of Things), robots, and artificial intelligence (AI), as well as Augmented Reality (AR) in serving humans so that people can feel comfortable and enjoy life. This is done because the Society 5.0 is a comprehensive ecosystem. The society structure of Society 5.0 is not only seen in the aspect of productivity, but also the activities of educational institutions, active and more efficient human resources. At the level of actualization, public relations education builds an ecosystem by implementing an internet network system to facilitate access to internal information, monitoring human resources, and reports on public relations education work programs. Using the internet network to communicate all activities in everyday life. Public relations education does not only focus on technological developments,

but balances the needs of humans as social creatures. Adjusting cyber technology to the need for human enjoyment according to the situation is a necessity and part of the reconstruction of public relations education through the internet of things (IOT). The reconstruction of education public relations in its actualization certainly takes into account the multidimensional aspect (Wellbeing), namely creating added value by applying new solutions to existing problems. Public relations education with Wellbeing collaborate to create happiness in society. The reconstruction of public relations education in the era of Society 5.0 is expected to be able to realize smart innovation through increasing and equitable quality of life, expanding access and relevance in realizing everyone's happiness. The space for human interaction is already in a digitalized world. Therefore, public relations education in the era of Society 5.0 needs to be directed at the above innovations. So that the reconstruction of public relations education can be realized in creating conventional habits, becoming completely digital that offers convenience and efficiency of time and costs to facilitate, comfort and balance the need for happiness for yourself and other people. So that arises a symbiosis of mutualism between public relations education innovation and wellbeing.

Controlling

Controlling public relations education in the era of Society 5.0 leads to the use of technology such as IoT (Internet of Things), robots, and artificial intelligence (AI), as well as Augmented Reality (AR) in serving humans so that people can feel comfortable and enjoy life. The implementation of work program control is carried out according to the objectives set by the highest management and education public relations. Public relations education control takes advantage of the potential use of selected technology. The purpose of public relations education control is more to benefit community participation so that the use of technology leads to a feeling of comfort and enjoyment of life that is felt by the community. The control of public relations education is carried out by: (a) Positive Image Model for Society, (b) Information Achievement Model for Community, (c) Community Attitude Response Model, and (d) Synchronization Model of Community Needs and Educational Institutions. First, the positive image model to the community is the control of public relations

education in implementing the programs that are carried out, especially the goal of a positive image to the community through various mass media. This model places public relations education as a function of positive image control. The education management process is not the focus but the impact of information on a positive image to society. Second, the model of information attainment to the public is the control of public relations education related to the attainment of information conveyed to the public. This model is a control response to information conveyed by education public relations to the public regarding managed educational institutions. Third, the community attitude response model is the control of public relations education in getting a response to community attitudes based on the results of research in developing messages with the aim of facilitating education and public persuasion to think, behave and act in accordance with the expectations and desires of the organization. Fourth, the synchronization model for the needs of the community and educational institutions. This model is a research activity using communication as an approach to managing conflict and increasing understanding of educational institutions. This model emphasizes the importance of changing the behavior of educational institutions and community participation in accommodating the needs of both. So, this model emphasizes communication that is supported by its actual activities.

Conclusion

The reconstruction of the education public relations function in the era of Society 5.0 was more in response to competition between educational institutions and to accelerate access to technology and information in carrying out its strategic functions. In its implementation, it is carried out by Planning, Organizing, Actuating, Controlling, Evaluating. The public relations function of education in the context of Society 5.0 places society as the focus of interest and convenience in using advanced technology, IoT (Internet of Things), robots, and artificial intelligence (AI), Augmented Reality (AR) actively in life in this case is the field of education.

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Ethical Education Model in Wulang Reh

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ABSTRACT

The problem that will be discussed in this study is the model of ethical education in Wulang Reh. The purpose of writing this article is to describe the model of Javanese ethical education in Wulang Reh which is still relevant to be studied and applied in Javanese life even though it has been more than 200 years Wulang Reh was written by Sri Susuhunan Paku Buwana IV. The research method used is qualitative descriptive with a hermeneutic approach that is interpreting the contents of Wulang Reh and translating the results of the interpretation with a Javanese cultural expert from the Surakarta Palace, Kanjeng Yusdianto. From the results of the study it can be concluded that the main ethics of the Javanese people at first was bad, for example hypocrisy, chameleon, sneering, hating, biting, lying down, teasing, teasing, panasbrang, golek-golek, dahwen, open, srei, dengkri, kikrik, dhemenan, sekuthon. With this background emerges the teachings of Javanese ethics in Wulang Reh as a medium to improve the bad ethics to be transformed into a noble ethic. This is possible if the Javanese want to learn and practice the teachings (piwulang) contained in Wulang Reh by continuing to improve the bad ethics attached to them.

Keywords: Ethical education, Wulang Reh, Javanese

Introduction

Wulang Reh is a classical literary work composed by Sri Susuhunan Paku Buwana IV King of Surakarta palace year 1788–1820. He was a king who hated the colonizers and was full of ambition and courage. *Wulang Reh* is a work that contains high Javanese ethical values. Javanese people need ethics, in order for life to fulfill its function. Ethics in *Wulang Reh* covers everything, from Javanese people as family members to community members [1].

Wulang Reh which is also a source of Javanese life view of manunggaling kawula-Gusti, not free from the concept of Javanese ethics. This conception is the culmination of the Javanese ideals at

the end of their journey. With the expression in the second stanza of Dandanggula:

Sasmitaning ngaurip puniki | mapan ewuh yèn nora wéruba | tan juménêng ing uripe. rasa kang satuhu | rasaning rasa punika | upayanên darapon sampurna ugi | ing kauripanira /

Signals in this life, it is impossible for you to understand if you do not know it, will not have peace in his life. Many claim to have understood the signal (in life), even though they have not processed the taste, the essence of the real taste. Therefore, strive (understand the meaning of that taste), so that your life is perfect.

Indeed, it is the perfection of life is achieved while people know and will know how to process signals about taste, taste true.

It seems that ethics is inseparable from the 'Taste' that is cultivated in the human mind. If that virtue becomes noble, then ethics will also lead people towards noble character [2].

Javanese life ideals, idolized in an ethical map. If you look at some verses in the book of Wulang Reh, the content shows the attitude of man in facing life in the world and living towards God. The arrangement of steps reflected from the Dhandanggula temple to the last temple of Girisa is an ethical arrangement. The problem is, not all Javanese are able to be Javanese who have the character of King Yudistira who is polite, 'valley of the heart', ambegparamarta and virtuous. Why is that?

Literature Review

Ethics is a container (bracket). As a container, ethics is considered a pattern, to frame the ugliness of human nature. Because the cage is so strong, sinubya-subya, it becomes a tradition. The tradition permeates, becoming blood, muscle, bone, and flesh of the body. Therefore, the ethics has the vibration of the kejawen tradition. Agree or not, the presence of ethics in the Javanese tradition, (presumably) because there are Javanese characteristics; Ugly (earth's crust, earth's crust). Javanese people tend to go through the dark world [3].

What can be noted in most Javanese communication, the ugly nature must appear. The main character of the Javanese is hypocrite. So the poem "Aja lamis" is right as the vortex of Javanese ethics. The hypocritical Javanese (pretend) must have a chameleon soul. In addition to lamis (pretending) the ugly nature of other Javanese who are not

less dangerous, namely: nylekuthis, hate, ngigit-igit, ndableg, ujas-ujus, gonyak-ganyuk, panasbrang, golek-golek, dahwen, kikrik, dhemenan, sekuthon, as the nature of Sengkuni in the world of puppetry [4].

If these ugly characters are left, without the norm, this world will be ruined. That ugly nature, if not anticipated with noble ethics will develop terribly (ndadra and ngambra-ambra). As a result, Javanese tend to behave strangely, out of propriety. Unfortunately, the ugly nature of the Javanese is less realized by the Javanese, as stated in the Kinanthi temple, 13: [5]

Akèh wong kang sugih wuwus | nanging dèn sampar pakolih |
amung badane priyôngga | kang dèn pakolihkên ugi | panastène kang
dèn umbar | tan anganggo sawatawis

Many people are good at talking but his talk is wrapped up with the intention of being selfish, only he is the one who benefits, he solves unlimited envy (in Kinanthi, 13).

*Aja na wong bisa tutur | ngémungna ingsun pribadi | aja na kang amémadha
| angrasa pintêr pribadi | iku setan nunjang-nunjang | tan pantês dipun parêki*
(Kinanti, 13 – 14) [6].

No one can speak except himself and no one can meyamai, feel the smartest, it is demonic behavior, you do not deserve to approach.

Wulang Reh has come up with an ethical offer that can unite the various aspects of life. In *Wulangreh* there are many things that can be used as a handle (handle). Many catharsis from *Wulangreh* fiber that can cure the disease (memala) of this ethical behavior of the nation. Many ethical education can be a remedy for the ugly Javanese tradition in this book *Wulang Reh*.

The structure of *Reh Wulang* Content that contains ethics can be seen in the following table:

Table 1. Song Names and Number of Bytes in Wulang Reh

No.	Name of Song	Number of canes / bytes
1.	Dandanggula.	8 bytes
2.	Kinanthi.	16 bytes
3	Gambuh	17 bytes
4.	Pangkur.	17 bytes
5	Maskumambang.	34 bytes
6.	Megatruh	17 bytes.
7.	Sleep.	12 bytes
8.	Wirangrong	27 bytes
9.	Pocung	23 bytes
10	Mijil	26 bytes
11	Asmaradana	28 byttes
12	Sinom	33 bytes
13	Girisa	25 bytes

The 13 songs in the book *Wulang Reh* above all contain Javanese ethical values that are very sublime and dignified if practiced in life. Unfortunately, the ethical values of *Wulang Reh* are not much studied and practiced so that the example of example in Jaw aini ethics is less known. Esti et al [7] concluded that one of the ethics in *Wulang Reh* is responsiveness in gradescan be concluded that the value of the local wisdom tanggap ing sasmita in *Serat Wulang Reh* is still relevant in the global era. The value of local wisdom in grading concretely appears in the individuality and soul of the Javanese people, namely giving priority to preventive behavior, and this is very useful as a prevention against greed of lust, mental rudeness, which has an impact on the loss of sensitivity of the human soul in life in the global era.



Figure 1. Museum Radya Pustaka Surakarta Place of Storage *Wulang Reh*

Research methods

This research uses a qualitative research paradigm, a hermeneutic approach. Data collection techniques by interpreting *Wulang Reh* and the results of the interpretation are excluded with the opinion of a Javanese cultural expert, namely Kanjeng Yusdianto. Data analysis using Miles and Huberman model [7] which is summarized as follows (1) data collection and recording, (2) data interpretation, (3) triangulation of interpretation results with Javanese cultural experts from Surakarta Palace, Kanjeng Yusdianto and Head of Museum Radya Pustaka Surakarta.

Results and Discussion

Javanese ethics is not just a matter of norms of action alone, but related to the outlook of life. Life insights related to 'from' and 'towards', can not succeed in getting enlightenment (scholars, enlightenment) when ethics fails to be implemented. The lust is like the characters of Sengkuni and Kurawa. The character of Sengkuni requires the ethics

of 'Pa keret', otherwise the cosmos will shake. The disharmony of the cosmos is a sign that Javanese ethics is beginning to clog.

Javanese social ethics teachings that refer to the character of Sengkuni figures, namely *chamomile soul, sneering, bating, biting, lying down, teasing, teasing, panasbrang, golek-golek, dahwen, open, srei, dengkeri, kikerik, dhemenan, sekuthon*, etc belong to those who need to be straightened (in the 'train') back to noble ethics. Straightening efforts ('pa keret') can be done with guidelines on the following verses of Gambuh song:

*Sekar gambuh ping catur, kang cinatur polah kang kalantur,
tanpa tutur katula-tula katali, kadaluwarsa katutub, kapatuh pan dadi
awon.*

Sekar gambuh the fourth pattern, which is the subject of discussion is irregular behavior, do not want to listen to advice, the longer the more uncontrolled, this will have bad consequences.

*Aja nganti kabanjur, sabarang polah kang nora jujur,
yen kabanjur sayekti kojur tan becik, becik ngupayaa iku, pitutur ingkang
sayektos.*

Do not let yourself get caught up in dishonest behavior, if it is already done it will hurt, and it is not good. Therefore, strive for true teaching.

*Ana pocapanipun, adiguna adigang adigung,
pan adigang kidang adigung pan esthi, adiguna ula iku, telu pisan mati
sampyuh.*

There are metaphors that read adiguna, adigang, adigung, adigung kiasan kijang, adigung kiasan gajah, and adiguna kiasan ular. All three died at the same time.

*Ing wong urip puniku | aja nganggo ambék kang têtêlu | anganggoa rèrèh
ririh ngati-ati | dèn kawangwang barang laku | dèn maskitha solahing
wong*

In life, do not precede these three habits, be patient, careful, and careful. Observe all behavior, be aware of the behavior of others.

*Dene katêlu iku | si kidang suka ing patinipun | pan si gajah alena
patinirèki | si ula ing patinipun | ngandêlkên upase mandos*

Of the three, the deer died for its joy, the elephant died for its negligence, while the snake died for its usual violence.

*Katélu nora patut | yèn tiniru mapan dadi luput | titikane wong anom
kurang wéwadi | bungah akèh wong anggunggung | wékasane kajalomprong*

All three you should not imitate, if you imitate the consequences will be bad. The characteristic of the youth is not being able to keep secrets, happy when many flatterers that eventually fall apart.

From the description of the parade above will guide the reader towards a wise ethic. The ethics in Wulang Reh is spoken wisely. Sengkuni has an arrogant character, offends others and makes others hurt, others are considered weak, stupid, wrong and self-righteous. It can be said that Sengkuni has no ethics. From here Wulang Reh displays the teachings of ethics that can be a cure (cure) of bad traits and behaviors that exist in human beings.

Conclusion

Give a conclusion on the results of research can be concluded that the ethics in the teachings of Wulang Reh is a perfect living ethic. This ethic will be able to lead to a better life if applied. Bad ethics that for example is present in Sengkuni has no benefit if it is owned by Javanese people. The main ethics of the Javanese people at first was bad, with the emergence of Javanese ethics teachings in Wulang Reh can improve the bad ethics to be changed into a noble ethic. This is possible if the Javanese want to learn and practice the teachings (piwulang) contained in Wulang Reh by continuing to improve the bad ethics attached to them.

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Integrating Mirt into Ordinary Linear Regression Modeling in Generating New Prediction Model

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ABSTRACT

The advances in technology today have allowed data to be collected in various forms to such a great extent that it is becoming more complex. Likewise, the production of new theories in various fields demands a change to the methods of modeling and measurement. Predictive models in the field of statistics are also impressed by these two changes. This study has proposed new predictive models that can be applied in the fields of education, business, and others who need psychological elements in the model variables. The developed model incorporates the MIRT model into ordinary linear regression model that was never backed by any researcher before. This study also proposed modeling framework that can be used by new model with other models available. Suggestions for further research related to the model integrating MIRT have been stated to robust and intensify the existence of the model.

Keywords: Prediction model, multidimensional item response theory, linear regression model.

Introduction

For centuries, humans have always tried to invent various methods to make prediction for the future. Ancient methods such as prediction using the medium of yarrow stick or tarot card have been ignorantly used by people to predict their fate. Tarot card readers have developed a

subject thinking framework to produce prediction that may be accurate. However, Islam strictly forbids its followers from upholding such practices. In Islam, divination is only used for economic or business management purposes. For instance, the story of Prophet Yusuf which is included in the Qur'an chapter Yusuf verses 46-49:

ثُمَّ يَأْتِي مِنْ بَعْدِ ذَلِكَ سَعٍ ۗ شِدَادٌ يَأْكُلْنَ مَا قَدَّمْتُمْ لَهُنَّ إِلَّا قَلِيلًا مِمَّا تَحْتَصُونَ ﴿٤٨﴾

"O Joseph!" (he said) "O man of truth! Expound to us (the dream) of seven fat kine whom seven lean ones devour, and of seven green ears of corn and (seven) others withered: that I may return to the people, and that they may understand."

قَالَ تَزْرَعُونَ سَبْعَ سِنِينَ دَأَبًا فَمَا حَصَدْتُمْ فَذَرُوهُ فِي سُنْبُلِهِ إِلَّا قَلِيلًا مِمَّا تَأْكُلُونَ ﴿٤٧﴾
يُوسُفُ أَيُّهَا الصِّدِّيقُ أَفْتِنَا فِي سَعٍ بَفَرَّتْ سِمَانُ يَأْكُلُهُنَّ سَعٌ عِجَازٌ وَسَعٌ سُبُلَاتٍ خَضِرٌ
وَأُخْرٍ يَأْسِتُ لَعَلَّ أَنْجِمَ إِلَى النَّاسِ لَعَلَّهُمْ يَعْلَمُونَ ﴿٤٩﴾

(Joseph) said: "For seven years shall ye diligently sow as is your wont: and the harvests that ye reap, ye shall leave them in the ear, - except a little, of which ye shall eat.

"Then will come after that (period) seven dreadful (years), which will devour what ye shall have laid by in advance for them, - (all) except a little which ye shall have (specially) guarded.

ثُمَّ يَأْتِي مِنْ بَعْدِ ذَلِكَ عَامٌ فِيهِ يُغَاثُ النَّاسُ وَفِيهِ يَعْرِضُونَ ﴿٤٩﴾

"Then will come after that (period) a year in which the people will have abundant water, and in which they will press (wine and oil)."

This verse teaches Muslims to build and manage wealth in order to prepare for the future. Immediately after the king of Egypt's dream was explained by the Prophet Joseph, the plans and wisdom were put together to save the Egyptians.

The use of predictive methods has spanned over various fields including political sciences, education, product production, and others. Political science has been using predictive methods to predict election results based on public sentiment information gathered on various issues. The field of education requires a forecasting system that can identify students who are at risk of failure. Similarly, in the production of a product, a field study is carried out first to find out the needs of

the customer which then enables the estimation of profit that will be obtained in the future.

Statistical scholars have begun to introduce the method of divination as early as the 1700s. Started by Thomas Bayes and Richard Price [3] and up until the work of Pierre-Simon Laplace [14]; an event has been seen to occur randomly. This allows for the possibility of an event repeating itself. Events that occur can be predicted based on the pattern or distribution that they have.

However, so many changes are taking place in the world of statistics which require a paradigm shift in methods to meet current needs. Aside from that, multitype data is more common than ever and often very difficult to model whereas the complexity of categorical data faced by statistician is very remarkable. Consequently, evolution in theory demands an improvement in existing statistical methods. All these changes make modeling difficult if they are not implemented properly. In addition, it is often that only a small amount of available data can be used in analysis. A variety of prediction models can help stakeholders produce more accurate prediction without worrying about changes in the data or theories to be applied.

Predictive models involving the field of psychology are given little attention by statisticians. Among the popular theories produced in the field of psychology is the modern test theory also known as item response theory (IRT). The two scholars who pioneered the formation and development of one-dimensional IRT model were Georg Rasch and Frederic Lord. The model is useful for any instrument built to test only one ability [18]. Such ability can be explained through a latent nature. The one-dimensional IRT model assumes that a group of individuals has only one common ability. However, there is a need to measure instruments that have more than one ability [13]. Therefore, the multidimensional TRI model is more suitable to be used on instruments that test the unique abilities of each individual [15].

This study proposes a new modeling method and framework which are established for forecasting purposes. The newly built model incorporated the IRT model into the existing regression model. The model developed can be applied to the field of psychology, business or education which also measures the level of knowledge of an individual to the items that have various levels of difficulty.

This article is organised as follows. Section 2 highlights the predictive models that have been developed by previous scholars in various fields. Next, the formulation of the new prediction model will be detailed in section 3. Section 4 proposes an appropriate modeling framework to be used for the prediction model that implements IRT. Lastly, it is followed by conclusion that identifies challenges in implementing new models and addresses future research proposals that can be conducted in the future.

Literature Review

Over the decades, many scholars have sought to understand the real phenomenon in order to acquire something. The phenomenon can be observed extensively through modeling methods that detail the variables in the form of mathematical formulas and their accuracy can be tested. The procedure works well on rigidly manageable phenomena; making it possible for a small number of 'state variables' to be identified. Next, these variables can be studied and evaluated in relation to other variables.

The three main schools of thought about variability in statistics are frequentist, Bayesian, and survey sampling. The concept of frequentist can determine the probability of an event through the long-term relative frequency of events in many experiments. Meanwhile, the Bayesian concept updates the pre-experimental views packaged in the previous rules by the Bayes rules. However, the Bayesian approach is more abstract than frequentist because one event is tied to another event that often coincides with the actual situation. Sampling survey solves the problem by limiting population to be sampled. This approach depends directly on the actual population from which the sample was taken. Based on the Bayesian and frequentist approaches, observations are present from random variables. The inferences made are mostly related to the distribution compared to the actual unit of the population.

The approach to the phenomenon allows the statistical prediction model to be fully constructed through the identification of the relevant variables. Statistical prediction modeling can be defined as the process of creating a model that aims to achieve a high level of accuracy [16]. It is able to assess the difference between theory and practice or serves as a reality checker on related theories [9]. Statistical prediction models are categorised as linear or parametric models and nonlinear or non-parametric models [12].

Parametric models assume that the model error follows a specific distribution and has a finite or fixed number of model parameter(s). Meanwhile, errors for non-parametric models do not depend on a particular distribution and have an infinite number of parameters that depend on the number of data. Among the commonly used parametric models in various fields are linear regression, logistical regression, ordinal regression, and support vector machine (MVS). In contrast, K-nearest neighbor and classification tree are examples of non-parametric models.

The regression model is the most frequently used method as a predictive model in previous studies. Multiple regressions take into account the effect of several independent variables on the dependent variable and determine the type of relationship between them [17]. If the relationship between the two types of variables is linear, then multiple linear regression can be used [11]. Whereas, nonlinear regression is used to estimate non-linear model parameters that cannot be linear even after transformation technique is applied [10].

Most predictive models assume the number of responses agreed within the instrument as independent variable values for the predictive model [1]. This approach does not take into account the level of difficulty of the question and the individual's ability to response. For example, when two individuals are asked to answer 10 different item questionnaires in terms of difficulty level, but the number of responses agreed by both individuals turn out the same. Usually, these individuals will be considered to have the same abilities. However, if there are questions that are much more difficult than others, then there is a clear difference of abilities that is being tested. Alternatively, modern test theory is able to apply elements of the level of difficulty of questions and individual ability in the prediction model. By isolating an individual's ability from the level of difficulty, one's true ability can be assessed regardless of the questions that are used in the test.

Predictive model can be integrated with IRT which has basic parameters such as individual's ability and level of difficulty of the question. Additional parameters such as discrimination and guessing can be made part of the IRT model [2]. Each IRT parameter is capable of providing additional information to the predicting model. The extent to which these parameters contribute to depends on the analysis of the actual data. Proposed a linear regression technique applied in

conjunction with one-dimensional IRT model as a predictive model of student academic performance. However, one-dimensional IRT model was found to fail to assume each individual's unique ability. Thus, the researcher of this present study believes that a more complex model of multidimensional IRT (MIRT) model is required [1].

Methodology

This section provides the details of MIRT model used and the method of constructing the prediction model that implements the IRT model. The MIRT model was integrated into basic linear regression technique through estimation of some independent variables based on information from the benchmark variable [22] or other variable. Estimated response of a variable was obtained from the estimation of ability parameter for the benchmark variable and the estimation of difficulty parameter for the estimated variable [7]. An important assumption to enable this approach to be made was that each individual has equivalent ability to different items where those items were tested against the same thing. The use of the MIRT model in predicting the response of an item coincides with the Bayes approach.

Multidimensional Item Response Theory (MIRT)

MIRT is a modeling method capable of measuring complex psychology. This model provides specific inferences for each individual respectively through the identification of individual traits along with discrimination parameter for each skill to be measured by test items [22]. The most popular MIRT applied to polytomous data is the graded response model [7].

Introduced a Graded Response Model (GRM) that is suitable for ordinal response categories. This model assumes that a test item has more than two categories related to each other [20]. The cumulative probability of GRM for the two-parameter model is given as follows:

$$P(Y_{ijk} \geq 1 | \theta_j, b_{i1}, a_i) = 1 \tag{1}$$

$$P(Y_{ijk} \geq 2 | \theta_j, b_{i2}, a_i) = \frac{1}{1 + \exp[-a_i(\theta_j - b_{i2})]}$$

$$P(Y_{ijk} \geq 3 | \theta_j, b_{i3}, a_i) = \frac{1}{1 + \exp[-a_i(\theta_j - b_{i3})]}$$

⋮

$$P(Y_{ijk} \geq k + 1 | \theta_j, b_{ik}, a_i) = 0$$

where: Y_{ijk} is the response of person j for item i and category k ,

$\theta_j = \theta_{j1}, \theta_{j2}, \dots, \theta_{jm}$ is the latent trait for ability of person j and latent factor m ,

b_{ik} is the difficulty parameter for item i and category k , and

a_i is the discrimination parameter for item i .

The probability of success for step k or more has an ascending pattern such as normal ogive function and logistic model. The probability of response $Y_{ijk} = k$ is defined as follows:

$$\begin{aligned} &P(Y_{ijk} = k | \theta_j, b_{ik}, a_i) \\ &= P(Y_{ijk} \geq k | \theta_j, b_{ik}, a_i) - P(Y_{ijk} \geq k + 1 | \theta_j, b_{ik}, a_i) \end{aligned} \tag{2}$$

Based on equation (2), the conditional distribution of $I \times 1$ person response vector \mathbf{j} , \mathbf{Y}_j is:

$$L(\mathbf{Y}_j | \Upsilon, \boldsymbol{\theta}) = \prod_{i=1}^I \prod_{h=0}^k P(Y_{ijk} = h | \Upsilon, \theta_j)^{\ell(Y_{ijk})} \tag{3}$$

where: Υ is a collection of all item parameters,
 $\boldsymbol{\theta} = \theta_1, \theta_2, \dots, \theta_j$ is a latent matrix, and

$$\ell(Y_{ijk}) \text{ is an indicator form, } \ell(Y_{ijk}) = \begin{cases} 1, & Y_{ijk} = k \\ 0, & \text{otherwise} \end{cases}.$$

The parameters for the MIRT model can be estimated using two types of methods, namely the algorithm maximizing expectations [4] and the Metropolis-Hastings Robbins-Monro (MHRM) method for the polytomous model [6].

Random response data for GRM are generated using normal ogive function as in equation (4). Each individual's response to an

item can be generated from the score factor. The resulting score depends on the orientation of the coordinate axis in the multidimensional space defined by the analysis of the item core matrix or the input matrix of the ability parameter [19].

$$P(Y_{ijk} = k | \theta_j, b_{ik}, a_i) = \frac{1}{\sqrt{2\pi}} \int_{a_i^r \theta_j + b_{i,k+1}}^{a_i^r \theta_j + b_{ik}} \exp\left(-\frac{t^2}{2}\right) dt \quad (4)$$

Integrated MIRT in Linear Regression Model

This study proposes a new predictive model developed through the combination of a linear regression model with a multidimensional GRM. This model applies modern test theory that can measure the actual abilities of a latent individual based on the level of difficulty of the question and the degree of discrimination. Multiple linear regression equation was modified as follows:

$$Z_i = \alpha + \sum_{l=1}^l \beta_l Y_l + \sum_{k=t+1}^p \beta_k \hat{Y}_k + \varepsilon_i, \quad (5)$$

$$i = 1, 2, \dots, r, \quad t = 1, 2, \dots, p - 1$$

where, ε_i is error term.

The linear model of equation (5) has divided the independent variables of the model into two sections. The first section of the independent variables, $\sum Y_l$ is the actual response score. The second section, on the other hand, $\sum \hat{Y}_k$ is the response score for the independent variable which $k=t+1$ is estimated as a result of the information from the variable in the first section. The combination of the independent variables on both sides will give a prediction of the dependent variable for individual i, Z_i .

In addition, in ensuring that the prediction model is well adapted, this study recommends that the data sample is to be divided into two parts which consists of estimation and testing. On the estimation part, the difficulty and discrimination level parameters are estimated from the independent variables in the second section. Meanwhile, for the testing part, the response scores are estimated based on the estimates of ability from the independent variables in the second section along with the estimates of the parameters from the estimation part.

Proposed Modeling Framework

This study also presents a modeling framework for new predictive model that apply MIRT model as shown in Figure 1. The outline of the modeling explains the construction process of the prediction model. The process begins by identifying the appropriate variables to include in the model. One of the method in selecting variables is based on previous studies that have similar or almost similar research objective. Selected variables are collected and their data processed in order to meet the general assumption of the model. Incomplete data sample should be discarded and not included in the study data. The linear regression model requires quantitative data for dependent variable, while the independent variable(s) can consist of quantitative and qualitative data.

The assumption review is an important process in the development of a predictive model. The new predictive model proposed in this study should meet all the requirements for MIRT model and linear regression model. The conditions of the MIRT model consist of the number of dimensions and the local dependency of an item that can be examined using factor analysis. Meanwhile, the five main conditions for a linear regression model are linear relationship, multivariate normally distributed, little to none multicollinearity, no autocorrelation, and homoscedasticity. Various methods can be used to check all the conditions of the linear regression model, but this study does not present those methods.

Determination of sample size should also be based on the minimum requirements for both models. Looked at the effect of sample size factor on IRT model with three parameters. The results of the conducted simulation study found that the sample size can affect the accuracy of the parameters of difficulty and discrimination [5]. Estimation bias will become smaller as the sample size is increased. However, sample size only gives little effect to the guessing parameters. In addition, many scholars agree that sample size does not affect the estimation of ability parameter that latent trait provided that the item parameters are already known. Meanwhile, the minimum sample size for a linear regression model should be 30 which corresponds to the central limit theorem. Therefore, the use of a significantly large sample size is sufficient to achieve the minimum requirements for IRT model and linear regression model.

In finding the best predictive model, many scholars have combined various methods to obtain the model that provides the highest predictive accuracy. Predictive accuracy can be measured using measurements based on predictive errors. Therefore, model fitting process should contain several models fitted to the same data sample. Next, the model's goodness of fit can be tested using various tests. The goodness of fit test for the regression model consists of coefficient of determination, lack-of-fit sum of squares, reduced chi-squared, regression validation, and Mallows's C_p criterion. Meanwhile, the statistic that can be used in assessing the overall goodness of fit of the IRT model are z-statistic for residual means, a mean and variance correction to Pearson's X^2 statistic, and z-statistics for residual cross-products. The goodness of fit test is able to identify significant independent variables and the significance of the model as a whole.

Analysis of the goodness of fit test conducted will determine the prediction model that provides the most accurate prediction results for a study. The results of the model selection should be based on the objectives of the study and of course, the new model proposed has its own strengths compared to other models that have been created before. Not only predicting a situation, model that apply IRT also take into account the latent ability of an individual as well as the level of difficulty of a question instrument. Finally, decision of the study should also list out the strengths and weaknesses of each prediction method used so that there is no biasness in the choice of a model.

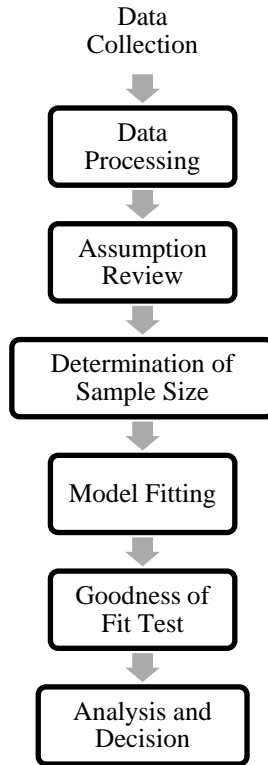


Figure 1. Modeling Framework

Conclusion

This study has produced a new method in predicting a phenomenon. The proposed model has involved modern test theory that is capable of recognizing the latent nature of an individual's ability based on the level of difficulty of the question and the element of discrimination. A complete modeling framework appropriate to the new model has been proposed for use with the existing models. In contrast to the standard linear regression model, the model developed must meet the requirements of the MIRT model tested using factor analysis. The resulting model has its own strengths that are not present in other models. However, there are suggestions that can be done by future research to further strengthen and test the proposed model. First, the best combination of difficulty levels between the independent variables needs to be determined in producing the most accurate prediction.

Secondly, the estimates of independent variable response scores are expected to increase the number of outliers' data that may affect the estimation of model parameters. Therefore, a more robust estimation method needs to be considered for the new prediction model. Next, the proposed model should be analyzed against actual data and simulated to test its consistency of various data features and increased sample size. Then, this present study only integrated the MIRT model into a linear regression model. A similar approach can also be applied to other regression models such as the logistic regression and ordinal regression but with some improvements. Finally, this kind of model gives the option to the researcher who wants to make prediction on phenomena involving psychological elements in the study.

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Community Empowerment Responsive to Law-Abiding Culture in Era 5.0

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ABSTRACT

The nonoptimal socialization of statutory regulations to communities in all provinces of Indonesia and community preparation in a law-abiding culture in the era of society 5.0 with the characteristics of a human-centered and technology-based society needs to design and make educational programs / technology-based training. The research is a literature study and it is necessary to change the pattern of non-formal education. In the era of digitalization 4.0 towards 5.0, several changes are needed in providing legal education to public so that people can follow changes, especially in the field of law through information technology. Community empowerment requires commitment from various elements and utilizes technology by preparing various things, including facilities and infrastructure, training programs, counseling and assistance with digitalization patterns, socialization of laws and regulations with a model developed in information technology.

Keywords: Empowerment, Community, Responsiveness, Legal Culture

Introduction

The 2005-2025 Long-Term National Development Plan states that legal development is directed at the realization of a society that has a high legal awareness and culture in the context of realizing a rule of law and creating a just and democratic community life.

The development of science and technology will affect the culture of society. In the industrial era 4.0, there are so many changes that have occurred as a result of information technology that forces people in both real and virtual worlds to carry out their activities. Likewise in the development of legal culture in the community, so it is necessary to adjust activities or programs in socializing the law in order to achieve legal compliance in the community. Continuous socialization with the dissemination of information and legal understanding of the prevailing

laws and regulations requires a model (pattern) to create a law-abiding culture in society.

There is legal fiction (*rechtsfictie*) which says that everyone knows the law or legislation after it is promulgated. Therefore, socialization and non-formal education through training, counseling or legal assistance is needed. There should be regular information and legal counseling on the basis of careful and good planning because the main objective is for the public to understand certain laws according to legal problems that are being faced at one time or another [1].

In the era of Society 5.0, people are required to be able to solve various social challenges and problems by utilizing various innovations in the era of industrial revolution 4.0 such as the Internet (internet for activities), Artificial Intelligence, Big Data (large amounts of data), and robots to improve the quality of human life. Education, especially legal education for society as a whole in Indonesia, needs to revisit existing infrastructure, develop human resources, reform education and industry. Then, it is also the use of technology as a tool for learning activities and absorbing information, especially the development of science in the field of law for the wider community. It is necessary to develop formal and non-formal education to accelerate information in the field of legal education.

Sustainable community participation is needed in development in order to achieve development goals. Community participations needed in this case are: 1) increasing independence, community empowerment, 2) developing community pioneering, 3) fostering community responsiveness to participate in social supervision, 4) providing input / suggestions and delivering accurate information.

Community participation is a process to facilitate and encourage people to be able to position themselves proportionally and become actors in utilizing their environment, in order to achieve sustainability in utilizing environmental resources in accordance with applicable laws. Community participation is very closely related to *sustainable development*. This is a prerequisite as a driving force that can lead society towards sustainability in relation to dynamic economic, social and environmental welfare. To increase community participation in development, especially in the regions (in villages), it is necessary to make efforts with a continuous and gradual program with all the existing potential.

In this case, *community empowerment* and *community development* are needed to increase community participation. Bartle (2003) defines *community development* as a tool to make society more complex and strong. This is a social change in which society becomes dynamic, institutionalized, grows, its *collective power* increases and there are qualitative changes in the organization [2]. It is different from Giarci (2001) which states that *community development* is a matter that has the center of attention in helping people of all ages to grow and develop through various facilities and supports. This is so that they are able to decide, plan, and take action to manage and develop their physical environment and social welfare [3]. This opinion means that the community must be able to survive with the support of community collective action and the network or access as an instrument to a potential and strong community. In the end, it is hoped that there will be social and economic changes in achieving prosperity including instilling a law-abiding culture. A program is needed related to strengthening community participation in empowering communities, especially people in rural areas, so that laws and regulations reach the community and are understood by the community.

Obedience of law is closely related, either directly or indirectly, to legal awareness which is manifested in behavior. Obedience to law is a qualitative psychological process. HC Kelmen divides adherence into 1) compliance (willingness), identification (introduction), interanlization (internalization) [4]. Satjipto Rahardjo stated that legal compliance is not only explained by the presence of the law but also from the willingness of humans to obey it [5].

Thus community empowerment, especially with regard to community response to law and law-abiding culture, requires changes in legal education, one of which is non-formal education for the community. So the problem issue is strengthening the law-abiding culture in some areas because there are still many laws and regulations that have not been disseminated regarding obligations, citizens' rights, laws and regulations relating to public law and private law.

Research methods

The research method used is literature study with descriptive analysis using secondary data. The data collection technique is using document study.

Result and Discussion

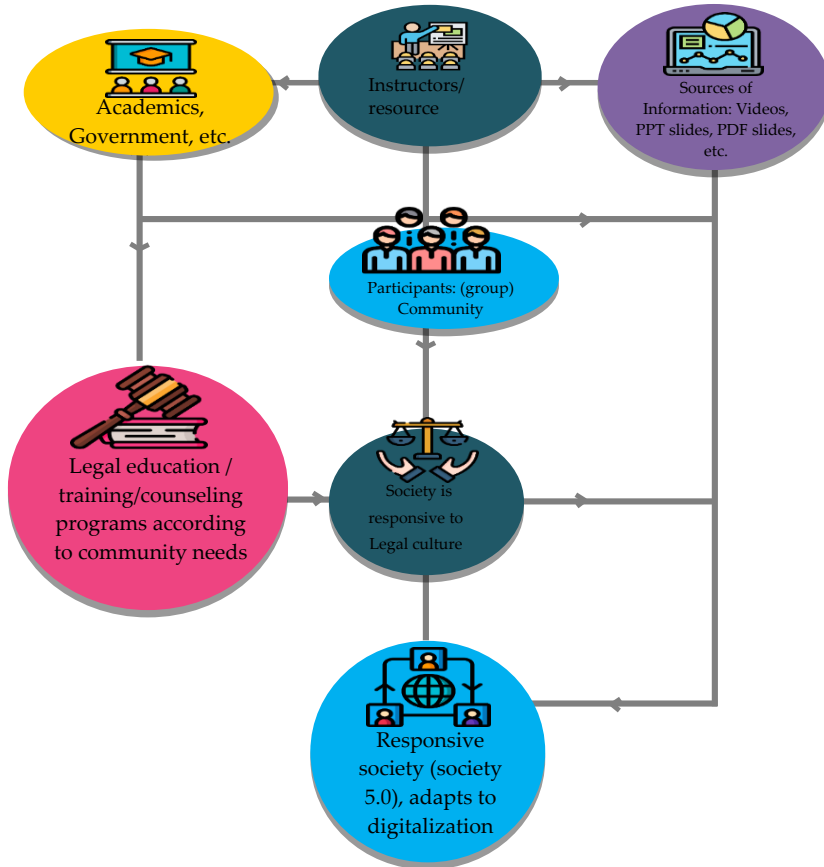
In the era of digitalization 4.0 towards era 5.0, several changes are needed in providing legal education to the public so that people can respond to changes especially in the field of law and participate in legal development through information technology. Community empowerment requires commitment from various elements and utilizes technology by preparing various things, including facilities and infrastructure, extension programs, and socialization of laws and regulations with a developed model. In reality, people obeying the law can be caused by several factors, including fear of sanctions if they violate the law, maintaining good relations with parties, the existence of interests and so on. In order for legal norms to be obeyed by members of the community, people need to know and understand all the laws and regulations they need so that they can obey them based on the awareness that these laws are beneficial for the life of the community, nation and state.

Regarding legal problems in society that touch society, we should know our rights and obligations as citizens who can contribute. In addition, as a citizen, it is necessary to disseminate the laws and regulations regarding a society that is responsive to legal development, including in carrying out activities/work/profession based on existing regulations. Therefore existing regulations issued by local/regional governments or the central government need to be socialized on an ongoing basis with programs that involve all related elements. In this case the programs proposed as an alternative to increase community participation with a sustainable responsive legal culture are as follows:

- 1) Providing information and dissemination carried out by experts, local officials, related agencies regarding matters that need to be known by the public.
- 2) Information gathering which can be done through education, training, and counseling through online (digital) media which is updated and can be accessed 24 hours by the public.
- 3) Consultation is carried out through meetings and two-way communication on the implementation of laws, government regulations, regional regulations that are tailored to the needs.
- 4) Conciliation at this level, the community participates in decision-making which is usually not decided in advance by the authorities. This is because the community is motivated to be responsive to the legal knowledge that has been given.

Society 5.0 Fostering Spirituality and Humanity

For this reason, the model or pattern in providing legal education to the community in the 4.0 era towards the 5.0 era is as seen in the scheme below:



From the scheme above, it is stated that counseling as a means of disseminating regulations and legislation is not only provided for a certain period but is continuously programmed and digitally documented. A series of outreach programs according to community needs presented in the form of videos, slides, interesting pictures, etc., can be accessed at any time if the community needs it. It is necessary to have facilities in the area from the kelurahan level (necessary from the *RT* and *RW*) within 24 hours. The forms of consultation can be held at any time if needed to see the impact. This program requires coordination from related agencies and academics on a continuous

basis and to anticipate any developments in laws and regulations that experience developments or changes (always updated). The outreach model that is carried out prioritizes the use of digital information technology. Moreover, habituation to the community from the training/extension pattern takes a long time. It is necessary to make efforts to society, including the use of information technology facilities.

Conclusion

With updated information, non-formal education is responsive to the implementation of law in society so that people are accustomed to it, encouraged, motivated to obey the rules in their daily activities, without coercion or pressure.

With the existence of community participation that is responsive to laws and regulations, the government is expected to get positive inspiration from the community as a basic reference in making future laws and regulations.

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The Role of The Law in Partnership to Develop Cooperatives is The Form of Justice in The Welfare State

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ABSTRACT

The role of partnership law in development demands changes because almost all social and economic changes that occur must be followed by changes in legal norms. Because changes in legal norms also have an impact on social change. In contrast, almost all human life has been regulated by legal norms concerning written and non-written legal norms. To build this legal relationship, the role of partnership law is needed so that legal certainty can be realized to achieve a welfare state. The fact is very feasible to study, considering that economics' justice element plays a significant role in realizing society's welfare. While the problems that arise in this paper are: the role of law in partnerships, the implementation of cooperatives in a welfare state while the goal is to know the role of law in partnerships and cooperatives in a welfare state. This study used a normative juridical study with a descriptive analysis approach. The research materials were processed qualitatively. While the research results, namely the penetration of law into society and development, are expected to bring about a strong sense of justice. Meanwhile, changes and developments in law are carried out in line with the demands arising from existing social problems in line with the result of existing developments, which are benchmarks for change. So, the law plays a crucial role in regulating development itself. If the law does not function in development, it will result in social inequality among the people themselves. Then the impact is not healthy in developing an economy based on the values of justice.

Keywords: Cooperative development is a form of justice

Introduction

The role of law in development is not only to function as a regulator or as a benchmark for business actors, but law must also provide clear boundaries of rights and obligations in carrying out development. But the role of law here must be able to change society, both from the social level, economy, income levels, and changes to people's lives as

aspired in the development itself, namely to achieve justice in the goals of welfare state.

One of the changes in the Republic of Indonesia's goals as stated in Pancasila and the 1945 Constitution is that all Indonesian people must get justice. It is a hope for realizing social welfare, as written in the second and fifth principles of Pancasila and the opening of the 1945 Constitution. The purpose of the law, which contains a sense of justice [1], is also a manifestation of the law's purpose. Justice from the purpose of the law is justice that is general and applies to all societies. Still, essential justice is justice that can be felt by every individual as a member of society. So, if it refers to justice in terms of legal objectives or legal norms, then the purpose of justice is to serve all society.

As the essence of justice in the economic field, the law in the partnership must play a role as regulated in PP. 17 of 2013 Article I point 4 states that a partnership is a partnership with a relationship with one another's business, whether jointly or not, using: mutual need to reinforce mutual benefit and trust in all aspects of existing business fields.

In connection with the provisions which govern the partnership, in Chapter III on Partnerships in PP No. 17 of 2013 Article 10 states:

1. Whereas a partnership must pay attention to and uphold business ethics and fair behavior in running a business, both large and small. Thus, the principles of the partnership will run well.
2. For the business to run by the partnership, it must follow the following provisions: mutual need, mutual strengthening, mutual benefit, and mutual trust.
3. There must be a balance in the partnership law so that justice can run with the provisions made in the partnership by the parties [2].

Furthermore, Article 12 states that for the partnership to run well, it must be guided by what is stipulated in Article 11 PP No. 17 of 2013:

- a. Large Enterprises are prohibited from opening small or medium scale businesses that are related to their business, and
- b. Also, Medium Enterprises are not permitted to open or control both small and micro-businesses related to or the same as their business fields.

This partnership also eliminates the unfair treatment between the strong and the weak due to imbalance. The partnership concept that has been regulated in the PP Partnership is a reflection of the welfare state. So, the penetration of law into society and economic development can run, and it is hoped that it can act as a counterweight in regulating and for making changes from the law itself which is related to economic development and society itself so that the role of law can be felt by all, both development and society as a whole [3].

Problem Formulation

In this paper, several issues will be discussed, which will be discussed in the discussion. The problem formulations are as follows:

1. How the role of law in partnership is
2. How the implementation of cooperatives in the welfare state is.

Theory and Conceptual Framework

In the concept of a welfare state, the state must be responsible for the community's welfare. The welfare referred to as stipulated in Pancasila and the 1945 Constitution is the welfare that covers the entire life of the community, such as education, economy, health, work, and residence, etc. Every country has aspirations to realize the welfare of its nation and state. Penetrating all the Indonesian people's hopes and desires as regulated in the philosophy of the Indonesian nation and the constitution, both those that have not and those that have been amended, the spirit for the welfare of the Indonesian nation is the hope and desire of all Indonesian people. In the concept of justice, justice is the goal or desired to implement and determine a more prosperous and just Indonesia [4].

Research Methods

This study used a normative juridical study with a descriptive-analytical approach. Descriptive research takes a written legal approach, with the data under study, people as legal actors, and other symptoms. To obtain data, there are two stages: First, library research and field research. Field research is carried out through the following stages: field research is carried out to obtain primary data supporting secondary materials. After the data collected is analyzed in a qualitative way to provide answers to the problem under study.

Results and Discussion

1. The Role of Law in Partnerships

The law must play a role in building a partnership between the three economic actors, namely BUMN, cooperatives, and the private sector. This regulation is necessary to provide direction so that it remains according to the philosophy of Pancasila and the 1945 Constitution to achieve the goals of the welfare state. This is where the law is expected to play a role in eliminating these differences through partnerships as regulated in Government Regulation no. 17 of 2013. This cooperation is important because cooperatives, BUMN, and the private sector are the three economic actors who live in the community. So that the gap does not get sharper, the government must be able to move its role to regulate it.

Furthermore, it was explained that to overcome these weaknesses. It is necessary to harmonize partnerships between cooperatives and other companies. The targets that must be achieved with partnerships are for cooperatives to have access to sources of capital, access to technology and information, and product marketing of their members, foster human capabilities, and overcome management and organization [5].

By building patterns such as partnerships, cooperatives as economic movements and as legal entities can strengthen their existence in the national economy. This is necessary in connection with the threat of the world economy in globalization, where competition is getting tighter, but this is also an opportunity for cooperatives. With the emergence of cooperative and competitive businesses and new forms of cooperation in the era of globalization, cooperatives will face and respond to these dynamics as a measure of their existence [6] in the Indonesian economic system.

This partnership is expected to encourage cooperatives to gain access to economic sectors, such as capital, technology, marketing, and product quality improvement in competition in the current global era. This reason is undoubtedly very influential for the development of cooperatives in the future. It requires the support of all parties, such as the government, the private sector, and parties who are still participating in paying attention to cooperatives to run under the Republic of Indonesia's constitutional mandate. This hope is, of

course, in the framework of increasing cooperatives' ability in global market competition and a manifestation of a just economy that can be felt by all society levels.

A balanced togetherness and family atmosphere must be able to foster nationalism in development. In achieving the goals of the welfare state in this way, the Indonesian economy can run according to the 1945 Constitution, which is based on:

- (1) Togetherness
- (2) Brotherhood. It means that these three economic drivers must be able to unite and help each other so that the Indonesian economy can compete in the era of globalization, between the economies, both private, cooperatives and BUMN, must be based on family atmosphere [7].

2. Implementation of Cooperatives in a Welfare State

Philosophically, the meaning of the family atmosphere principle in partnership, if it is related to Hatta's thinking, then according to Hatta, showing each other in cooperative members helping each other is a reflection, that in cooperatives they do not differentiate from one another, but both have the same goals. This can be reflected in each member. Namely, mutual solidarity and mutual assistance [8], and according to Hatta, the words of the principle of family atmosphere are more in accordance with the conditions and circumstances of our society.

Concretely, the meaning of family atmosphere in the form of a partnership as stated in the 1945 Constitution, where our economy must be based on family atmosphere, it is concluded that there are obligations stipulated in the 1945 Constitution as the basis that the economy must be well planned, not allowed to run without direction or policy to develop progressively. According to the wishes and expectations of all Indonesian people [9].

Companies that are built must be in accordance with or in line with the cooperative's vision and mission [10]. The formulation of the position of the cooperative, the functions and linkages of all business actors can be shown as follows [11];

1. The private sector, cooperatives, and state-owned enterprises should have an equal position and status, by the mission they carry, following applicable regulations and operations, they have the same right to live

2. Cooperatives, BUMN, and the private sector are not the same because the business actors have different goals. The cooperative's superiority is that quantitatively it is quite a lot, but the large number is not under what is produced. Therefore, others must do their respective roles with the comparative advantage they have.

It can be seen from each economic actors' operational ideals that this comparative advantage can be seen. BUMN companies are used to contribute nationally, for the national interest. All the profits that are owned are for the benefit of the state, which will later be distributed for the benefit of the community. So, the state company is none other than earmarked nationally for welfare and development costs to aim that the Indonesian people can increase both in terms of income and welfare.

Cooperatives, however, are not only limited to economic interests alone. Because cooperatives are a form of business that prioritizes members' interests, from members, as well as for members, it means that cooperative business actors all profits and advantages that are adapted are also returned to the members. Related to this business, it has three main aspects, namely 1) morale 2) business 3) economy [12]. If seen from the business philosophy, these three aspects are the pillars or foundations for running a business to not deviate from the mandate of Article 33 of the 1945 Constitution. This basis is a tool to build a sense of togetherness among members according to the cooperative's vision to prioritize members [13].

This characteristic by Munker calls it a principle. Even though a cooperative as a business entity is in the form of a legal entity, it has the strength and advantage in which all members have the same identity without differentiating one another [14]. This is very important for cooperatives. Otherwise, they will lose the cooperative's identity as an economic actor, where members are the priority. Otherwise, they will lose their character and strength as social economy actors. Suppose it is not in line with the vision of the cooperative. In that case, it will cause problems, where the cooperative should seek profit and pay attention to the welfare of its members, where members as an organization are prioritized and prioritize service and in the same interests [15]. This is what makes the cooperative superior in the organization of these advantages, not having a certain group. Still, in cooperating the advantages that are enjoyed by all members, such as

profits and advantages from the remaining business results returned to all members, this feature needs to be maintained so that the cooperative has advantages and at the same time distinguishes it from another company. A private sector is a form of business known as a pool of capital. Of course, this is the vision and orientation of seeking maximum profit because this is a characteristic of private companies.

Empowerment of small and medium enterprises and cooperatives, following the principles and mandate of the 1945 Constitution, is a shared responsibility, economic actors in achieving national development, namely growing and increasing business capacity, increasing competitiveness, equalizing business ownership, and strengthening the structure of the national economy, increasing exports, equity, development, and income. Through the national business partnership movement, all development actors together renew their determination to mobilize all potentials and strengths to accelerate a just nation's growth rate. This method must be done so as not to be left behind with the state of the business world that is so advanced and developing today, and this method is an effort that must be done to be ready to face the world market that is so open [16].

Indonesia was independent of colonialism, so since then, the Indonesian nation has had a clear vision. The government and the people unite to build the Unitary State of the Republic of Indonesia. This development has the goal of making the Indonesian people prosperous. This is clear as what was formulated in the preamble to the 1945 Constitution and the fifth principle of Pancasila. That foundation is the foundation on which the Indonesian nation must have a clear concept of the welfare state's goals. In this case, the state must protect, provide education, carry out development, open employment opportunities, to provide welfare for all Indonesian people. To achieve all this, under Article 33 of the 1945 Constitution which gives power to the government to manage the most important natural resources for the greatest welfare of the people and provide social security for the poor and neglected children [17].

Indonesia, as a welfare state, must see in countries where the cooperative has advanced and developed. Denmark as a Scandinavian country can be said that cooperation is quite advanced. Almost all of its citizens have taken advantage of the cooperative. Almost all economic sectors have been given shares by cooperatives such as factories and

business entities like supermarkets and so on, so cooperatives are quite advanced. Indonesia can do that if the cooperative has become an economic actor that can compete with other economic actors. Thus Indonesia can make cooperatives capable economic actors of achieving a welfare state [18].

Cooperatives as the pillars of the national economy, as regulated in Article 33 of the 1945 Constitution. Therefore, there is no reason for Indonesia not to make cooperatives as an economic model. However, in reality, in everyday life and in the Indonesian economic system, it does not reflect the values of cooperatives outlined in the Pancasila and the 1945 Constitution, but what appears is that the Indonesian economy's concept describes who is strong in winning. This results in capitalists who deviate from cooperative values that are based on the principle of family atmosphere.

If cooperatives in Indonesia can carry out their duties properly and can encourage progress, they can be used as a foundation for reaching a welfare state. This is a mandate contained in the preamble of the 1945 Constitution and Pancasila. It's just what needs to be prepared is a way to get to a welfare state. All components of society must support it, both sectors such as financial institutions, the private sector of education, and the Indonesian people, such as civil servants and breeders, laborers, farmers, and others) [19].. For cooperatives to develop and progress, all Indonesian people's support is needed, without which the cooperative will not be able to carry out its duties towards the welfare state as desired by all Indonesian people.

Conclusion

1. The legal role in this partnership is expected to encourage cooperatives to gain access to economic sectors, such as capital, technology, marketing, and product quality improvement. Besides that, it is a form of the family principle mandated by the 1945 Constitution. In this way, the justice principle can be achieved.
2. Implementation of cooperatives in a welfare state. If cooperatives in Indonesia can carry out their functions independently, they can be used to reach a welfare state as mandated by the 1945 Constitution. What needs to be a concern is what should be prepared if the cooperative is used as a welfare state tool. This must have the support of all components of the Indonesian nation, including the

government because this support is very important. Without this, the cooperative cannot be used as a tool to achieve the welfare state, as expected by all Indonesians

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Social and Financial Capitals for the Building of Society 5.0

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ABSTRACT

The paper aims to analyze the social and financial capital of the Smart Society, Society 5.0. With new challenges and changes more advanced countries like Japan are modeling future plans on how to overcome the negative impacts of current economic, social, technological collision and improve the general state of human life. The idea of human-centered society is close to western countries ideology, their current collaboration and historical conditions facilitate the process of unity of thoughts. Generally accepted social capital collection, which is important for the progress of society, its bonding and unity formation with new technological developments will be amended, with both positive and negative impacts. Financial capital metamorphoses due to financial technologies headway in upcoming years steadily will face changes too. The main dispute is about providing equality principles offered in Society 5.0 concept and negotiation with nations to make human-centered society not an idea but a reality.

Keywords: *Society 5.0, social capital, financial capital, financial technology, equality*

Introduction

The novel coronavirus disease 2019 (COVID-19) in the year 2020 on one side has brought negative economic consequences, for example, has significantly affected global GDP growth and caused the deepest global recession in decades according to the World Bank, global countries per capita income decreased to the level of the year 1870. [1]. On another side pandemic has accelerated economies reconstruction processes, elevating science, technology, and innovation (STI), digital transformation has been considered effective to stop the spread of the virus. For example, many smart countries have preferred innovations instead of strict conservative measures.

The Government of Taiwan implemented contact tracing and mobile SIM-tracking to maintain quarantine discipline and isolate

those people who may spread the virus. A similar tactic was used in compact and “nanny state” Singapore: application of technologies for contact-tracing, namely scanning identity documents at supermarkets. South Korea carried out extensive testing and contact tracing regime. Iceland relied on contact-tracing as well when Canada applied public health messaging and coherent policy of different units. The UAE together with online campaigns found implementation of monitoring mechanism and fines system for spreading irrelevant, misleading, or inappropriate information in social networks as a useful instrument [2].

In Japan rather than declaring lockdown and frozen the economic powerhouse actions were taken to transform the state to “Society 5.0”. The concept of Society 5.0 or Smart Society was first mentioned by Japanese Prime Minister Shinzo Abe at CeBIT (the largest and most internationally representative computer expo), the technology fair in Hanover, Germany. The idea of the Society 5.0 was elaborated and presented as a core concept in the 5th Science and Technology Basic Plan, adopted by the Japanese Cabinet on January 22, 2016. Society 5.0 is a “human-centered society that balances economic advancement with the resolution of social problems by a system that deeply integrates virtual and real space” [3] by adopting the technological innovations of the fourth industrial revolution. The Industrial Revolution - the Industry 4.0 or the Industrial Internet of Things (IIoT) is a society where interconnectivity, data exchange, smart digital technology, automation, machine learning, real-time data are functioning together for smoothing processes of human life. IIoT or smart manufacturing is a vision presented in “High-Tech Strategy” introduced by the German government in 2006 at Hannover Messe. Industry 4.0 suggests ‘Social innovation’ with society put at the center, the same motto is implemented in Japan’s human-centered Society 5.0.

The concept of Society 5.0 should be perceived as a helping tool rather than a threat to people. The power of new technologies like SIM-tracking and personal data collection, constant monitoring, and censorship in social media rise the concerns of respecting human rights, freedom of expression, and legitimate privacy interests. At the same time IoT-enabled/linked devices/applications improve daily life, making any process more simple and transparent when service becomes easier and more accessible. Following the examples provided above smart devices significantly helped at the stage of early diagnosis

and monitoring patients during the pandemic. We can conclude that digitalization became a vital instrument for dealing with COVID-19 impacts and all efforts to combat the novel coronavirus boosted, even more, the use of technologies.

As McKinsey Global Survey of executives states that attempts to prevent and contain COVID-19 have speeded digitalization interactions processes by three to four years, the development of digitally enabled products by seven years [4]. The use of online channels for purchasing goods, getting medical assistance, education, flexible and remote access working, entertainment, public administration, finance, industry, entrepreneurship became a common aspect of daily life in most countries and examined the movement to a new phase of social development.

Discussion

Concept Society 5.0 is backed by Japan, Germany, the United States, countries of so-called First World, westernized societies, industrialized and the highly developed. The developed countries also pay close attention to the progress of such elements of the digital economy as an information society and knowledge economy. Presentation of both models: Industry 4.0 and Society 5.0 was held in Germany. Japan with Germany together stands out as technology giants. Both West Germany and Japan in the past was a recipient of the aid and assistance of the American initiative Marshall Plan and received contributions of innovation from the West.

Currently, reinforcing of multilateral regional cooperation in economic, security, and diplomatic spheres among the United States, Japan, South Korea, Australia, and India manifests the unity of countries sharing similar values. Western culture, “at its core, individualistic and democratic and liberty-minded and tolerant and progressive and rational and scientific” [5], due to globalization, close inter-states relations and functioning of developing programs has influenced Asia in large part. We can assume that the idea of Society 5.0 may be shared and later implemented within the named states plus European countries as the most technologically advanced territories are able to adapt to modern vision faster and easily.

Society 5.0 concept projects the response to the main threats Japan is facing nowadays, namely population aging, birth-rate decline, regional

inequality, essential need to rethink the current model of the economy, increased production, and pollution. Similar problems are affecting other developing countries. Besides economic issues, worldwide global democracy is also in decline. The Democracy Index 2019 states that in the year 2019 the average global score has dropped to 5.44. from 5.48 in 2018. It means that 2019 was the worst year for democracy since 2006 (The Economist Intelligence Unit started publishing its Democracy Index reports in 2006, hence no comparison with previous years). Such and other issues Japan by offering the idea of Society 5.0 is aiming to address together with other partners.

For example “the EU and Japan share many challenges that they count on solving, at least partially, through technology development”. They may also act jointly in spheres of cybersecurity, connectivity, and artificial intelligence (AI) governance and become strategic players in realizing Society 5.0 basic conceptualization through the Economic and Strategic Partnership Agreements [6]. Japan as well interested in closer collaboration and pursuing trade deals with the United States and the United Kingdom, envisages the promotion of an eight-point partnership plan with the Russian Federation, and maintaining economic ties withing the neighborhood, including China, India, and ASEAN economies [7].

Society 5.0 “where anyone can exercise diverse abilities; where anyone can get opportunities anytime, anywhere” [8] should not have any kind of borders in the future, social and financial capital remodeling may prove its nearest possibility.

Social capital

One of the first definitions of social capital was offered by James Coleman in the 1970s. Coleman suggested that social connections can be considered as not material resources assisting human performance in a more effective way [9]. Social capital use can be performed on an individual level and can be considered as community-based benefit implemented for the collective good. For example, in Indonesia traditional value of gotong royong or working together [10] is the established principle of behavior, which is still preserved in rural areas when people are helping each other without a request, the need for support is self-understand. In this case basic social capital no need to earn, it is available yet due to a cultural tradition, however

for greater work or assistance on higher-level gotong royong may not work, reputation and connections will come as more significant and important for moving up the social ladder.

Social elements and simultaneously the components of social capital are trust, norms, values, and networks, which can be based on long-term mutual relationships, cooperation, reciprocity, and open platforms. They allow individuals to bridge their ideas, projects, and establishing useful people-to-people connections through a variety of information channels while optimizing the time for search and providing more reliable data, materials, and support. World Bank states “Social capital is not just the sum of the institutions which underpin a society – it is the glue that holds them together” [11] – social capital benefits make society stay as a unity because more tangled cooperation ties are not only providing more profit but amalgamate various strata. This principle is partially used in the European Union building. Numerous educational programs allow young generation from different countries and with a different position in society to expand their knowledge and make friends. Hence, the European Union, European values, open borders, and collaboration matters a lot for youth. The Revolution of Dignity or Euromaidan revolution in Ukraine in the year 2014 is a perfect example.

Individual by having a mixed social capital, namely colleagues from other countries, friends with opposite hobbies, small and older children, who are studying in the school and university, etc. would be able to immerse in more topical subjects and better understand the ongoing processes from different angles, would get access to mass of advice and enjoy privileges of the diversity of opinion, would learn from an expert or person with experience and adapt new knowledge daily improving common life. For instance, any construction requires the point of view not only from aesthetic side specialist but a deep analysis of many variables to provide a proper plan satisfying functionality requirements of diverse stakeholders and giving the most easily accessible service for all customers. Shortly, a sibling, a colleague and a sports friend can have a completely contrary view on a topic and hence give you different advice, opposite perspective, a better understanding and a more efficient solution.

In the era of Social Media like Facebook, Twitter, Instagram, LinkedIn, WhatsApp, TikTok, Slack, and many more, physical or real social communication is turning into a virtual one. The aforementioned community-driven platforms from one side are proper for expanding human social capital: representatives of different generations, races, countries, ethnicities, religions, castes, education, professions, and skills can meet and learn from each other's experience without borders and prejudice. The assistance of algorithms and online translators makes it possible and easy. On another side: due to not equal development processes not everyone has access to the Internet, so there are people left aside. Additionally, social media served up by the algorithm are making users get the content they care about or relevant to them. Simultaneously it creates a bubble or comfort zone of similar information, people are staying in it without knowing what is going outside, without understanding the opinion of others, and without growing up. Moreover, social platforms are ideal for “digital campfires”, “more closed, and often more private and interactive online spaces”... “which offer a more intimate oasis where smaller groups of people are excited to gather around shared interests” [12]. A trend of micro-communities, private groups and mode of messaging is the fastest growing area of online communication according to the statement of co-founder and chairman of Facebook Mark Zuckerberg made in March 2019.

Sara Wilson rises the awareness of such shifts by calling Social Media anti-social [12]. For instance, the TikTok application with short entertaining videos is the second-most popular social app after Instagram among teenagers in the United States does not offer the creation of bonds and deeper communication between users. Following the latest developments of the COVID-19 and restrictions limiting socialization off-line such apps will shape the new patterns of human behavior and social capital building.

In modern societies social capital can be collected due to people's independence of choice making and existence of wide networking systems; business forums, clubs, conferences, gyms, etc. – are comfortable platforms for getting new connections. Good people-to-people relations are quite valuable, however, sometimes improper use of such capital leads to corruption, nepotism, and cronyism at the same time undermining trust as one of its bases. Doing social

capital online may eliminate negative factors aforementioned due to the transparency, accessibility, and equality grounds offered by new technologies described in Society 5.0.

Financial capital

Key components of technology-based and human-centered Society 5.0 are: Ecology, Infrastructure, Logistics, Healthcare, Financial technology (Fintech), Big Data, IoT and AI [13]. “In Society 5.0, financial capital is no longer the key, but data that are interconnected with each other” [14]. Financial technologies, namely using electronic money, like Bitcoin, Ethereum, Tether, (nowadays there are 200 cryptocurrencies) or substitute forms of digital assets will drive trade and ease business processes through borders.

Both barter transactions and cash-basis system were not efficient in a way that equal exchange of goods was leading to waste creation or purchase of more/fewer items than required when introduced monetary policy, currency exchange rate complicates the economy and not always benefits small business. Furthermore, cash and credit cards are not hygiene, especially during the time of the global pandemic, not sustainable objects, not ecologically-friendly. Virtual payments following Society 5.0 goals of super-intelligent, super-connected, super-efficient, super-human, super-sustainable society with opportunities for everyone from top-down to bottom-up could drastically change the financial sector.

With digitalization, robotization, and algorithmic culture – automation job loss will affect mostly lower-skilled workers. Changes in the definition of salaries and job requirements have been in discourse for recent decades, design of unconditional basic income can appear as a solution. Despite the idea of the introduction of universal basic income is not presented in Society 5.0 model, it sounded in Japan at a recent time following the statement made by Prime Minister Yoshihide Suga’s economic adviser Heizo Takenaka. A basic income guarantee was offered as a way mitigating job security and social inequality issues due to the current novel coronavirus pandemic [15].

One of the problems with financial technologies’ full implementation is that “according to the World Bank 1.7 billion adults remain unbanked globally”. Hence, a gap in countries’ development will prolong the procedure of moving towards Society 5.0. Additional

supporting programs for less advanced states will be needed, however, the case of competition and realism in international relations is generally accepted. Society 5.0 in this situation is facing impractical utopia goals, world division, and anew technologically based inequality. For avoiding so Japan should initiate a global discussion process, otherwise, human-centered society design with closed borders is not what the idea states for – super-connected civilization with opportunity for all.

Conclusion

The concept of Society 5.0, which is put forward by Japan and can unite highly-developed nations suggest human-centered, open, sustainable, inclusive, and experimentation driven approach for reconstruction and improving current people's lifestyle. The research finds that offered betterment has a subjectively positive impact, nevertheless the issue of equality at the earliest stages of project implementation may limit its overall progress. Less live communication bounded relationship and algorithm defined friendship can change a common basis of the social capital building, human bonding and bridging. Fintech as well from one side is smoothing business processes around the globe and on another side, less developed countries will face discrimination. As a solution to the risen issue Japan as an initiator of Society 5.0 should negotiate this idea using international relations platforms and involve more stakeholders to make the chain reaction of Society 5.0 basic and valuable principles become irreversible in the modern world to guarantee the equality and equity principles, ones of the most important.

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Improving Hijaiyah Letter Reading Skill Through Index Card Match Method on Children 5-6 Years Old

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ABSTRACT

This research entitled Improving Hijaiyah Letters Reading Skill Through Index Card Match Method on Children 5-6 Years Old in Lab. School FIP-UMJ Indonesia. Kindergarten. It is motivated by the concern of researchers seeing the development of children's ability to read hijaiyah letters which considered slow. Thus, the researchers are encouraged to make learning innovations by using index card match method. Therefore, this thesis was aimed to identify and describe the implementation of index card match method in Lab. School FIP-UMJ Indonesia, kindergarten. Indonesia. Classroom action research was used as the research method. It was consisted by two cycles of action class. There are 15 children in class A which become subjects that receive the action. In this research, the researchers were as the implementing subjects, while teachers and principal were as supporting subjects. The results showed that the index card match method could improve children's ability to read hijaiyah letters. The improvement can be seen from the percentage of values in each cycle. In the pre-cycle the percentage of children's ability to read hijaiyah letters was 58.9%, in the first cycle it increased to 77.1%, then in the second cycle it increased to 90%.

Keywords: *Improving Hijaiyah Letter Reading Skill through Index Card Match Method on Children 5-6 Years Old.*

Introduction

Al-Qur'an as a guide lines for human life. It is very important to be studied, understood, and lived as well as being practiced for mankind, especially Muslims, in order to avoid all the dangers of Satan's tricks. As it is, the Qur'an also has a main function. It is as the main guide for every Muslim in making decisions on any problems he faces. The study and understanding of the Al-Qur'an begins with the ability to read it. Without the ability to read, it is impossible to carry out the assessments, especially to understand them. The activity of reading the Qur'an is a

very noble deed, earns multiple rewards, because what it reads is the holy book of God. Al-Qur'an is the best reading for believers both in good times and bad times, when they are happy or sad. More than that, reading the Qur'an is not only an act of worship but also a remedy and an antidote for restless people.

In connection with the Al-Qur'an as a guide lines for life, Allah SWT has shown the path of truth to His servants through the meaning contained in the Qur'an, as a source of guidance for human life to be faithful and pious, in order to be safe from the astray life of the world and be happy someday in the afterlife. Therefore, the ability to read the Al-Qur'an is very necessary to be able to understand the contents and practice it in everyday life. The ability to read Al-Qur'an is actually also very necessary for children in order to provide provisions to be able to pave the way and as an introduction to further sciences. Besides, the ability to read Al-Qur'an in turn leads to increased piety and faith. That is why it is rally important learn the Al-Qur'an earlier. In this period, children are directed to the belief that Allah is Rabb and Al-Qur'an can give good influence to their intellect.

The ability to read the Al-Qur'an cannot be possessed by a child without learning to read the Al-Qur'an. As for what is meant by learning Al-Qur'an is reading fluently with fluent speech in accordance with the rules (reading) and tajwid, learning to understand the meanings contained in the Al-Qur'an and learning to memorize by rote. Therefore, the first step in teaching Al-Qur'an is the introduction of children with hijaiyah letters and recitation of the Al-Qur'an, so that children can read fluently and correctly according to the recitation and *makebroj* [11]. Learning to read the Qur'an has been emphasized by Allah SWT in one of His words, it is in surah Al-Alaq verse 1 which reads:

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (١)

Meaning:

"Read (by mentioning) the name of your Lord who created," (Surah Al-'Alaq (96):1).

Quraish Shihab, argues that the command to read is the most precious order that can be given to mankind. It causes of reading is a way that leads humans to reach the perfection of human degree. Because reading is the main factor for human success in mastering the knowledge that

has been taught by God to humans. Reading the hijaiyah letters which are the basics for reading the Al-Qur'an is one of the important things that must be introduced to children. In this case, family has an important role because it is the first and intact education for children. Before children go to school and they are taken care of by the teacher, they get education from their parents. Unfortunately, based on the observations, there are many parents who are unable to teach their children, especially in reading hijaiyah letters.

The case above causes of the parents who can not read hijaiyah letters, or because they are busy so they don't have time to teach their children to read hijaiyah letters. Meanwhile, education for a child starts with the Al-Qur'an and they begin to learn to read the Holy Qur'an, memorize it then. The Holy Qur'an is the final guideline for every Muslim. In terms of basic beliefs, forms of worship, and rules of conduct. So that the ability to read the Al-Qur'an children from an early age needs to be considered by educators, both parents and teachers or *ustadz*. Unfortunately, learning to read hijaiyah letters in children is seen as boring at times. This is because the methods used by most teachers are the *sorogan* or classical methods. Where the child is conditioned to follow what is said by the teacher such as saying hijaiyah letters or the child just looks down and says hijaiyah letters in his iqra book. Whereas, children aged 5-6 years old are still in learning by playing phase [1].

It is feared that this phenomenon can make children feel bored learning to read hijaiyah letters, so that their ability to read hijaiyah letters will not increase or even setback. So that, to slow down this problem, it is necessary to find a solution to anticipate this problem. For this reason, in the learning process of reading hijaiyah letters, teachers must have a breakthrough or dare to apply new methods and strategies, so that children's interest and enthusiasm for learning increases. So that, the ability of children to read hijaiyah letters can improve. One of the alternatives that the researchers offer is to use the Index Card Match strategy (matching cards), during the learning activities. So that the learning objectives can be achieved in line with the expectations. The use of the Index Card Match strategy invites students to take an active role in carrying out learning, because there are several methods and techniques that can create an effective, efficient, and enjoyable learning atmosphere [12].

Not without a reason, the choice of using the above method is based on Peaget's opinion which argues that "The knowledge obtained by students is built in the mind through the process of assimilation and accommodation. The assimilation process is a process carried out by students by absorbing new information in their minds. Mean while, the accommodation process is a process carried out by students by restructuring the mind because of new information, so that information has a place in the structure of thought". Based on the statement above, it is enough to be one of the bases that the use of the Index Card Match method for students can increase their knowledge of reading the letters of the Qur'an easily and efficiently, because with the Index Card Match game, children will get new information in their minds. (through the assimilation process). In addition, in this game there is a matchmaking game (pairing) one card with another card in the hope that this game can structure the mind of students because of the new information obtained (through the accommodation process).

As quoted by Ma'shumah, Frank and Theresa, say that the value of play for children, including: play helps children's growth, freedom to act, foundation for language development, has a unique influence in forming interpersonal relationships. Researchers have made preliminary observations regarding the ability to read children's hijaiyah letters, where the results show that there are still many children in kindergarten of Lab. School FIP-UMJ. Indonesia is not fluent in reading hijaiyah letters. This is evidenced from the direct and simple test results conducted by the researcher. Based on the explanation of the various opinions above, the researcher feels that it really needs to conduct research on the use of the Index Card Match method in learning to read hijaiyah letters in children.

Limitation of the Problems

Based on the background of the study, the researcher will limit this research as follows:

1. The ability to read hijaiyah letters in this study is the ability of children to read hijaiyah letters correctly and fluently.
2. The Index Card Match method in this study is the activity of pairing cards that are written with hijaiyah letters by using Arabic letters with cards that are written with reading hijaiyah letters by using Indonesia.

Problem of the Study

Based on the limitation of the problem, the researchers formulate several research questions as follows:

1. How to apply the Index Card Match method to improve the ability to read hijaiyah letters in children aged 5-6 years in kindergarten of Lab. School FIP-UMJ Indonesia?
2. How to improve the ability to read hijaiyah letters in children aged 5-6 years in kindergarten of Lab. School FIP-UMJ Indonesia?

The Objective of the Study

Thus, the objectives of the study as follow:

1. To find out and analyze how to apply the Index Card Match method to improve the ability to read hijaiyah letters in children aged 5-6 years in kindergarten of Lab. School FIP-UMJ. Indonesia.
2. To find out and analyze how to improve the ability to read hijaiyah letters in children aged 5-6 years in Kindergarten of Lab. School FIP-UMJ. Indonesia.

Literature Review

The definition of the Ability to Read Hijaiyah Letters is something that actually can be done by someone [5]. Ability is built on readiness. When an ability is found in a person, it means that person has readiness for it. F. Musthafa in his book to make your children like reading, states that children's reading readiness is influenced by several factors, including physical readiness, psychological readiness, educational readiness, and IQ readiness. According to Mustafa: Physical readiness means that before carrying out learning activities, teachers must be sure that their students have healthy senses, because they have an important role in reading activities. The ears, eyes, hands and speech instruments are very important organs in learning to read. Psychological readiness means that before reading learning activities take place, the teacher must first know the psychological condition of each child, then give him motivation so that the child can quickly escape from the problems that twist him, so that the child feels calm and can adapt to his learning environment. It is an effort to prepare children to read, it is also the responsibility of the family and the school. However, in this case the school is the main responsibility, while the family is the place for the formation of children's experiences.

Readiness IQ (Intelligent Quotient), means that before children learn to read, they must first reach the maturity level of their IQ. It makes them easier to learn. So, children with high intelligence is easier to master the material than those with low intelligence. The stages of reading ability can be distinguished as beginner reading (initial reading), and advanced reading. Readers who are only at the initial reading stage mean that the reader only has the ability to vocalize the sound symbols of the language contained in various written sources. As for reading, it is an activity of the brain and eyes. The eye is used to pick up the signs of the reading, so that if you pronounce it it is not wrong. Whereas, the brain is used to understand the messages carried by the eye, then order the other organs to do something. So, the work between these two organs are very systematic and mutually sustainable. M. Abdurrahman has quoted Soedarso, opinion that reading is a complex activity that requires a large number of separate actions, including the use of understanding or imagination or observation, and memory. It is impossible for humans to read without moving their eyes and using their minds. Mean while, Winarno claimed that reading is a learning activity which in addition to taking meaning also gives meaning to what is being read. For the first meaning, it seems to lead to the process of learning to read, where when children learn to read, recognize it word for word, spell it and distinguish it from other words.

Therefore, when reading, children make the habit of moving their lips to pronounce the words they are reading. Comprehension and speed reading become very dependent on the ability to lead every organ of the body that is needed for it. The opinions above can be understood that reading is an activity carried out by certain body organs, which consists of the work of the brain and eyes to understand a written message. Reading is an important activity. Many things can be gained from reading. Through reading activities, getting important information contained in it. Materials for reading can come from books of knowledge, textbooks and the Al-Qur'an. As for reading ability, as quoted by Abdurrahman from Lerner, that reading ability is the basis for mastering various fields of study. If the child at the beginning school age does not immediately have the ability to read, then he will experience many difficulties in learning various fields of study in subsequent grades. Therefore, children must “learn to read” in order to “read to learn”. Remember from the purpose of reading to expand

his knowledge, enrich his experience, and enrich his vocabulary. While, the hijaiyah letter is a collection of Arabic letters totaling 29 letters. These letters are used in the Qur'an and are known today. The meaning of the Al-Qur'an as it is known is the word of Allah that was sent down to the Prophet Muhammad SAW, through the medium of Jibril as gradually. The meaning of the Al-Qur'an cannot be separated from the etymology and terminology.

Etymologically according to Al-Farra 'the word Al-Qur'an is rooted in the word al-Qarai, the plural of Qorinah which means friend. Meanwhile, according to Imam Asy'ari the word Al-Qur'an comes from the word Qarana which means combining, and according to Imam Lehyani, Al-Qur'an comes from the word Qaran which means reading. According to terminology Al-Qur'an is the word of Allah SWT which is a miracle that was revealed to the Prophet Muhammad SAW and reading it is a worship. Meanwhile, Al-Shabuni states that: "He (Al-Qur'an) is the Kalam of Allah which has the value of miracles, which was revealed to the "conclusions" of the prophets and apostles, with the angel Jibril a.s. as the middle man, what is written on the mashahif is narrated to us with mutual worries. Reading Qur'an is considered as a worship. Beginning with *suratal-Fatihah* and closed with *Surah an-Naas*.

The understanding of the ability to read the Qur'an according to Shafi'i is defined as the ability to recite the Al-Qur'an and smoothen the letters or sentences of the Qur'an one by one clearly, regularly, slowly and not in a hurry to get mixed up, it must be following the rules or tajwid. Based on the explanation above, it can be understood that the ability to read hijaiyah letters means something a child can actually do. Children can read hijaiyah letters properly and correctly in accordance with tajwid and makharijul letters. The ability to read hijaiyah letters must be taught from an early age. It is when the children are still in low school age or even at Kindergarten, because the tongues of minors are still soft and it is relatively easy to guide them in pronouncing the correct makhraj. The followings are some indicators that must be mastered by children to able to read hijaiyah letters: Fluency in reading hijaiyah letters, fluent means speaking clearly.

Fluent in reading hijaiyah letters means a clear pronunciation when reading the Al-Qur'an. For the level of fluency, there is a part in reading the al-Qur'an. The recitation of the Al-Qur'an is different from any reading, because it contains the words of Allah, whose verses

are neatly arranged and explained in detail, which come from the most wise, All-Knowing Essence. Therefore, reading Qur'an cannot be separated from adab that is both *ẓahir* and mental. One of adab in *zahir* is *tartil*. *Tartil* in reading means read slowly, clarifying the letters and vowel, resembling the surface of the teeth which flat and neatly arranged. The accuracy of the *tajwid*, the experts *qira'at* (*qurra'*) say that *tajwid* is a decoration or art in reading al-Qur'an (*hilyah Al-qira'ah*). *Tajwid* is reading letters according to their rights, putting them in order, and returning them to their place of exit (*makhraj*), and their origin, and refining their pronunciation without exaggerating, without being reduced and made up. *Tajwid* rules include *nun sukun* and *tanwin*, law of *mimsukun*, law of *lam ta'rif*, *mad* letters, and so on. The purpose of *tajwid* science is to practice the rules when reading the Qur'an, so it is not just to memorize it.

Fluency in reading hijaiyah letters. Fluency here means reading without obstacles, not slow, and not falter. Fluency in reading hijaiyah letters means that children able to read hijaiyah letters fluently, quickly, precisely and correctly. In teaching reading hijaiyah letters, when the child is not yet fluent or not fluent in reading it, a teacher does not raise it to the next reading. In order to be successful in line with the objectives that must be achieved. It is necessary to pay attention to several factors that can affect learning outcomes. The learning outcomes referred in this study are the results of learning to read, so that children able to read hijaiyah letters properly and correctly. Abdurrahman quoted the opinion of Kirk, Kliebhan, and Lerner, who stated that: There are eight factors that contribute to the success of learning to read, they are; (1) Mental maturity, (2) Visual ability, (3) listening ability, (4) speech development and language, (5) Skills to think and pay attention, (6) Motor development, (7) Social and emotional maturity, (8) Motivation and interest.

Thonhowi in Educational Psychology, classifies these factors as follows: Internal factors, internal factors are all factors that exist in a child or student. Therefore, it includes physical factors and psychological factors (mental). Physical factors are related to the health of the body and its perfection. So, there is no absence or experience of defects or deficiencies in the students' body, which can be an obstacle to achieving success or the ability to read the Qur'an properly. Meanwhile, the followings are mental factors that influence the succes

of reading Qur'an; motivation, thinking process, intelligence, attitude, feeling and emotion. Motivation influences behavior, because it is driven by a conscious need and directed to relevant achieving goals. Thinking Process, in thinking contains aspects of ability that will change behaviour, such as knowing, recognizing, understanding the object of thinking. Intelligence is seen as the potential for thinking, so that children who are intelligent in learning are more capable than children who are less intelligent.

Next is attitude, positive or negative attitudes are always related to their learning actions, children who don't like subjects tend not to learn will affect their ability to read the Al-Qur'an. The last one is Feeling and emotions. Emotions are aspects of feeling that have reached a certain level. Emotions have positive and negative impact, so they can affect the success of reading the Al-Qur'an. External factors come from the students' outside. There are two characteristics of this factor, they are social and non-social. First is social. It is related to humans, for example the behavior of teachers in teaching and learning activities using methods as the right strategy in delivering material in order to achieve success or the ability of children to read the Al-Qur'an. Second is non-social, such as learning materials, educational tools or media, teaching methods, and environmental situations, and all the things which affect the success or ability of children to read the Qur'an. Based on the factors above, the success of reading is not only influenced from within, it is possible to be influenced from outside or called the environment. The environment is defined as everything that comes from outside of a person that has an influence on its development and education.

There are three educational environments, they are the family environment, the school environment, and the community environment. So, it can be said that the success of learning ability can be influenced by social and non social factors. It means that teacher has an important role to guide and convey the material, so that a teacher is expected to have a way (method) to achieve his or her teaching goals. The development of children aged 5-6 years, the ability to read Hijaiyah letters is related to the development of children's language children's language development is closely related to children's cognitive development. For this reason, the author wants to put forward the theory of cognitive development according to Piaget. Piaget (1896-

1980), a developmental psychology stargued that all children have the same cognitive development pattern, it is through four stages, they are: the motor sensor stage (0-2 years). At this stage, children use a lot of reflexes and senses to interact with their environment. Next, the results of the experience of interacting with this environment are very useful for further thinking. Preoperational stage (2-7 years), at this stage the child begins to show clearer thought processes. He began to recognize several symbols from the tent including language and images. So, symbol manipulation is an essential characteristic of this stage. Thought at this preoperational stage is typical egocentric thinking. Children this stage find difficulties to imagine how things look from the perspective of others. The Concrete Operational Stage (7-11 years), at this stage it can be described in the occurrence of positive changes in the negative characteristics of the preoperational stage, such as in egocentric thinking, at the concrete operational stage it becomes less, marked by correct concentration, it means that the child is able to pay more attention than one dimension simultaneously and also to relate the dimensions to one another. Conservation issues at this stage are well mastered.

Formal Operational Stage (11-16 years), at this stage the child is no longer limited to what is seen or heard or in close issues, but can already imagine problems in the mind and logical hypothetical development. In addition, another development at this stage is the ability to think systematically. Students also able to think of possibilities systematically to solve problems. According to Piaget's opinion above, the development of each stages is the result of improvements from the development of the previous stage. It means that according to Piaget's stage theory, each individual goes through a series of qualitative changes that are invariant, always constant, do not jump and reverse. Based on the opinions of the experts above, the cognitive development of kindergarten/early childhood children is at the preoperative stage, this is the stage where the child has not been able to master mental operations logically. Operations are activities that accomplished mentally not physically. This period is marked by the development of a representational or symbolic function. It is the ability to use something to represent something else by using symbols (language, images, objects, gestures, or events). Thus, children are able to imagine or fantasize about various things. Like using a toy object "flying ship"

to symbolize an actual flying ship, sitting in a chair to symbolize driving a car, and so on.

The Index Card Match method, every educational process requires a method used to achieve the learning goals in education itself. In the process of Islamic education, the method has a very important position in the pursuit of goals, because it becomes a means of meaningful subject matter arranged in the educational curriculum in such a way that it can be understood and absorbed by students into functional definitions of their behavior. So, it can be said that the method is one of the important factors in determining success and also a means of achieving these goals. In a general sense, a method is defined as a way of doing something. According to letter, the word "method" comes from Greek "meta" which means "through" and "hodos" which means way. So, method means "the path traversed". Meanwhile, the Big Indonesian Dictionary writes the meaning of the method as a systemized way of working to facilitate the implementation of an activity in order to achieve the specified goals [7].

Whereas, if it is added with so that it becomes methodology. It means the knowledge of the path or method that must be followed to achieve the goal, because the word which comes from Greek (Greek), "logos" means "reason" or "science". As for the terminology, educational experts express their opinion as follows: a. Zuhairini et al. Defined method as the most appropriate and fast way to do something. b. Ahmad Tafsir defined method as the most appropriate and fast way of doing something. c. Samsul Nizar, defined method as a technique of knowing which is used in the process of seeking knowledge from a particular material. Some of these definitions can be concluded that the method is a way used to achieve the goals that have been set in teaching and learning activities. A teacher needs method and it varies. The use of method supposed to in line with the goals, so the goals will be achieved at the end of learning. A teacher is expected to have a broad knowledge of learning methods. Teachers must also have the ability to choose the appropriate method for each unit or particular lesson.

A good learning method has the following characteristics: Generating great interest in students, instilling the necessary values, appropriate behavior and work habits among students, developing teacher experiments in real classroom situations, having flexibility for

activities and participation of students, stimulating a desire to pursue further studies and exploration. The right method will generate the need for learning, bring out an abundance of information and skills from the teacher, and the most important, it will align the subject matter with the needs of the most important person in the learning process, it is students. It is said that the path to successful learning is not just one. There are many paths available. With the rapid development of available methods, media and materials over the last few decades. Teachers should be able to harmonize and combine available methods, media, and materials so that the learning process becomes more interesting, important, and lively. The index card match method can be interpreted as an active learning strategy and as an active learning method which is a comprehensive collection of learning strategies that include various ways to make students active from the start through activities that build group work and in a short time to make students think about the subject matter. The index card match method or it can be translated as a method of "looking for pairs of cards" is a learning method which is quite fun to use to repeat the learning material that has been given previously.

The steps of the Index Card Match Method, teachers teach and educate the students by transforming the knowledge they have, so that students know and understand the subject matter that has been delivered by the teacher. It causes of good communication in interactions can make activities more interesting, as said by J. Brian Mcloghlin, the communications enable the various activities to interest" Communication can make activities more interesting. Moreover, in the material of Islamic religious education, students are required to really understand the knowledge that exists in Islam and then practice it as a guide in life. So, good communication from Islamic religious teachers through the implementation of the subject teaching method can make students more interested in learning the subject matter. On the other hand, teachers must provide subject matter with correct teaching methods and according to their competence. It causes of individual student behavior is strongly influenced by personality characteristics.

Meanwhile, the personality is not innate. It is learned and formed because someone do interaction with other people. Thus, that is the importance of implementing teaching methods, because teaching is "giving knowledge or training skills to children". Therefore, we need a

good and correct teaching method. It must be based on the students' competence so that the teaching method is used appropriately according to its functional value and this is very important for teachers to know and understand about the appropriate teaching method. The steps for applying the index card match method in learning are as follows: Make as many pieces of paper as the number of students in the class. Divide the papers into two parts, in half, write questions about the material being taught. Each paper with one question. On the other half of the paper, write down the answers to the questions that have been made. Shuffle all the papers so that the questions and answers will be mixed. Each student is given one paper.

Explain that this is an activity that is done in pairs. Half of the students will get a question and the other half will get an answer. Ask students to find their partners. If anyone has found a partner, ask them to sit close together. Explain also that they do not share the material they get with other friends. After all the students have found a pair and are seated close together, ask each pair in turn to read the question aloud to the rest of the class. Furthermore, the question is answered by his partner. End of this process is by making clarifications and conclusions. Factors that must be considered in using the Index Card Match Method. The index card match method is a method used in active learning. Active learning is a way of binding new information and storing it in the brain. So that this information can be mastered and can be maximized in the learning process which can stimulate students. So, they do not easily forget the information. Active means that the teacher must create an atmosphere in such a way that students ask, question, and express ideas. In the use of the index card match method in learning, teachers are required to be able to consider factors in its use, including: The teacher as the delivery of the material, the index card match method will be very helpful in carrying out their duties. So, the teacher must really have the readiness to apply the index card match method so that the results can be maximized, even though the teacher's position is only as a facilitator.

Strengths and Weaknesses of the Index Card Match Method, Learning using the index card match method is a learning strategy that invites students to learn actively and aims to make students have a spirit of independence in learning and foster creativity. Learning with the index card match method in its implementation has advantages

or advantages, including: Learning with the index card match method can be used as an alternative strategy because it is understand student characteristics. The intended characteristic such as students like learning while playing. It means that in the teaching and learning process, the teacher must be able to make students feel interested and happy with the material presented so that later learning objectives can be achieved.

Learning with the index card match method can be applied to increase student interest in learning. Learning with the index card match method can be used to overcome student boredom in the subject or learning process carried out by teachers and students. This method also as a learning model to activate students and teachers during the learning process. As a facility to increase teacher and student interaction so that learning will have higher quality and to repeat the learning material that has been given previously. Index card match method is also known as "looking for pairs of cards". This method has potential to make students happy. The game elements contained in this method certainly make learning less boring. Of course, an explanation of the rules of play needs to be given to students so that this method becomes more effective.

This method is very appropriate for repeating the learning material that has been given previously. However, in practice, the index card match method has disadvantages, as follow: The use of the method requires a long time management, especially when used in classes with relatively large numbers of students. The teacher also has to be prepared with a variety of questions. The reading of the questions and answers done by each pair if the number of students is large will take a lot of time. Moreover, it has potential to cause boredom in students. This method also has obstacle if the number of students is not even. However, by modifying and adapting the conditions of students and existing subject matter, this method remains an active method of learning. The index card match method requires the seriousness of the teacher in implementing it, because the teacher must observe the learning process since the card needs to adjust in pairs.

Research result

Characteristics of kindergarten teachers. Lab. School FIP-UMJ, which can be seen in the following table:

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Table 1: Kindergarten Teachers. Lab. School FIP-UMJ, Indonesia Based on education

Number	Education	Absolute Frequency	Percentage
1	SLTA	1	16,7%
2	S1	4	66,6%
3	S2	1	16,7%
	Total	6	100%

Table 2: Kindergarten Teachers. Lab. School FIP-UMJ Based on Gender

Number	Gender	Absolute Frequency	Percentage
1	Female	4	66,6%
2	Male	2	33,4%
	Total	6	100%

Graph 1: Kindergarten students data. Lab. School FIP-UMJ Indonesia, totaling 51 children. Consists of two study groups, they are class A and class B. The details are as follows:

Pre Cycle

Researchers focused on researching female students. They who have the ability to read hijaiyah letters by reading Surah Al-Qadar in class B as many as 15 children, who are considered to be representative, because they are still not optimal. Based on this statement, the children's interest in the reading area seems less of enthusiastic. This is possible because the learning method used for learning turns out to be less attractive to children, and the lack of children's ability to read hijaiyah letters by reading Surah Al-Qadar as can be seen in the following table:

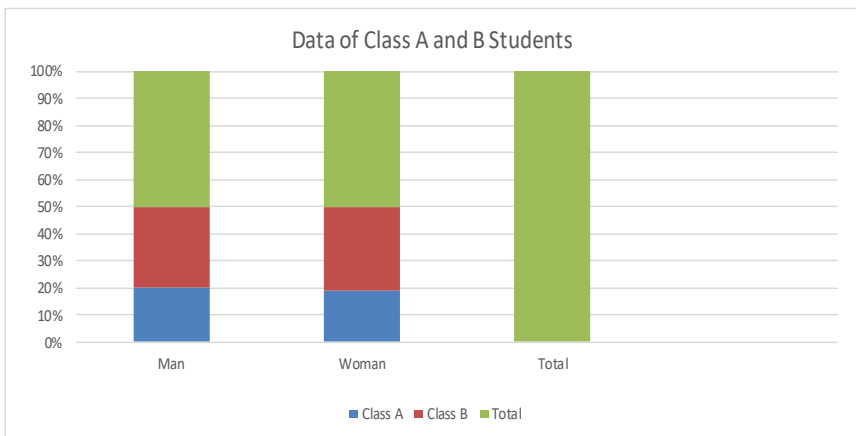
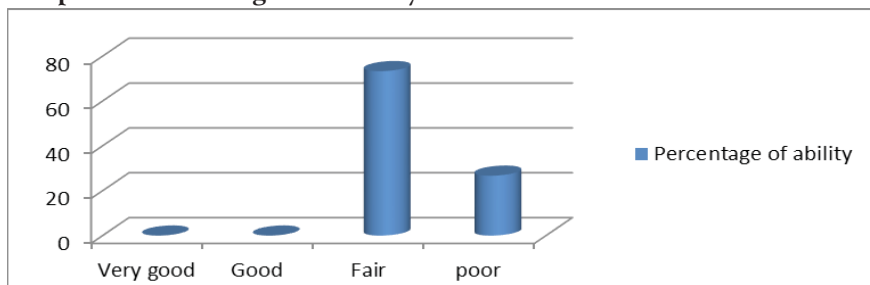


Table 3: Children's Ability to Read Hijaiyah Letters in Pre-Cycle

No	Name	Indicators			Σ	Mean	%
		1	2	3			
1	AS	2	1	2	5	1.7	55.6%
2	YY	2	1	1	4	1.3	44.4%
3	XX	2	2	1	5	1.7	55.6%
4	CC	2	1	2	5	1.7	55.6%
5	CC	2	2	1	5	1.7	55.6%
6	HH	2	1	1	4	1.3	44.4%
7	KK	2	2	1	5	1.7	55.6%
8	UU	2	2	2	6	2	66.7%
9	PP	2	2	1	5	1.7	55.6%
10	LK	3	2	2	7	2.3	77.8%
11	PP	2	1	2	5	1.7	55.6%
12	ER	2	2	1	5	1.7	55.6%
13	NT	2	1	1	4	1.3	44.4%
14	WE	2	2	1	5	1.7	55.6%
15	IR	2	2	2	6	2	66.7%
Mean					5.1	1.7	58.9%

Based on the table above, it shows that the students' learning completeness in reading hijaiyah letters by reading Surah Al-Qadar in the initial conditions was only 11 children (73.3%) who had quite good abilities, and 4 children (26.7%), who got poor grades. The ability of children to read hijaiyah letters in the form of reading Surah Al-Qadar before implementing the index card match method can be seen in the graph below:

Graph 1. Percentage of Pre-Cycle Score Results



Cycle I

a. Planning

Cycle I was done by making plan to conduct a research to improve children's ability to read hijaiyah letters by reading Al-Qadar letters through the index card match method. In the planning process, the researcher identifies the problem and compiles a one-cycle design. The teacher compiles a learning plan for 1 cycle (1 meeting), compiles a Daily Activity Plan, improvement scenarios, corrective steps according to the development contained in the Daily Activity Plan that has been made, provides props according to learning activities and compiles sheets observation. However, after the design was implemented, it did not produce results.

b. Implementation

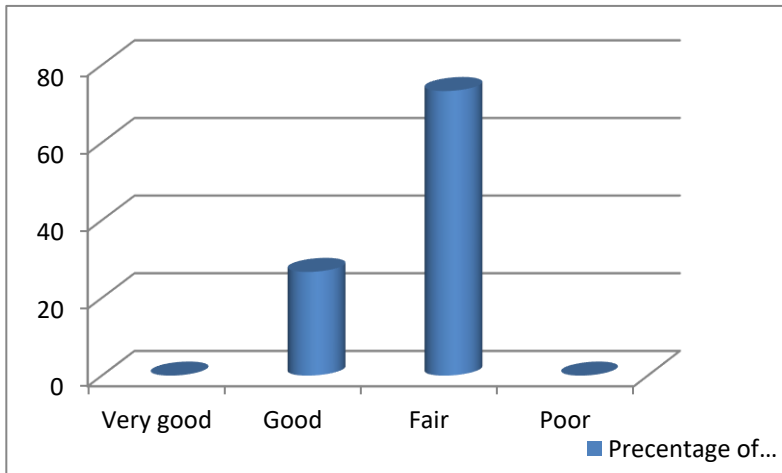
Learning to read hijaiyah letters by reading the Al-Qadar through the index card match method for cycle I was held on Monday, May 5, 2020. The results are as follows: 6 children got good grades, 9 children got poor scores. It was taken randomly for kindergarten students. Next is Class B, there are 15 female students can be seen in the following table:

Table 4: Children's Ability to Read in Cycle I

Number	Name	Indicators			Σ	Mean	%
		1	2	3			
1	AS	2	2	3	7	2.3	77.8%
2	YY	2	2	2	6	2	66.7%
3	XX	2	3	2	7	2.3	77.8%
4	CC	3	2	2	7	2.3	77.8%
5	CC	2	2	2	6	2	66.7%
6	HH	2	2	2	6	2	66.7%
7	KK	2	2	3	7	2.3	77.8%
8	UU	3	2	3	8	2.7	88.9%
9	PP	2	3	2	7	2.3	77.8%
10	LK	2	3	3	8	2.7	88.9%
11	PP	3	2	3	8	2.7	88.9%
12	ER	3	2	2	7	2.3	77.8%
13	NT	2	2	2	6	2	66.7%
14	WE	3	2	2	6	2	66.7%
15	IR	3	2	3	8	2.7	88.9%
Mean					6.9	2.3	77.1%

Based on the table above, it shows that the learning completeness of the children in reading hijaiyah letters in the Al-Qadar letter in the first cycle was 4 children (26.7%) were in good grades, and 11 children (73.3%) were at quite good grades. The result of cycle I can be seen in the graph below:

Graph 2: Percentage Graph of Cycle I Value Results



Observation

During the learning improvement process to find out the children's ability to read hijaiyah letters in Al-Qadar letter through the index card match method, there are several things can be observed as follows: Learning improvement plans, determining learning improvement indicators has appropriate, selection of teaching aids is not enough so that there are children who not yet getting teaching aids, determining the goal of improvement has appropriate appropriate, designing class management is still have still deficiencies since it is not regulating the balance of the number of students in the study group, Planning the tools and methods for assessing the improvement of activities is appropriate already. The learning improvement process, including: Arrangement of space and learning resources used for learning is correct, Implementation of learning improvement is going well, management of class interactions; children's responses when participating in the learning and repair process are better and look enthusiastic. Children's performance, in the result of research, there is evidence of reading

hijaiyah letters by reading Al-Qadar letter through the index card match method. The final result of each activity during the question and answer time, attitudes and behavior of children in learning are good.

Reflection

After the improvement of learning ended, the researcher then gave a reflection on the learning who has done to improve the ability to read Hijaiyah letters in surah Al-Qadar through the index card match method. The findings in cycle I were as follows: the advantages of the learning process: Children were very happy to learn and read hijaiyah letters in surah Al-Qadar because the teacher implemented it through the index card match method. The learning process of reading hijaiyah letters in surah Al-Qadar through the index card match method feels fun and not boring for children because all children are involved in the learning process both individually and in pairs. Weaknesses of the learning process: management in class arrangement is still not well organized since there are still some children who like to hang out in class, the props are less varied too.

Cycle II

Planning

Cycle II held by planning learning improvements to improve reading ability through the index card match method. The focus of the research is more emphasized on children whose ability to read hijaiyah letters in Al-Qadar is not optimal through the index card match method. Planning cycle II, researchers identify problems, compile one cycle design, design learning for 1 cycle (1 meeting), compile a Daily Activity Plan (DAP), improvement scenarios, corrective steps; according to the development activities contained in the Activity Plan Daily (APD), provides teaching aids in accordance with learning activities and compiling observation sheets. After the design was implemented, it turned out to a good progress, there is improvement of students' ability to read the letters in Surah Al-Qadar through the index card match method.

Implementation

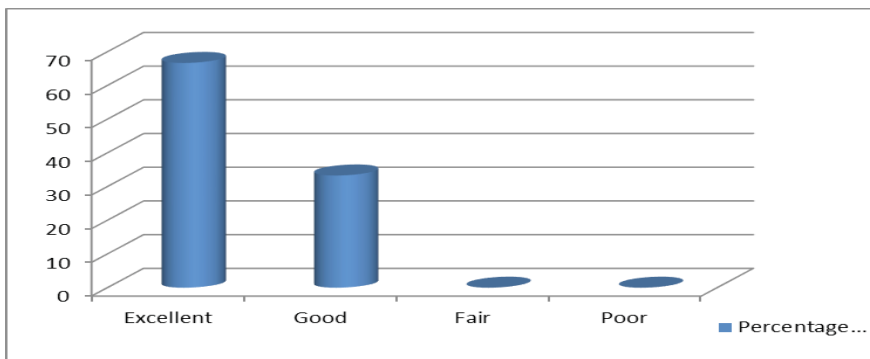
The cycle II was carried out on Monday, May 12, 2020. The ability to read hijaiyah letters in Al-Qadar letters through the index card match method can be seen in the following table:

Table 5: Children's Ability to Read Hijaiyah Letters in Cycle II

Number	Name	Indicator			Σ	Mean	%
		1	2	3			
1	AS	4	4	4	12	4	100%
2	YY	3	4	4	11	3.7	91.7%
3	XX	4	3	4	11	3.7	91.7%
4	CC	3	3	4	10	3.3	83.3%
5	CC	4	3	4	11	3.7	91.7%
6	HH	3	3	4	10	3.3	83.3%
7	KK	3	3	4	10	3.3	83.3%
8	UU	4	3	4	11	3.7	91.7%
9	PP	4	4	4	12	4	100%
10	LK	3	3	4	10	3.3	83.3%
11	PP	4	3	4	11	3.7	91.7%
12	ER	4	3	3	10	3.3	83.3%
13	NT	4	3	4	11	3.7	91.7%
14	WE	4	4	3	11	3.7	91.7%
15	IR	4	3	4	11	3.7	91.7%
Mean					10.8	3.6	90%

Based on the table above, it shows the children's progress in reading hijaiyah letters by reading A;-Qadar in the second cycle. 10 children (66.7%) were at very good scores, and 5 children (33.3%) were in good grades. This result also can be seen in the graph below:

Graph 3: Graph of the Percentage of Value Results for the Ability to Read Hijaiyah Letters in Cycle II



Observation

During the process of improving learning in cycle II, several things can be observed as follows: Learning improvement plan; There is no more learning improvement needed and it is enough until the second cycle only because of the completeness of learning is achieved. the learning improvement process includes; There is no more learning improvement process needed and it is enough until the second cycle because the completeness of learning is achieved. Classroom interaction management; Children's responses when following the learning improvement process are better and more enthusiastic. Children's performance; the evidence of children's reading skill in hijaiyah letter can be seen in the final results. The final result of each activity during the question and answer time, attitudes, and children behaviour are good.

Reflection

After the improvement of learning ends, the researcher then provides a reflection of the learning. The followings are the advantages of the learning process: a) Children are very happy to learn to read hijaiyah letters since index card match method is used. b) Classroom management is good. c) The process of learning to read hijaiyah letters in surah Al-Qadar through the index card match method can increase children's learning concentration.

Discussion

Pre Cycle

The initial condition of learning to read hijaiyah letters in surah Al-Qadar through the index card match method in group B in kindergarten. Lab.School FIP-UMJ Indonesia, was not optimal. This is proved when the teachers ask the children to read hijaiyah letters in surah Al-Qadar in general. They do not have good abilities. The Tajwid in reading hijaiyah letters in the Al-Qadar letter in this pre-cycle is considered incomplete. It can be seen from the learning outcomes of the children, there were only 11 children or 73.3% and 4 other children or 26.7% received poor grades. This causes of the learning process in reading Al-Qur'an has not well organized by the teacher, not used varie and appropriate learning aids, and the learning process feels boring so that the child is not maximized in learning. Therefore, researchers

conducted classroom action research through the index card match method to solve the problem.

Cycle I

Cycle I was held by adding the teaching aids in order to improve the children's ability in reading hijaiyah letter through Al-Qadar letter. Children seem to be more enthusiastic to follow the learning process so that children's learning outcomes improve well. The scores obtained were as many as 4 children (26.7%) were in good grades, and 11 children (73.3%) were in good enough grades, with a general increase in ability percentage of 77.1%.

Based on the learning outcomes above, there is an improvement in learning outcomes when compared to the conditions in the Pre-Cycle. This is because when conducting learning activities, researchers have used the right teaching aids and the right teaching method. An important activity for children to master is the ability to read hijaiyah letters in surah Al-Qadar, as well as developments in other aspects. Basically, this ability is one of the basic skill in Kindergarten of Lab. School FIP-UMJ Indonesia. It is needed to improve children's ability and creativity according to their development stages, as follow: language, cognitive, physical-motoric, and art.

Cycle II

In the implementation of cycle II, the ability of children to read hijaiyah letters in surah Al-Qadar through the index card match method has increased satisfactorily. There were 10 children (66.7%) got excellent scores and there were 5 children (33.3%) got good scores. Overall, learning outcomes in improving children's ability to read hijaiyah letters in surah Al-Qadar through the index card match method in group B in kindergarten. Lab. School FIP-UMJ Indonesia, experienced a significant improvement and can be seen in the following table:

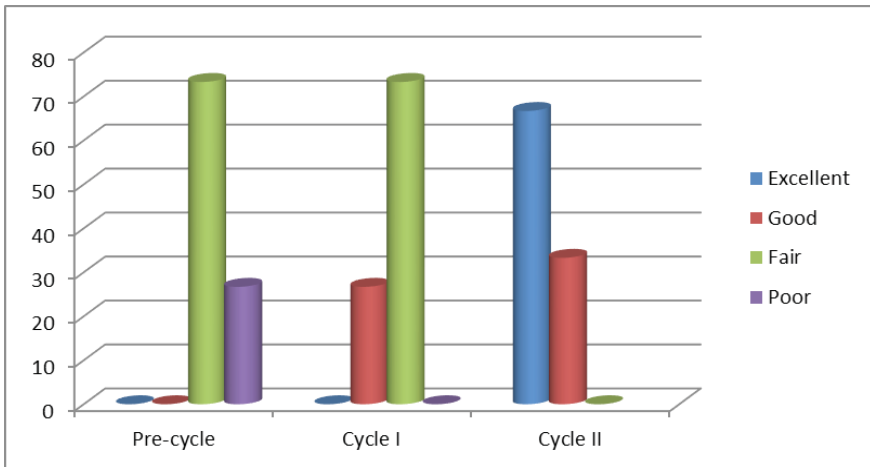
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Table 5: Recapitulation of Research Results on the Ability to Readletters Hijaiyah Throughtheindex

No	Actions	Children's respons-es	Score				Learning complete-ness
			Excellent	Good	Fair	Poor	
1	Pre-cycle	Total	-	-	11	4	58.9%
		(%)	-	-	73.3%	26.7%	
2	Cycle I	Total	-	4	11	-	77.1%
		(%)	-	26.7%	73.3%	-	
3	Cycle II	Total	10	5	-	-	90%
		(%)	66.7%	33.3%	-	-	

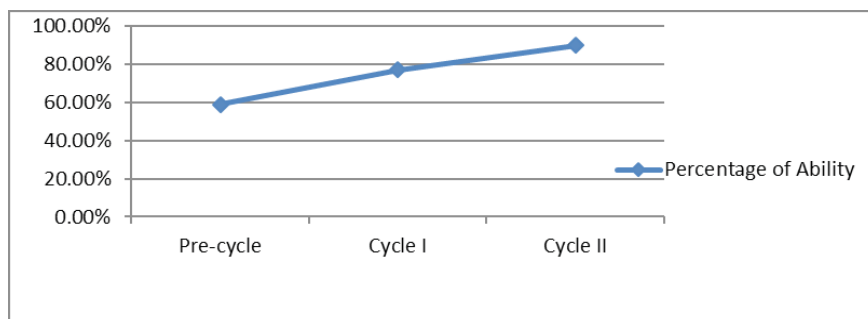
Ability to read hijaiyah letters by reading Surah Al-Qadar in group B in kindergarten of Lab. School FIP-UMJ through the index card match method completely can be seen in the following graph:

Graph 4. Recapitulation of the Development of Ability to Read Hijaiyah Letters



The improvement of percentage of children's ability in reading hijaiyah letters in surah Al-Qadar started from pre-cycle stage, cycle I, and cycle II are as follows:

Graph 3: Graph of Increasing Percentage of Ability to Read Hijaiyah Letters



Conclusion

Based on the results of previous research and discussion, the researcher can conclude, as follows:

1. Implementation of the Index Card Match method as an effort to improve children's ability to read hijaiyah letters in Surah Al-Qadar is carried out in two cycles of activity. Each cycle consists of planning, implementing, observing, and reflecting.
2. After implementing class action with the index card match method, the ability to read hijaiyah letters in class B has increased in each cycle. In the first cycle, the percentage of learning completeness in reading hijaiyah letters was 77.1% and the second cycle was 90%.

Suggestion

The researchers propose some suggestion, as follows:

1. It will be better if a kindergarten teacher. Lab. School FIP-UMJ Indonesia, is more professional in carrying out learning. Especially for the learning that rarely applied to children in the school environment. Parents of the students should be able to understand learning problems, especially those who concerning the child's ability to master reading the Qur'an so that children are more familiar with learning materials for increase interest in learning.
2. For kindergarten educational institutions. Lab. School FIP-UMJ, Indonesia, hopefully can use this research as a reference in improving students' skill completely and dynamically.

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Uncertainty of Sustainability of Marine and Fishery MSMEs in Coastal Areas and the presence of Maritime Autonomous Surface Ships in the Era of Society 5.0

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ABSTRACT

Technology of Robotics and Artificial Intelligence Systems marked already by the introduction and development of Maritime Autonomous Surface Ships. It opens new era that leads to paradigm shifts, concepts, patterns, new standards in ecology, social, regulatory, legal, economic. Also potentially cases uncertainties on the sustainability of marine-based Micro and Medium Enterprises (MSMEs) and catch fisheries. The aim of this paper is to formulate key components, which are believed to be a source of uncertainty. How the source of uncertainty can affect the sustainability of marine-based MSMEs and fisheries in the society 5.0. The research began in 2019-2020 through literature studies, FGD, and the results of discussions and consultations of several expert opinions. Their background: (1) systems, (2) environment, (3) state administration, (4) shipping techniques, (5) marine, (6) fisheries, and (7) experienced fishing businessmen and MSMEs since the 1970s. The method used is structural modeling using Interpretative Structural Modeling (ISM). Structural modeling is a useful tool in decision making, enriching more informative findings, and leading to evaluation results. Structural modeling also could be useful in understanding of important issues in better informed policy making in the future. The results showed that global marine governance, legal conflicts and criminal problems, business conflicts have the highest driver power. But the three components have lowest dependency. So that the three components of the source of uncertainty are key to the uncertainty of sustainability of MSMEs. The results of Interpretative Structural Modeling processing on uncertainty sub-components is acceptable. Because the consistency of seven experts opinion is stated at 95.92 percent (> 80 percent)

Keywords: *uncertainty, sustainability, MSMEs marine and catch fisheries, ISM*

Introduction

Industry 4.0 emerges from innovative digital technologies to create value creation, while Society 5.0 argues as a human-centered society

that balances economic progress with Industry 4.0. On the other hand, the environment has given us natural resources that accelerate the growth of our industry and economy towards sustainability [1].

In 2020, the International world began to talk more seriously about the existence of maritime autonomous surface vessels or Maritime Autonomous Surface Ships (MASS) as ships that can operate independently of human interaction. MASS is an model of development of Robotics and Artificial Intelligence (RAI). In the maritime industry, it is said that the expected journey is ideally safe, described as maritime traffic that desperately needs data, information, alternative decisions, final decisions, actions, and suggestions, to produce an instruction. Therefore, it is needed management with a reliable level of complexity, especially for countries that have coastal areas. Such management is in the form of providing vessel traffic services (VTS) that have been started since the late 1940s.

Today, there are more than 500 units of VTS operating worldwide [2]. Data, information and advice provided by the VTS for the implementation of safe navigation, is a useful interaction to prevent potential collisions and grounding. In many accident investigations at sea, VTS are an important bridge resource, as they are able to contribute to navigational safety. Several International Associations such as the International Lighthouse Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) have developed guidelines and recommendations for VTS to improve navigational safety through increased human interaction.

Maritime countries, including Indonesia have long recognized the need to improve navigational safety which is one component in global marine governance to facilitate safe sea trade. Seeing the need to attract more shipping activities to the increasing trade and economy, countries that have coastal areas deserve to provide infrastructure and navigation assistance services from the mainland. The main function of VTS ships is to regulate the movement of maritime traffic in areas with high traffic density. These functions are performed through interaction with the ship's master and pilot to provide them with navigational information that supports the decision-making process. This is the role and function of VTS, as well as an explanation of how the existing relationship between manned ships and VTS.

MASS presence as an unmanned vessel, accompanied by alternative fuels in the maritime industry will soon open up a new era and lead to paradigm shifts, concepts, patterns, new standards in terms of safety, security, environmental on marine protection, concerns of new technologies that could create new types of risks (such as non-navigational risks and cybersecurity threats) [3], as well as the sustainability of marine and fisheries-based Micro And Medium Enterprises (MSMEs) in coastal areas both in the world and in Indonesia.

About 40% of the population of Europe lives in coastal areas [4]. In the United States (USA), the number is almost the same, which is about 37% of the total population, about three billion people worldwide live within 200 km of the coastline. Nevertheless, the activities of the inter-city logistics network depend heavily on road transportation. Meanwhile, waterborne transportation emits lower Greenhouse gas emissions than road transport, but it is still not used properly. Thus, the shift in load from road on land to sea through short-distance sea shipping or Short-Sea-Shipping (SSS) can be said to have a considerable role in greening the land transportation industry as well as improving road safety. By using autonomous vessels, some SSS challenges, such as crew costs can be eliminated [5]. According to [6], the U.S. is a country that can lead the paradigm shift in freight transportation through facilitation of shipping infrastructure using small-size autonomous vessels. Furthermore according to [4], the use of ships that are on re-route routes by the operator aims to avoid crowded ports, and then cargo is transported to the final destination using inland waterway transportation for schedule reliability.

The electric-powered MASS namely the YARA Birkeland, 37 miles from the sea in Southern Norway, from the YARA plant in Porsgrunn to Brevik (7 miles from the sea) and the Larvik (30 nautical miles) port, sails every day to transport fertilizer. By building the infrastructure of this SSS route, the U.S. has successfully replaced 40,000 truck units a year from road transportation (mainland). This will contribute greatly in eliminating CO₂ and NO_x emissions, reducing congestion, reducing noise pollution and improving road safety.

However, the presence of MASS and SSS infrastructure in the maritime industry, still requires an ability to monitor commercial fishing, tracking real-time fishing activities that are accessible to the public,

supporting marine protection, overcoming overfishing, improving fishing governance, and of course to advocate policies in organizing the oceans globally towards better and fairer direction.

Furthermore, according to [7], the total number of fishermen and fish farmers worldwide in 2018 amounted to approximately 59.51 million. Meanwhile, in Indonesia based on data from the Central Statistics Agency (BPS), shows a drastic decrease in the number of fishing households from 2 million in 2000 to 966 thousand in 2016. In the same year, the Food and Agriculture Organization (FAO), which is one of the International agencies, reported that the number of fishing workers continued to decline. Not only in Indonesia, the number of fishermen in Europe also decreased from 779 thousand to 413 thousand during 2000-2014, and similar trends also occurred in North America and Oceania. Policies that limit overfishing, as well as components of the development of Robotics and Artificial Intelligence (RAI) systems and advances in information technology in various sectors (industry, transportation, etc.) are slowly, potentially replacing roles and reducing human interaction. Reform of marine and fishery policy is not followed by the performance of fishery affairs [8].

Indonesia as an archipelago and maritime country has MSME assets based on marine and fishery, which is one of the important sectors in the nation's economy because it is an economic driver, especially in the regions. Based on [9], the number of MSMEs fish processing businesses, small micro business scale has the largest proportion with the number of 62,389 units or 98.46 percent. Meanwhile, medium and large scale UMKM only amounted to 975 units or 1.54 percent. Changes in public spending patterns such as, the use of internet-based shopping applications and delivery services that are increasingly popular in the community, need to be seen as an opportunity. Therefore, UMKM Businesses need to transform from offline into an online system.

Advances in RAI-based technology in the maritime industry characterized by the presence of MASS in large types, increasingly complex global ocean governance, the trend of the number of fishermen globally declining, the sustainability of fishery biology decreases, regulations that are not parallel to the advancement of RAI-based technology, will have an impact on the sustainability of MSMEs' efforts in the availability access of key raw materials. Therefore, a holistic, cooperative, multidisciplinary, fair, and wise approach to development

is needed [10]. The presence of higher levels of autonomy, complexity, and uncertainty is more important for countries to play a role in regulating, directing and protecting marine and fisheries-based MSMEs that mostly live in coastal areas. Therefore, the aim of this paper is to formulate important and needed key components that become a source of uncertainty and how the source of uncertainty can affect the sustainability of MSMEs in the community 5.0 era

MSMEs and MSMEs Based on marine and fishery

The World Bank's commitment to the development of MSME sector as a core element in its strategy to encourage economic growth and recovery, employment and poverty alleviation in the 2020 pandemic. Since 2004, the World Bank Group has approved about \$2.8 billion to support MSMEs. Furthermore, according to [11] stated that, policies towards MSME development are driven by political considerations not by economic reasoning.

MSMEs play a big role in most economies, especially in developing countries. MSMEs account for the majority of businesses around the world and are important contributors to job creation and global economic development. MSMEs represent about 90% of businesses and more than 50% of jobs worldwide. Formal MSMEs contribute up to 40% of national income or Gross Domestic Product (GDP) in developing countries. These numbers are significantly higher when informal SMEs are included. According to World Bank estimates, 600 million jobs will be needed by 2030 to absorb the growing global workforce, which makes MSME development a high priority for many governments around the world. In emerging markets, most formal jobs are generated by MSMEs, which creates 7 out of 10 jobs. However, financial access is the main obstacle to MSME growth, this is the second most cited obstacle faced by MSMEs to develop their businesses in emerging and developing markets [12].

The impact of the pandemic has disrupted the supply chain, and a massive drop in demand in most. To continue to survive plays an important role in creating decent jobs and improving livelihoods, MSMEs are more reliant on business environments, including support for access to finance, information, and markets. MSMEs generally employ fewer than 250 people, MSMEs are the backbone of most economies around the world and play a key role in developing countries.

Some of the key recommendations presented by the results of the 2018 entrepreneurship and MSME survey by the Asia Pacific Foundation of Canada on 'Building the Capacity of MSME's Through Human Capital' for MSMEs, include: (i) developing strong coordination between the private sector, all levels of government to help MSMEs find policy information and programs that are already available to them through digital advertising and local information centers; (ii) support entrepreneurship training in schools; (iii) invest in information and communication technology (ICT) infrastructure to support MSMEs to reach online resources and tools.

The number of MSMEs based on marine and fishery shows a decrease, this is seen from the number of households catching fisheries drastically decreased from 2 million in 2000 to 966 thousand in 2016. In the same year, the Food and Agriculture Organization (FAO) reported that, the number of fishing workers continues to decline. Not only in Indonesia, the number of fishermen in Europe also decreased from 779 thousand to 413 thousand during 2000-2014, and similar trends also occurred in North America and Oceania.

Maximum Sustained Yield

The Maximum Sustained Yield (MSY) theory is also named as maximum surplus production, maximum balance capture, maximum constant yield, maximum sustained yield, sustainable catch [13]. Further meaning of THE MSY theory is the highest theoretical balance that can continue to be taken from stock under available environmental conditions. This is the highest catch that still allows the population to sustain itself indefinitely through somatic growth, spawning, and recruitment [14]. One approach to MSY calculation is to use Surplus Production Model (SPM). SPM is built on the assumption that fish resources are in a 'steady state' or 'equilibrium condition' and 'constant catchability'. In reality such equilibrium conditions are extremely rare. From the experience in the countries where this concept comes from is that this concept produces too high an estimate, so in its application should actually apply a 'precautionary approach'.

As for the statistical data required in msy counting procedures: (i) production of fish species, (ii) production of fish species per-type of fishing equipment; and (iii) the number and type of fishing gear. As for calculating the annual total production if all types of fish can already

be grouped into 'species groups' such as small pelagic, demersal and others, then the annual production of the group of fish species can be obtained through the usual summation. The steps to calculate MSY are as follows:

1. Steps to calculate fishing power index (FPI)

From the production of fish species per-type of fishing equipment can be calculated the catch per-unit tool (C / A) for a certain year. The capture device that has the highest number of C/A is declared as a standard capture tool, where the value of $FPI = 1.00$. Other capture tool FPI values are converted to the highest FPI value.

2. Steps to calculate Total Effort

Effort value (f) is obtained from the multiplication between the number of tools (\sum Tools) and FPI. Total annual effort is the sum of the effort value of the capture tool used.

3. The next step is to calculate the MSY

To calculate MSY, it is necessary to formulate of catch indicators of effort unity or catch per-unit of effort (CPUE) annually, namely by dividing total fish production (demersal, pelagic etc.) with annual Total Effort.

4. The last step is to calculate the regression equation between the annual CPUE and the annual total effort.

Calculation of MSY with surplus production model approach using assumptions such as: (i) Fish resources (FR) in a state of 'steady state' or 'equilibrium'; (ii) Constant catch-ability ($F = q * f$); (iii) fixed capture efficiency; (iv) no interaction between species; (v) MSY cannot be summed due to a 'predator-prey relationship' (e.g. sdi skipjack and an anedy; (vi) other assumptions (mathematics – elements of regression)

Sustainability in Fisheries

The development of theory with MSY approach continues to be done to obtain real conditions in the sustainability of fisheries are very complex with an open system. Fisheries Sustainability incorporates theoretical disciplines: (i) fishery population dynamics, (ii) practical strategies, such as avoiding overfishing through techniques such as individual fishing quotas, limiting destructive and illegal fishing practices by lobbying for appropriate laws and policies.

In order to measure progress towards the Sustainable Development Goals (SDGs) 14, the main indicator is the proportion of fish stocks that are at a biologically sustainable level. This can help predict the sustainability of the world's marine fisheries. However, the percentage of fish stocks that are in biologically sustainable levels has decreased from 90 percent in 1974 to 65.8 percent in 2017 [15].

World fish production, consumption and trade are expected to increase, but with growth rates slowing over time. Total fish production is expected to grow from 179 million tons in 2018 to 204 million tons by 2030. Aquaculture production is projected to reach 109 million tons by 2030, an increase of 32 percent (26 million tons) during 2018.

Maritime Autonomous Surface Ships (MASS)

The introduction and interest in the development of Maritime Autonomous Surface Vessels or MASS is growing rapidly and continues, as it is considered to have a level of safety, efficiency as well as solutions in the maritime industry in recent years [16]. MASS is an element of the development of the Internet of Things (IoT), Information and Communication Technologies (ICT), and Robotics and Artificial Intelligence (RAI) Systems. The term MASS has been adopted by the Maritime Safety Committee (MSC) of the International Maritime Organisation (IMO).

The Maritime Autonomous Surface Ship conducted its first test in 2018 in Finland. The first commercial ship was the M/V Yara Birkeland, operating with minimal crew before switching to fully autonomous. The main issue regarding the application of Autonomous vessels in the maritime industry is not related to technical knowledge, but rather related to the legal and regulatory frameworks that will govern operational aspects [17].

Structural Modeling and Interpretative Structural Modeling (ISM)

Structural modeling is a useful tool in decision making, enriching more informative findings, leading to evaluation results, understanding of important issues in policy making that are better informed in the future [18-19]. Furthermore, according to [20-21] said that estimating a structural modeling also aims to find the impact that occurs on a program.

Some challenges to adjust specific structural parameters are predicted, and find some opportunities to be identified credibly. Building structural modeling that can be useful in the field, requires some strong assumptions, and requires data collection exercises. The data collected should include not only results, but also a number of variables that can be used to estimate more realistic models.

One type of structural modeling is Interpretative Structural Modeling (ISM). The ISM method has effectively reviewed output capabilities and results in better program restructuring decisions. ISM is also a well-constructed methodology for identifying and summarizing interconnected relationships between specific issues or issues. Ism techniques have been used in structural modeling in the MSMEs businesses of Ruminant Animal Shelter and Slaughter [22] and poultry or chickens [23].

ISM technique is a group learning process aimed at photographing the complex subject of a system, so as to provide valuable value for the community in meeting the needs of present and future. The three things produced by the ISM method include: (1) key elements, (2) element hierarchy structure, and (3) grouping of elements in four classification sectors.

The four classifications are sector I or Independent, sector II or Linkage, sector III or Dependent, and sector IV or Autonomous. The classification of independent sectors is an element that has a large driving force, and a small dependency. Linkage sector classification is a sector that has unstable relationships between changers and any change in action from the changer will have an impact on other sub-elements. Feedback from its influence can magnify the impact, so these sub-elements should be carefully reviewed. The classification of dependent sectors is a non-free sub-element. The classification of the autonomic sector, a sub-element not directly related to the system, has fewer relationships, but can be more powerfully influential in the face of goal achievement. The steps of the ISM method can be seen in Figure 1

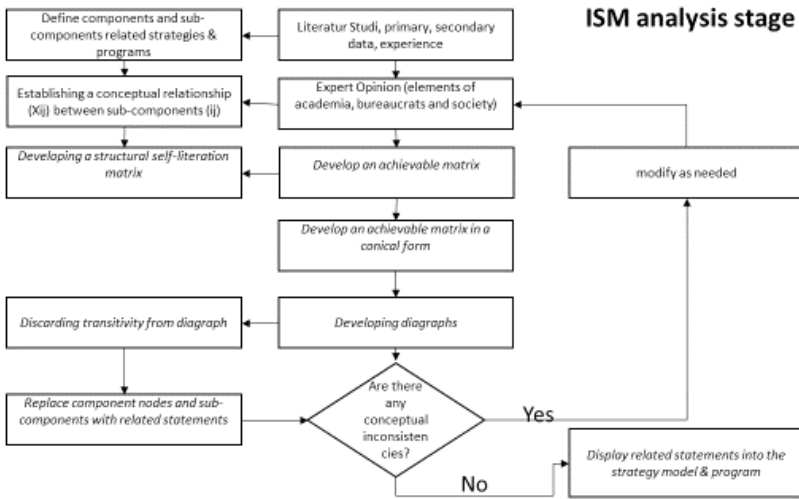


Figure 1. Analysis steps with the ISM method

Research methods

The research began in 2019-2020 through literature studies, Forum Group Discussion (FGD), and expert opinions. FGD is intended to agree on the components and sub-components to be used in the ISM processing. The number of experts who will be respondents in the processing of ISM is 7 people. Experts consist of: (1) systems, (2) environment, (3) state administration, (4) shipping techniques, (5) marine, (6) fisheries, and (7) experienced fishing businessmen and MSMEs since the 1970s.

Structural modelling is a useful tool in decision making, enriching more informative findings, leading to evaluation results, understanding of important issues in better informed policy making in the future. Based on consultation with 6 experts, the recommended component is a statement of uncertainty. What are and how the sources of uncertainty in the structural model to be built, can be believed will affect. Uncertainty refers to epistemic situations involving imperfect or unknown information.

Results and Discussion

In order for the description of hierarchy and contextual relationship between the sustainability of marine-based MSMEs and fisheries and the presence of MASS as model RAI to be explicit, the analysis and

syntheses used are through structural model approaches. According to [24], structural models are said to be useful, when composed of elements, sub-elements, and well-defined key sub-elements i.e.: (i) Well-defined objectives for agents, (ii) Well-defined constraints, (iii) Statements about **uncertainty**, what agents know and the beliefs of such agents about the uncertain outcomes; (iv) How constraints, preferences and beliefs vary across agents; (v) A model of interaction between agents; (vi) Some idea of which of the above elements will be invariant to changes in the economic environment.

Based on consultation with experts of the systems, state administration, environment, shipping techniques, marine, fisheries, and experienced fishing businessmen and MSMEs since the 1970s, the recommended component is a statement of uncertainty. What are the sources of uncertainty in the structural model to be built, and how sources of uncertainty can be believed will affect choice Uncertainty refers to epistemic situations involving imperfect or unknown information.

Uncertainty Elements

The results of FGD followed by bureaucrats, academics and private agreed the number of sub-elements of uncertainty is 14. 14 sub-element, namely: (1) equitable global marine governance (E_1), (2) decreased sustainability of marine biota biology (E_2), (3) decreased human interaction (E_3), (4) legal conflict (legal integration in maritime industry) (E_4), (5) increased business conflict in maritime, marine and fishery (E_5), (6) marine functions become to Short-Sea-Shipping (E_6), (7) Fisherman profession to non-fisherman (E_7), (8) the occurrence of increased accidents at sea (E_8), (9) grounding (E_9), (10) marine degradation (E_{10}), (11) marine ecosystem damage (E_{11}), (12) difficulty of cultural compliance at sea (E_{12}), (13) transfer of the professional functions of marine-based MSMEs and fisheries to non-MSMEs (E_{13}), as well as (14) the certainty of marine foodstuffs being legally caught (E_{14}).

The ISM method identified experts understanding of contextual relationships between uncertainty sub-elements. The relationship between sub-elements expressed with symbols V, A, X and O forms a matrix of respondents' perception, called structural self interaction matrix (SSIM) (Table 1). The contextual relationship of the uncertainty

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sub-element will affect the sustainability program of Marine Based MSMEs and Fisheries

Table 1 Results of the aggregation of seven experts on contextual relationships between sub-elements of uncertainty

No	E ₂	E ₃	E ₄	E ₅	E ₆	E ₇	E ₈	E ₉	E ₁₀	E ₁₁	E ₁₂	E ₁₃	E ₁₄
E ₁	V ²	V ³	V ⁴	X ⁵	V ⁶	V ⁷	V ⁸	V ⁹	V ¹⁰	V ¹¹	V ¹²	V ¹³	V ¹⁴
E ₂		V	A	A	V	V	V	V	V	V	V	V	V
E ₃			A	A	A	A	A	A	A	A	A	A	A
E ₄				V	V	V	V	V	V	V	V	V	V
E ₅					V	V	V	V	V	V	V	V	V
E ₆						V	V	V	V	V	V	V	V
E ₇							A	A	A	A	A	O	A
E ₈								A	A	A	X	A	A
E ₉									V	V	V	V	V
E ₁₀										X	V	V	V
E ₁₁											V	V	V
E ₁₂												V	V
E ₁₃													V
E ₁₄													

The SSIM is converted in binary matrices 1 and 0 into an initial reachability matrix (Table 2).

Table 2 Aggregation results of seven VAXO ISM processing experts sub-elements of uncertainty in marine and fishery based MSME sustainability programs

No	E ₁	E ₂	E ₃	E ₄	E ₅	E ₆	E ₇	E ₈	E ₉	E ₁₀	E ₁₁	E ₁₂	E ₁₃	E ₁₄
E ₁	1	1	1	1	1	1	1	1	1	1	1	1	1	1
E ₂	0	1	1	0	0	1	1	1	1	1	1	1	1	1
E ₃	0	0	1	0	0	0	0	0	0	0	0	0	0	0
E ₄	0	1	1	1	1	1	1	1	1	1	1	1	1	1
E ₅	0	1	1	0	1	1	1	1	1	1	1	1	1	1
E ₆	0	0	1	0	0	1	1	1	1	1	1	1	1	1
E ₇	0	0	1	0	0	0	0	0	0	0	0	0	0	0
E ₈	0	0	1	0	0	0	1	1	0	0	0	1	0	0
E ₉	0	0	1	0	0	0	1	1	1	1	1	1	1	1
E ₁₀	0	0	1	0	0	0	1	1	0	1	1	1	1	1
E ₁₁	0	0	1	0	0	0	1	1	0	1	1	1	1	1
E ₁₂	0	0	1	0	0	0	1	1	0	0	0	1	1	1
E ₁₃	0	0	1	0	0	0	1	1	0	0	0	0	1	1
E ₁₄	0	0	1	0	0	0	1	1	0	0	0	0	0	1

In the ism method, revision of SSIM with transitivity rule until final reachability matrix (Table 3). From the final reachability matrix can be determined the level of dependency (dependency) and driver power (driving force) element of uncertainty affects the sustainability program of Marine Based MSMEs and Fisheries effectively. The results of the processing of uncertainty sub-elements showed a level of consistency of expert opinion expressed at 95.92 percent (> 80 percent) or acceptable.

Table 3 Aggregation results of seven experts reachability of the final matrix of uncertainty elements in marine and fishery based MSME sustainability programs

No	E ₁	E ₂	E ₃	E ₄	E ₅	E ₆	E ₇	E ₈	E ₉	E ₁₀	E ₁₁	E ₁₂	E ₁₃	E ₁₄	DP
F ₁	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
F ₂	0	1	1	0	0	1	1	1	1	1	1	1	1	1	11
F ₃	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
F ₄	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
F ₅	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14
F ₆	0	0	1	0	0	1	1	1	1	1	1	1	1	1	10
F ₇	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
F ₈	0	0	1	0	0	0	1	1	0	0	0	1	1	1	6
F ₉	0	0	1	0	0	0	1	1	1	1	1	1	1	1	9
F ₁₀	0	0	1	0	0	0	1	1	0	1	1	1	1	1	8
F ₁₁	0	0	1	0	0	0	1	1	0	1	1	1	1	1	8
F ₁₂	0	0	1	0	0	0	1	1	0	0	0	1	1	1	6
F ₁₃	0	0	1	0	0	0	1	1	0	0	0	1	1	1	6
F ₁₄	0	0	1	0	0	0	1	1	0	0	0	1	1	1	6
Dép	3	4	14	3	3	5	13	12	6	8	8	12	12	12	

In accordance with the contextual relationship in uncertainty element, the results of ISM processing (Table 3), show that equitable global marine governance (E₁), legal conflict (legal integration in maritime industry) (E₄), and increased business conflict in maritime, marine and fishery (E₅) industries, have the highest driving force of (14) and the lowest dependency of (3). The three sub-elements are called key uncertainty sub-elements. Equitable Global Marine Governance requires further support strategies by national and local governments [25].

This will protect the economy of marine and fishery-based MSMEs

Figure 1 shows that, the decline in sustainability of marine biota biology (E₂), marine functions become to Short-Sea-Shipping (E₆), the occurrence of grounding (E₉), including in the independent sector (has high driving power and low dependence).

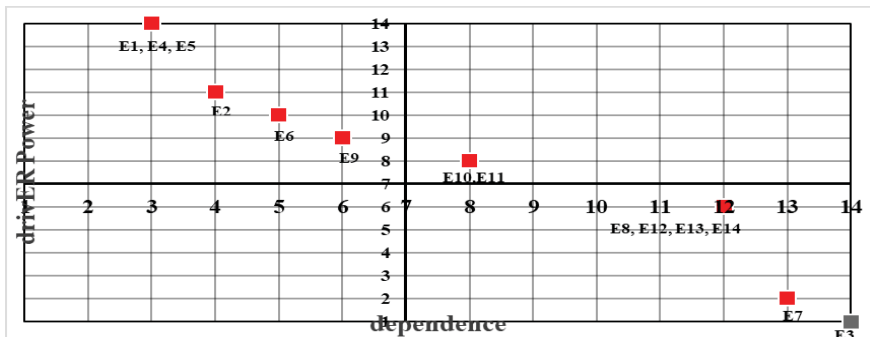


Figure 2 The relationship of driver-power and dependence to the element of uncertainty affects marine and fishery based MSME sustainability programs

Society 5.0 Fostering Spirituality and Humanity

Description on Figure:

- E_1 : equitable global marine governance
- E_2 : decreased sustainability of marine biota biology
- E_3 : decreased human interaction
- E_4 : legal conflict (legal integration in maritime industry)
- E_5 : increased business conflict in maritime, marine and fishery

- E_6 : marine functions become to Short-Sea-Shipping
- E_7 : fisherman profession to non-fisherman
- E_8 : the occurrence of increased accidents at sea
- E_9 : the occurrence of grounding
- E_{10} : marine degradation
- E_{11} : marine ecosystem damage
- E_{12} : difficulty of cultural compliance at sea
- E_{13} : transfer of the professional functions of marine-based MSMEs and fisheries to non-MSMEs

- E_{14} : the certainty of marine foodstuffs being legally caught

Marine degradation (E_{10}) and marine ecosystem damage (E_{11}) are included in the linkage sector. The four sub-elements of the occurrence of increased accidents at sea (E_8), the difficulty of cultural compliance at sea (E_{12}), the transfer of the professional functions of marine-based MSMEs and fisheries to non-MSMEs (E_{13}) and the certainty of marine foodstuffs being caught legally (E_{14}) have the same driver power and dependency, namely driver power (6) and dependence (12). Furthermore, sub-elements of fisherman profession to non-fisherman (E_7), and decreased human interaction (E_3) along with the four sub-elements above are included in the dependent sector.

The six sub-elements in the dependent sector are the result of uncertainty in the linkage and independent sectors. If the sub-element of uncertainty in the linkage and independent sectors is no longer problematic, then the six sub-elements of uncertainty in the dependent sector become important. Discussion of the importance of the uncertainty sub-element (Figure 3).

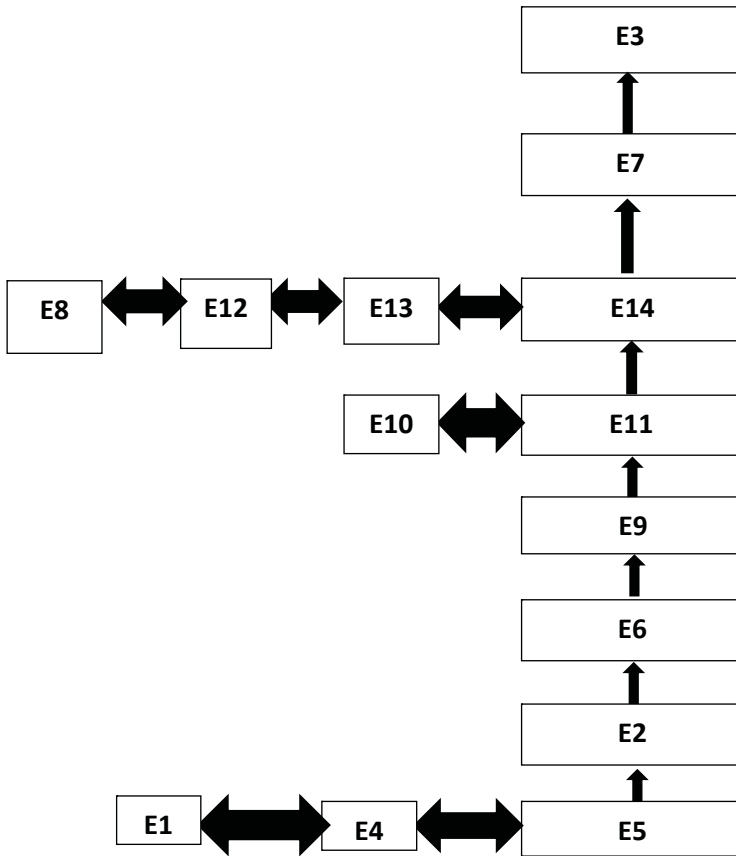


Figure 3 Diagram of hierarchy structure model of uncertainty sub-element in MSME sustainability program Based on Marine and Fisheries

Description on Figure:

- E_1 : equitable global marine governance
- E_2 : decreased sustainability of marine biota biology
- E_3 : decreased human interaction
- E_4 : legal conflict (legal integration in maritime industry)
- E_5 : increased business conflict in maritime, marine and fishery
- E_6 : marine functions become to Short-Sea-Shipping
- E_7 : fisherman profession to non-fisherman
- E_8 : the occurrence of increased accidents at sea

Society 5.0 Fostering Spirituality and Humanity

- E_9 : the occurrence of grounding
- E_{10} : marine degradation
- E_{11} : marine ecosystem damage
- E_{12} : difficulty of cultural compliance at sea
- E_{13} : transfer of the professional functions of marine-based MSMEs and fisheries to non-MSMEs
- E_{14} : the certainty of marine foodstuffs being legally caught

From the level of hierarchy and related relationships indicates that, the importance of uncertainty or opportunities expected in equitable global marine governance (E_1), the risk of legal conflict (legal integration in the maritime industry) (E_4), and increased business conflicts in the maritime, marine and fishery (E_5) industries, will result in uncertainty or risk of a decrease in the sustainability of marine biota biology (E_2), the risk of the transfer of marine functions to Short-Sea-Shipping (E_6), as well as grounding (E_9). Grounding is one of the causes of frequent accidents on ships.

In addition, grounding has a direct impact on the strength of ship base construction, so that if grounding occurs in carriers of hazardous substances such as oil tankers, liquefied natural gas (LNG), liquefied petroleum gas (LPG) can cause quite serious environmental damage, namely the risk of marine degradation (E_{10}), and marine ecosystems damage (E_{11}). MASS and modern global warming is rapidly accelerating and creating new challenges for sea creatures. As higher concentrations of carbon dioxide build up in the ocean and the waters acidify, greater damage is occurring to marine ecosystems, including the reduction of biodiversity in coral reefs and the hampering of animals' metabolisms. Changes to the current health of marine creatures like pteropods indicate the growing instability of their oceanic environment. Pteropods are a group of planktonic gastropods that are widely regarded as biological indicators for assessing the impacts of ocean acidification [26]

Marine degradation and marine ecosystems damage, resulting in an increase in accidents at sea (E_8), because the expected opportunities created cultural compliance in the sea is difficult to materialize (E_{12}), so the risk of the transfer of the professional functions of marine-based MSMEs and fisheries to non-MSMEs (E_{13}), as well as the expected opportunity that food sourced from the sea obtained legally can't be

realized (E_{14}) is likely to occur. Risks over the profession of fishermen to non-fishermen (E_7), and decreased human interaction (E_3) both fishermen and MSMEs Based on marine and fishery that will occur in the era of society 5.0

Conclusion

Equitable global marine governance, the risk of legal conflicts and criminal problems, and the risk of increased business conflict in the maritime, marine and fishery industries are key uncertainty components that are important and needed in the sustainability of marine and fishery-based MSMEs in society 5.0 era.

While the source of uncertainty occurrence of marine degradation and damage to the marine ecosystem have a high driver power (still under the key components), but has a high dependence. The two components will also be a source of uncertainty affecting the sustainability of marine-based MSMEs and fisheries, if the key components, and 3 components (decreased sustainability of marine biota biology, marine functions become to Short-Sea-Shipping, and the occurrence of grounding), are not immediately well prepared from now on.

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Digitalization and Quality of Life: Problems and Inequalities in The "Digital Society" (Society 5.0)

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ABSTRACT

The study aims to find out how nonlinear digitalization complicates human capital. The Digital Divide is only deepening over time in the post-industrial information society. This means that one of the main values that determine the well-being of both individuals and states, in general, is the informatization of the population.

The study is made based on theoretical studies. The purpose of the study is to explore the possibilities of establishing Public Solidarity. The process of social-digital individuals' formation is discussed, as well as the negative side effects and the peculiarities of the digital virtual space, as a result of which the dehumanization of social practice occurs. Furthermore, digital objects appear, which create a new arrangement of relations, practices, and way of working, that equates these objects with a human.

Keywords: *Digital society, social-digital individuals, digital divide, dehumanization, public solidarity.*

Introduction

At present, a complex, nonlinearly developing socio-digital-natural reality is underway. In the context of this process, non-linearly digitalization complicates human capital. If traditionally human capital was determined by the biological and social corporeality of the individual, now from the very birth it increasingly depends on the consequences of digitalization.

According to W. Beck, the new generation “initially personifies digitalization - putting it not at the end, but at the beginning of its socialization young generations have already been born as “digital

entities” [1]. As a result, the formation of a socio-digital individual is taking place, in which a real bio-social body and a digital body as a new type of “body without organs” [2, p. 672], in essence, form an integral hybrid. This process has ambivalent consequences: unprecedented social lifts and life chances open up for a modern young person, however, negative side effects arise in the form of dehumanization of social practices: the vision of social problems is limited to the social circle with whom digital “mass self-communication” is carried out, not aimed at socially significant transformations. A fundamentally new problem logically follows from this - the humanization of the emerging socio-digital human capital, which corresponds to the spirit of sociology, which aimed at exploring the possibilities of affirming public solidarity [3, p. 492]. The first step towards solving this problem should be the humanization of education, which, in particular, provides for adaptation of education to the realities of “normal trauma” caused by breaks in society [4, pp. 150-159]; the focus of the strategy for the development of human capital to ensure a balance between social and digital corporeality; teaching ethical topics of the use of digital and nano-technologies, taking into account the values and norms of local culture.

In an era when the digital society is becoming a new format of social reality, new actors are entering the scene - digital objects that set a new layout of relationships and practices. If the supporters of the actor-network theory called for things [5] or animals [6], now we can move on and defend digital objects (non-player characters, artificial neural networks, artificial intelligence, etc.). Today, no one will be surprised by a robot answering the phone, a chatbot chatting in an online store or reserving a table at a restaurant [7], a non-player character who remembers the player's actions during the game or lives a digital life as if the player does not exist. Machine learning technologies are often the backbone of these practices. They also allow us to talk about the active role of digital objects in our everyday life.

If an object is active, has a certain predictive potential, and is also capable of surprising the user, then it is difficult to think within the framework of subject-object relations, its ability to act (to some extent spontaneous) puts it on a par with a person - we find ourselves in new coordinates flat ontology [8]. The difficulties associated with the training/education of systems claiming to be meaningfully operating

are also obvious: 1) they are highly specialized; 2) the boundaries of learning are set by the amount of information provided to them and the technical capabilities of its processing, etc. But despite this, the training/education of such systems has stepped to a new level, when the program receives reinforcement not from the engineer (teacher), but the environment (reinforcement learning). This opens up a wide range of opportunities to search for new trajectories, objects, strategies. But what is more important for the analysis of the impact of such technologies on our lives: it is an attempt to develop curiosity in the artificial system, the desire for new things, and in the future - for knowledge. The connection between cognition and striving for the still unknown in humans is undeniable, cognition becomes possible not least thanks to memory [9, pp. 29–35].

On these foundations, projects are being built aimed at improving machine learning methods. To develop in a machine "aspirations" to something new, unknown, something that is not yet in the memory means placing it on the same plane with a person. On the one hand, we do not conclude about consciousness/thinking [8], and on the other, we are no longer talking about technical training (comparing classifications and objects), but about the ability to set own goals and achieve them. Setting goals not set by the developers seem to be a qualitative leap in the field of teaching artificial systems [10], [11]. It is worth noting that these methods are often practiced in computer games, which now act not only as laboratories for the constitution of experience and identifying forms of social interaction but also as an experimental platform for the practice of digital objects. Given the growing role of automated systems in everyday life, when more and more operations are delegated to them, it is worth closely monitoring developments in the field of machine learning, designed to teach the program to feel (the development of emotional AI), strive for new things (show curiosity) and independently choose not only solutions. but also their own goals.

Another role is played by the Internet, which has become an inseparable part of society as a virtual field. The problem of inequalities is brought to the forefront of sociological societies, which at some point was due to the refinement of specifics of new societies, driven by the result of technological advances over the past century, creates theories of post-industrial, global, information, and digital societies. With the

development of information problems in the pre-digital "analog" society, again seems to gain perspective solutions. The new space interaction created a foundation for hope, which with traditional forms of inequality will rise more and more. In accordance with "Principles of The Silicon Valley" [12], the Internet is seen as a virtual territory of freedom, which has its own "revelation", "neutrality", "flatness - the absence of hierarchies". The "digital" reality, full of alternatives and possibilities, looked perfectly different from the traditional "analog" realities, the basic property of which is the limitation (in the first case, access to the resource).

The digital space looks like an open and non-hierarchical space in which, according to cybertopians, inequality and associated constraints disappear automatically. However, for those who do not have access to this space, the prospects are catastrophically worse: "The global trend is that the information economy connects to its network those who are of value to it (thereby giving them additional value), but disconnects those who have no value for it (thereby further reducing their chances of gaining some value)" [13].

A new kind of inequality is emerging - the Digital Divide. The term Digital Divide and its corresponding evolving theme emerged in the mid-1990s, when the US Department of Commerce, National Telecommunications and Information Administration (NTIA) began publishing reports on the Internet and access to its use. The second report "Going Off the Net: New Evidence on the Digital Divide" (1998) recorded an obvious gap - the division into those who have Internet skills and, accordingly, have access to it, and those who do not.

The Digital Divide, in the words of the Department of Commerce, National Telecommunications, and the US Information Administration, boils down to the question that "On the other side" of the digital divide are "analog masses" alienated from the network. This is the simplest and, in principle, the surmountable form of inequality associated with the Internet, for which an optimistic dynamic forecast of development can be made: more and more people will master new communication technologies. To monitor the situation, the Digital Opportunity Index (DOI) was created.

Conclusion

The fact remains: a huge layer of public life has partially, and in some areas, completely moved to digital format. Lack of access to digital services leaves vast numbers of people unable to communicate, receive education, medical care, and essential information services. At the same time, as in the case of economic goods, the "digital divide" only gets worse over time.

Based on SNews analysis [14], experts have long concluded: to overcome the digital divide, it is necessary to provide 100% educational institutions, healthcare institutions, state authorities, and local governments with modern digital communication services. The priority direction of the state's social policy should be a reference point for creating such conditions for each person, being in which he could well master the skills and knowledge necessary for life and work in the digital society. There is no doubt that improving the same computer literacy is extremely important for the entire population. But first of all, it should be provided to students of secondary schools, middle-level educational institutions (vocational lyceums, colleges) and university students: institutes, universities, academies. And already provided that such support is received, the development of a legal information society should be defined as the main goal of the state information policy, completely focused on the interests of people who would have not only open access to information and knowledge but also the ability to create.

As a result, already at the next stage, the information potential can be used for the socioeconomic and cultural development of the country, improving the quality of life of residents, strengthening the information space itself, further minimizing the digital inequality on a regional scale, and bridging the "digital difference" between various groups and segments of the population. Preserving and enhancing the diversity of the information sector as official or business, reference or educational, scientific, sports or cultural information, or entertainment information, is a cornerstone of bridging the digital divide. The advantages of this approach are obvious: information is available to a circle of users around the planet, in different languages and different formats, and its diversity only contributes to constructive dialogue between individuals, sectors of society, and even entire nations.

Meanwhile, more complex is the specific problems associated with the specifics of existence in the digital virtual space. Individuals included in networked communities often begin to experience severe forms of alienation from real life and pathological dependence on virtual structures. These structures themselves are actively segmented, building new hierarchies, giving rise to new forms of exclusion and inequality.

There is also a deeper level of “Digital Divide”, its second level. Digital Citizens are divided into consumers and content creators. The divide that separates consumers and content creators is internally stable and take the form of a new type of inequality. The significance and consequences of this form of inequality for the human existence of the information age, which is not obvious at this stage, can acquire, as the researchers of network and stream structures of inequality indicate, a scale and significance comparable to the significance of economic and political inequality for the society of classical Modernity.

The most significant and most disguised and dangerous even today the third level of "Digital Inequality" is the division into the network elite, in whose hands is the freedom of the network and all other network users ("digital masses"). Visible "analog" opposition and the struggle for domination in the Internet space (disconnection and restriction of access to the Internet, etc.) can generally be considered a side effect of the operation of a large machine, the main work of which has long been conducted on the "digital field". On the Internet, power belongs to the same institutions, which in the real world looks like repressive activity, so an optimistic forecast is impossible here - the situation of this third level of “Digital Inequality” qualitatively increases the repressive power elites, especially in its autocratic form. A real analysis of the form and dynamics of a repressive authoritarian response to information "digital" freedom as the basis of "cyber skepticism", which draws the perspective of cyber-dystopia.

Criticism of the optimistic expectations of digital liberalization, which is a healthy skepticism about the first two levels of the Digital Divide, at this level becomes extremely pessimistic. The prevailing ideas about the known forms (structural, systemic, institutional) inequality, that are becoming insufficient to understand the new “digital” order and the problems and imbalances it generates. New forms of inequality that arise in virtual reality and are manifested in the differentiation

of networked communities and unequal involvement in information flows and the flows of technological innovations require sociology to develop its basic ideas about social inequality.

Digitalization as a social phenomenon inevitably affects the quality of life. There are two main areas of research on the quality of life in the context of digitalization. The first considers digitalization as a process of penetration of information technology into the life of society and concerning the quality of life is related to the study of those opportunities which open up to society and the state to improve the quality of life of people. In this case, the researchers focus on the changes in the quality of life, which are a consequence of the penetration of information and communication technologies into the daily life of people.

Thus, we can distinguish 6 blocks of the quality of life caused by the digitalization process: “the quality of the population, characterized by its digital competencies; provision of digital benefits (digital well-being of the population); the quality of the labor sphere; the quality of the social sphere; the quality of electronic state and municipal services to the population; security of information activities of the population” [15, pp. 414-427]. In general, this line of research is based on the thesis that information technologies change people's lives, which entails the need to reconsider the understanding of the content of the quality of life in new conditions [16, p. 14].

The second direction starts from the understanding of digitalization as a result of the already held intervention of information technologies in the world of everyday life and considers the quality of life of people in the realities of a digital society. This line of research on the quality of life is associated with the use of new methodological tools for collecting and processing information about the quality of life. This direction is implemented within the broad boundaries of digital sociology and considers various forms of everyday activities of people on the Internet as an integral part of their life in general. In this regard, the source of data on the quality of life of people is digital footprints of people, activity in social networks, etc., which can be analyzed using big data technologies and machine learning. This approach to the study of social phenomena is called "non-contact", its peculiarity is that sociologists do not ask anyone, they receive information from a stream of messages, from open sources. Today, this line of research

on the quality of life of the population and well-being, in general, is very promising. Each significant object receives its own electronic label and becomes an inhabitant of the virtual world - a copy or, more precisely, a model of reality. Any quantitative and many qualitative changes in surrounding things are tracked in real-time and stored in huge databases. These bases are memory, or even a kind of "matrix" of artificial intelligence, which is refined and rebuilt every second along with reality.

An increasingly significant part of the life of the most advanced part of the population is shifting into the virtual space: it is easier for such people to communicate with other network users, no matter how far away they are, it is easier to be aware of everything that is happening, it is easier to provide for themselves and adapt to a changing environment. The Internet is becoming an integral part of the life of the modern information society. That becomes more difficult for people who, for various reasons, are unable to access the network. Suffice it to note the fact that when applying for a job, preference is given to those applicants who know how to use a computer and the Internet.

Thus, Society 5.0 is a new social paradigm that implies the total spread of the IoT (Internet of Things), the use of Big Data (technology for working with huge amounts of data), and AI (artificial intelligence) for the parallel development of the economy and solving various social problems. The pilot countries for the implementation of this strategy were Japan, the USA, and Germany. The ideologists of the new paradigm, for example, Uemura Noritsugu, head of the department of external and government relations of Mitsubishi Electric corporation, even talk about the need to change national legislation and development strategies of states.

The problem of informatization of the world's population is becoming truly global. States are forced to prioritize raising the level of education and professional qualifications of their citizens as their top priority tasks because today the competitiveness of a nation is determined to a decisive extent by the availability of highly qualified human resources. Those countries that are unable to raise the level of development of information technologies and make the most effective use of scientific achievements in this area will inevitably lag behind their neighbors. As a result, the world will further increase the economic and social inequality of nations. If the state fails to overcome

the digital divide in time, new technologies, fraught with tremendous opportunities, will lead to even greater differentiation of society.

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Enhancing the Capabilities of the Cosmetic Industry through Technical Guidance on Good Manufacturing Practice

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ABSTRACT

The current free trade requires good quality of the products to be trading. Product quality control can be carry out through Good Manufacturing Practices, which in the cosmetics industry is call Good Manufacturing Practices for Cosmetics, which covers 13 aspects of quality control. In its application, not all cosmetics industries are able to carry out 13 aspects of quality control. For this reason, technical guidance is need so that the industry is able to apply Good Manufacturing Practices for Cosmetics. This technical guidance was carry out on 13 cosmetics industries in Banten and DKI Jakarta, West Java, Central Java and Yogyakarta, East Java and Bali, involving 52 key personnel from each company. This activity is carry out through four stages, namely: (1) the preparation phase, (2) the selection phase, (3) the technical guidance phase (a) the first, and (b) the second, and (4) the reporting phase. This technical guidance succeeded in increasing the competency of 52 key personnel of cosmetics industry. In addition, this technical guidance also succeeded in preparing 13 cosmetics companies to obtain a certificate on Good Manufacturing Practices for Cosmetics from Badan Pengawas Obat dan Makanan.

Keywords: *good manufacturing practice, cosmetics industry.*

Introduction

The era of globalization and free trade in Southeast Asia has prevailed which gave birth to various collaborations between countries in the fields of economy, science and technology, resulting in increased mobility of people, goods and services. Along with the increasing public awareness about the importance of health and body care in everyday life, the community's need for products from the cosmetics industry also increases. If this is address wisely, then this is an opportunity for the cosmetic industry sector to be able to increase its contribution to the country's economy. According of Nurgiyanti and Fithriya [1] the

cosmetic industry has a strategic opportunity to income increase of Indonesia country. A large market, abundant raw materials, and the ability to absorb a large workforce are the main advantages of the cosmetics industry in Indonesia.

According of Siregar and Sutrisna [2] one of the fundamental factors in improving operational and business performance is industrial innovation capabilities. In addition, to improve quality and competitiveness in the global market and in an effort to improve the performance of industrial products, industry players need to implement a production management system that applies globally, namely Good Manufacturing Process (GMP).

GMP in Indonesia is regulation by the relevant government agencies. GMP for the cosmetics industry in Indonesia is call Cara Pembuatan Kosmetik yang Baik (CPKB). The CPKB production system is regulation by Badan Pengawas Obat dan Makanan (BPOM).

According of Banerjee [3] cosmetics are chemical substances which serve the purpose of enhancing personal beauty, caring and rejuvenating human skin and its appendages. They are deliberately applied external reagents which find their pathway into the human body through the process of contact, ingestion and inhalation.

CPKB is a basic eligibility requirement so that a cosmetic industry is able to produce safe, useful and quality products. Besides that, in the context of ASEAN Harmonization in the cosmetic sector, the application of CPKB is a priority that must be fulfill by a cosmetic industry. The cosmetics industry is expect to understand that the application of CPKB is an aspect that must be fulfill in order to improve the quality and ranking of product, which in turn can improve the country's economy.

CPKB is a way to produce cosmetic products that meet quality and safety standards. The objectives are: (1) protecting the public from using cosmetics that do not meet quality and safety requirements, and (2) increasing the value add and competitiveness of Indonesian cosmetic products.

Every cosmetic industry must ensure that the products produced meet the requirements in accordance with the prevailing laws and regulations. The cosmetic industry is expect to understand that the quality assurance system, including CPKB, needs to be equipped with

reliable personnel, buildings, equipment and facilities that are suitable and capable of achieving the specified quality objectives. Quality assurance includes all things that can affect product quality, both individually and collectively. This is relation to all company activities to ensure that the products produced are in accordance with the quality requirements stipulated in BPOM Regulation Number HK.03.42.06.10.4556 of 2010 concerning operational guidelines for CPKB.

According to ASEAN Harmonization, CPKB is a good way of making cosmetics that is publish by ASEAN Cosmetic Directives (ACD) to develop quality management system a cosmetic industry that will distribution its products in ASEAN. The ASEAN Harmonization Team consisting of the government and representatives of the ASEAN cosmetics industry has succeeded in compiling 13 CPKB training modules that can be used to provide understanding and understanding in the consistent application of CPKB. This module explains the minimum requirements to ensure the quality and safety of the products produced. The training modules are: (1) Quality Management System, (2) Personnel, (3) Buildings, (4) Equipment, (5) Sanitation and Hygiene, (6) Production, (7) Quality Control, (8) Documentation, (9) Internal Audit, (10) Storage, (11) Production and Testing Contracts, (12) Complaints, and (13) Product Recalls.

The challenge faced in development related to drug and food control is the need to increase the quality and production capacity according to GMP standards, well distributed, reach consumers safely, efficacious/useful, and maintained quality. On the other hand, effective control of drugs and food will support increased competitiveness of medicinal and food product, include strengthening of regulations and law enforcement. One form of supervision of the cosmetic industry is CPKB certification.

CPKB certificate is a certificate issued by BPOM, which states that all cosmetics produced and distributed are in accordance with the good manufacturing practice of cosmetics. Cosmetics producers that have implemented CPKB can apply for certification by meeting the requirements for administrative documents and technical documents. By implementing CPKB, it is hoped that the cosmetic industry will be able to make products that are in accordance with the intended use, meet the stipulated requirements, and do not pose a risk to endanger consumers so that safety, quality and benefits accuracy.

The reality in the field shows that not all producers have a good ability to obtain a CPKB certificate as required by BPOM. Therefore, the role of government and academics is need to improve the ability of the cosmetic industry to be able to obtain a CPKB certificate.

In relation to this government policy and seeing the conditions and ability of companies in implementing CPKB, the government has an obligation to assist a cosmetic company that have difficulty obtaining CPKB certificates.

The role of mentoring by the government is carry out by academics in the form of technical guidance of good manufacturing practice for the cosmetics industry. This is CPKB technical guidance activity is intend to facilitate the cosmetic industry to be able to prepare the requirements needed for the CPKB certification process so that it can increase the competitiveness of the cosmetics industry.

Implementation Method

CPKB technical guidance for the cosmetics industry was carried out for 13 companies in 5 regions, namely: Banten and DKI Jakarta, Jawa Barat, Jawa Tengah and D.I. Yogyakarta, Jawa Timur, and Bali. The selection of the location for this technical guidance is based on the number of cosmetic industries in the region with due regard to the time available. Meanwhile, the selection of companies participating in technical guidance based on predetermined criteria and selection parameters.

The technical guidance participants are the cosmetic industry, which is not a small and medium industry group. The parameter used is the Regulation of the Minister of Industry R.I. Number 64/M-IND/PER/7/2016 concerning Amount of Labor and Investment Value for Classification of Industrial Business. In the regulation, is state that what is not included in the small industry group is industries that employ more than 19's employees. Even though Purwanto and Raihan [4] stated that manufacturing flexibility and the operational performance of small industries tend to increase according to the increase in the size, age, and market orientation of the company. Not based on the number of company employees.

This technical guidance activity is carry out in stages. The stages of this technical guidance activity are: (1) The preparatory stage, at this

stage: the preparation of a strategy for selecting companies participating in technical guidance, establishing criteria and parameters for companies participating in technical guidance, and compiling a questionnaire for companies that are prospective technical guidance participants. (2) Selection stage, at this stage the selection of CPKB technical guidance participants from the cosmetic industry. (3) The implementation stage, at this stage the first and second technical guidance activities are carry out. (4) Reporting stage, at this stage the preparation of work reports and best practices from CPKB technical guidance activities to the cosmetic industry is carry out. The description of the stages of this technical guidance activity shown in the following figure:

	PREPARATORY STAGE	SELECTION STAGE	IMPLEMENTATION S.	REPORTING STAGE
Target	Industry selection, instrument and module development.	Selection of cosmetic industry technical guidance participants	Implementation of technical guidance	Work report and best practices
Method of Technical Guidance	<ul style="list-style-type: none"> • Designation of technical guidance areas. • Cosmetics industry data collection. • Establishment of selection criteria and parameters. • Preparation of questionnaire. • Development of modules. • Preparation of a check-list for industrial visits. 	<ul style="list-style-type: none"> • The selection of prospective companies. • Determination as candidates for technical guidance. • Survey of potential technical guidance participants. • Designation of key personnel of cosmetic companies for technical guidance. 	<ul style="list-style-type: none"> • Experts' initial visit to selected companies. • Training for key personnel of company. • Carry out a gap analysis. • Advise CA/PA regarding findings • Industry conducts CA/PA according to the agreed period. • Expert final visit to verify CA/PA. 	<ul style="list-style-type: none"> • Collection of best practices after conducting CPKB technical guidance. • Brief evaluation of industry constraints and challenges in implementing GMP.
References	<ul style="list-style-type: none"> • Data collection and analysis. • Desk research and analysis. 	<ul style="list-style-type: none"> • Collecting the results of the questionnaire. • Questionnaire analysis and initial survey results. 	<ul style="list-style-type: none"> • Workshop. • Data assessment by Experts. • Provides technical guidance unique to each industry. 	<ul style="list-style-type: none"> • Brainstorming of Experts, Surveyors and Team Leader of technical guidance.
Result and Outcome	<ul style="list-style-type: none"> • Summary data of 13 cosmetic industries. • Detailed technical guidance method. • Work schedule and PIC. • Questionnaire form for surveys. • Check-list for visits to industry. 	<ul style="list-style-type: none"> • Recapitulation of industry selection results. • Data from 13 selected industries • Industry selection report • Division of work of the Expert Team and Surveyors. 	<ul style="list-style-type: none"> • Draft of GMP report. • GMP implementation in related industries. • Report on GMP implementation in each industry. 	<ul style="list-style-type: none"> • Final report of GMP technical guidance. • Recommendations for follow-up.

Figure 1. CPKB Technical Guidance Method

Results and Discussion

1. Personnel Training

CPKB's technical guidance for the cosmetic industry. The technical guidance participants were 52 key personnel in 13 cosmetic companies in 5 regions. In particular, this technical guidance is for key personnel of cosmetic company. In general, this technical guidance is for all cosmetic company employees. This technical guidance covers 9 aspects

of production management which are carried out for 4 calendar months.

This technical guidance begins with a workshop for key personnel held in each company. Although this training is priority for key personnel of company, its implementation is not limited to existing key personnel of company. This training is also attended all employees and company owners. This is to increase their insight and knowledge about good manufacturing practices. The material presented to the training participants consisted of 9 aspects of CPKB, namely: (1) Personnel, (2) Buildings and Facilities, (3) Equipment, (4) Sanitation and Hygiene, (5) Production, (6) Quality Control, (7) Product Complaints, (8) Product Recall, and (9) Documentation.

The training on 9 aspects of CPKB was carried out for 2 days, which was then followed by stage 1 technical guidance for 3 days. After the technical guidance phase 1 is completed, the company has 1 to 2 months to carry out the corrective action and preventive action (CA / PA). Furthermore, stage 2 technical guidance is carried out which is a confirmation of the implemented CA / PA.

This CPKB training begins with a pre-test and ends with a post-test. The pre-test results showed that 12% of the training participants who were key personnel of company had sufficient knowledge (good and very good) about CPKB. However, this training was able to increase the participants' knowledge as evidenced by the post-test results were much better than the previous test, namely that 90% of the training participants had adequate knowledge of CPKB. The following tables show the results of this training:

Rating	Pre-test		Post-test	
	Number	Percent	Number	Percent
Very Good	1	2	21	40
Good	5	10	26	50
Sufficient	36	69	4	8
Less	10	19	1	2
Total	52	100	52	100

Table 1. CPKB Training Assessment

Apart from their knowledge, the ability of employees can see from their skills and work attitudes. This training shows the knowledge

possessed by employees, while the skills and work attitudes of employees can see from the results of the technical guidance and CA/PA implemented.

2. Technical Guidance for the Cosmetics Industry

As is the case with training for key personnel of cosmetic companies, technical guidance for the cosmetic industry also covers 9 aspects of CPKB, namely: (1) Personnel, (2) Buildings and Facilities, (3) Equipment, (4) Sanitation and Hygiene, (5) Production, (6) Quality Control, (7) Product Complaints, (8) Product Recall, and (9) Documentation.

From the results of the assessment of each aspect of each company, known that this technical guidance has been able to improve the cosmetic industry's ability to apply CPKB production management. The results of the assessment show that in stage 1 technical guidance there are 5 aspects that can be fulfill by the cosmetic industry, namely: (1) Personnel, (2) Buildings and Facilities, (3) Equipment, (4) Sanitation and Hygiene, and (5) Production. While the aspects that cannot be fulfill by the cosmetic industry participating in technical guidance are: (1) Quality Control, (2) Product Complaints, (3) Product Recall, and (4) Documentation. These four aspects are of course a top priority in the technical guidance of the CPKB being implementation. By prioritizing these 4 aspects, it is hoped that the companies participating in the CPKB technical guidance will be able to fulfill all aspects required by BPOM.

In stage 2 of technical guidance, all participants of technical guidance have been able to improve all aspects presented to CA/PA. The results of the 9 aspects assessment for the 13 cosmetic industries that participated in this technical guidance are shown in the following table:

No.	Aspect	Stage 1	Stage 2
1	Personnel	3,06	3,55
2	Buildings and Facilities	2,90	3,40
3	Equipment	3,03	3,45
4	Sanitation and Hygiene	3,03	3,63
5	Production	2,92	3,48
6	Quality Control	2,38	2,87
7	Product Complaints	2,38	3,19
8	Product Recall	2,48	3,34
9	Documentation	2,61	3,42

Table 2. CPKB Technical Guidance Assessment per Aspect

The results of CPKB's technical guidance to the cosmetics industry show a significant change. This is indication by the increase in the results of the second stage technical guidance assessment from the results of the previous technical guidance assessment. The change in their CPKB technical guidance assessment shown in the following table:

Rating	Stage 1		Stage 2	
	Number	Percent	Number	Percent
Very Good	1	8	6	46
Good	6	46	5	39
Sufficient	1	8	2	15
Less	5	38	0	0
Total	13	100	13	100

Table 3. CPKB Technical Guidance Assessment

Conclusion

CPKB's technical guidance for the cosmetics industry has succeeded in increasing the capabilities of 52 key cosmetic company personnel. In addition, CPKB's technical guidance for the cosmetics industry has also succeeded in preparing 13 cosmetic companies to obtain CPKB certification from BPOM. Taking into account the success of the technical guidance that has be implemented and considering that there are still many cosmetic industries that have not obtained CPKB certificates, it is suggested that this technical guidance can be implemented for the cosmetic industry with a larger number and a larger area coverage.

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Redesign The Synchronous Blended Learning: Interception Self-Transcendence from Positive Psychology

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ABSTRACT

This study addresses several outcomes, conceptual framework of blended synchronous learning (BSL) and the benefits, and challenges. Although blended synchronous learning had the capability to provide equivalent learning experience for the online students and classroom students, but it had challenges as well that are approximating some aspects of human thought processes. The purpose of this paper is how to intercept self-transcendence from the view of Positive Psychology to redesign the blended synchronous learning to increase the engagement level of the online and classroom students. Results show that Positive Psychology had the potential to better blend the classroom and the virtual environment.

Keynote: Synchronous Blended Learning, Interception, Positive Psychology

Introduction

Human behaviour and human learning are extremely complex phenomenon. This is often partially due to human is exclusive creatures as they need the inside and inner dimension. The two dimensions had led to varied sorts of psychology expertise to proceed to more applicable, implementation, and concrete concept of development that has both spiritual and technology elements. The integration of spirituality and technology is no longer a commendable enterprise but a necessity. However, it is unfortunate indeed that some people misunderstand the concept of spirituality and technology. Human being is not just a physical and an intellectual being only, but is also a spiritual being. As much as a person needs to be nourished psychically and advance intellectually, so also does the person need to grow spiritually? It should be understood however that the spirituality is not just about worship and prayers, not just meditations and abstentions. Spirituality is also

about psychological well-being, about being in a state of wholesome, healthy and fulfilling life style [1]. Whereas, technology is an effective persuasive tool that can motivate individual to change their thinking, attitudes and behaviour [2].

The questions have been raised about whether the spirituality and technology needs to be integrated in improve blended learning (BL) as several outcomes of blended learning captured student rating. However, tracking the accurate extent of its growth has been challenging because to describe how people can participate in the spiritual evaluation of humanity has connected on what role might technology play? Human brain studies show that we can make decisions before we are aware of making decision. In the perspective of the evolution of human consciousness, technology can be seen as both an effect and a change agent. It is an effect that requires a certain sophistication of human spirituality to develop a particular technology [3]. Therefore, it needs the balance growth between spirituality and technology in the synchronous blended learning.

The blended learning is not new in helping students achieve course objectives and creating an environment that helps students learn and communicating ideas and information [4]. However, there have been at least five meta-analyses that have addressed the impact of blended learning environments and its relationship to learning effective. Each meta-analysis has shown positive effect sizes to fully online or traditional face-to-face environments [5]. However, inherent in these studies there are several considerations such as to redesign synchronous blended learning by intercepting self-transcendence from Positive Psychology. Unfortunately, its has been productive challenging to the search for a definition of blended learning that will enhance the contextual relevance to redesign synchronous blended learning. Generally, blended learning is the integration of face-to-face and online instruction. However, blended learning is defined as *a combination of online and in-class instruction with reduced in-class seat time for students*. The study found that 12% of the 12.2 million documented distance education enrolments were in blended courses and 35% of higher education institutions also offered blended course [6].

Although research has found that blended learning results in improvement in student success and satisfaction but the design was one of of the short term forcing driving technology adoption in

highest education in the next 1-2 years [7]. Hence, this led to research questions “*How is blended learning impacting the teaching and learning environment*”? Ultimately, one potential way to address to that question is to intercept the self-transcendence from Positive Psychology into the learning process. Basically, blended synchronous learning (BSLE) was created to support students who were geographically separated to participate simultaneously in classroom learning activities. Instruction was delivered physically at classroom and virtual learning via computer-mediated communication. Additionally, blended synchronous learning is defined as a learning method that enables online students to participate in classroom learning activities simultaneously via video conferencing [8].

In addition, blended synchronous learning can be broadly classified into practical, educational and economic categories. In terms of practical benefit, blended synchronous learning provides an alternative a way to ensure the continuity of instructions when a pandemic occurs [9]. With regards to education benefits, blended synchronous learning provides a mimic classroom environment where teachers ‘direct instruction and facilitation can be easily carried out and teaching presence is hence naturally established. A BSLE enables online students to observe classroom students, and the instructor and socially interact with them via two-way video conferencing, and therefore, social presence is created. To further construct knowledge for both classroom and online students are by engaging in instructional activities and sustained communication. As a result, cognitive presence can be easily promoted [10]. Blended synchronous learning has the capacity to provide a convenient and flexible setting for the students who cannot come to attend classroom instruction via two-way video conferencing in real time. BSLE was eventually developed by indentifying students experience and perceptions and by following the educational design research approach and implementation of the environment. Also blended synchronous learning has the potential to integrate the respective strengths of blended learning (e.g., flexibility and convenience) and synchronous learning (e.g., immediate feedback and increased motivation), and reduce the limitations that blended asynchronous learning often has.

However, blended synchronous learning has challenges with teachers’ and students’ perspective. The teacher had difficulties in

paying full attention to the online students and sometimes forgot the existence of the online students due to the streaming video was displayed on the projector behind the lecturer. The teacher also needs to perform multiple roles such as a content presenter and pay attention to both classroom and online students at the same time. Thus, the teachers are often cognitively overloaded in the process of conducting blended synchronous learning sessions. As a result teacher was found hard to read and checked for text messages in the embedded chat box the question may post from online students during the presentation. Hence some questions posted into the chat box remained unanswered. Furthermore, the teacher was found often has to help online students to resolve varied technical problems encountered and this caused a waste of significant time for the classroom students and resulted in students feeling neglected. In addition, research has also reports a lack of institutional support and the teacher had to adapt to this new environment by getting used to talking to the camera or using mobile device to present. Likewise, the online students felt isolated or excluded from the class and difficult to communicate and collaborate with classmate or other online members. Besides that, the online students felt frustrated when they encounter technical difficulties at a separate site without immediate support.

In the respond of the challenges on blended synchronous learning and reshaping BSL to increase the engagement level of the online and classroom students therefore interception self-transcendent from Positive Psychology was oriented. In philosophy, transcendent is something beyond common thought or experience. Positive Psychology is the study of the highest potential of a human being, in order to recognise, understand, and realise full potential. The central focus of Positive Psychology is how to develop human transcendent nature and spirituality to fulfil life as a transcendent human being. The emergence of self-transcendent can be facilitated by specific uplifting emotions. The term self-transcendence refers to a sense of reduced self-awareness and increased connectedness with others, which facilitates the emergence of prosocially behaviour as well as contribute to social trust and the formation of common in-group identities. Self-transcendence often brings strong positive emotions and well developed sense of awareness [11].

Discussion

The main purpose of the study is to redesign synchronous blended learning by intercepting self-transcendence from Positive Psychology. So, in an attempt to increase the level of online and classroom student engagement, the conceptual framework focuses on social design as well as technical design. Although social design at the same time simultaneous learning aims to provide a friendly environment where students and educators can project themselves socially, communicate and interact with each other. However, in certain circumstances, the subjective sense of self as an isolated entity can temporarily fade into a unifying experience with others. Self-transcendence is often used by others to describe a generalized reduction of self centeredness and selfish motivation.

In contemporary contexts, the development of self-transcendence component of mindfulness has lead to changes of self-focused needs and increase prosocial skilled such as empathy and altruistic behaviour. However, self-transcendence has been shown to increase social connectedness such as gratitude, compassion and elevation. Although, self-transcendences are often associated with positive outcomes yet often raise the question of whether the human capacity for experiences of self-transcendence is an adaption shaped by natural selection, or whether it is a by-product that emerged as evolution was shaping human nature in other ways.

Therefore, in designing the interception self-transcendence from Positive Psychology to redesign synchronous blended learning, persuasive technology may be needed to construct the framework. Even though the technical design in BSL aims to provide a usable environment for the online students to easily follow the content without technical difficulties and increasing the effectiveness online students' participation and on the classroom students. However, it was observed that the online engagement level was relatively low either remained visible in the whole session or turned off their webcams occasionally and did not respond when they were called upon due to the broadness and they walked away from the computers during the instructional process. The positive psychological apparent in the self-transcendent may offer a useful lens through which to explore and empirically inquire into the relationship between aspect of self-transcendence, well-being and other aspect of mental.

Nevertheless, to construct the framework on redesign synchronous blended learning, persuasive technology strategy tools have been identified to change attitudes or behaviours or to make desired outcomes simpler and easier to achieve. The conception of persuasive technology strategy has been identified which include reduction, tunnelling, customization, suggestion, self-monitoring, surveillance, and conditioning (reinforcing). These strategies tools demonstrate in the following sections:

1. Reduction

Reduction indicates the use of computing technology to reduce difficult behaviour to facilitate the tasks and influence end users to achieve the target behaviour. Reduction technologies help to make target behaviours simpler by reducing complicated activities to simpler ones such as reducing it to only a few easy steps. So certain activities (e.g. demonstration, group discussion) must be redesigned for online students to easily participate in. The reduction yet makes the behaviour easy, simple and very persuasive to perform the action.

2. Tunnelling

Tunnelling refers to the act of applying computing technology to guide end users through a procedure or experience that can provide the opportunity to persuade along the way. The system guides end users in their mind set change process by providing steps which consequently bring them towards any targeted behaviour. On the other hand, tunnelling was the way for the mankind to perform particular action in proper manner.

3. Customization

Customization is where information offered by computing technology to customize the user' requirement, personality, interest and usage context to change their attitudes or behaviours. The system usually provides customized information for its user groups which would persuade them to carry out certain behaviour. Customization technologies help to make life simpler for computer users who usually prefer not to struggle through amounts of generic information to discover what is related to them. Hence students must be trained in advance to reduce possible technical difficulties.

4. Suggestion

Suggestion technology is the system that providing suitable suggestion that significantly has greater persuasive power at the most appropriate time. Based on experience, the suggestion technologies are developed to determine the appropriate times and later remind the end users to carry out the behaviours. In addition, the partnership strategy needs to be incorporated in the learning environment to facilitate the communication between online students and the instructor.

5. Self-monitoring

Self-monitoring technology enables people to monitor themselves to change their attitudes or behaviours to achieve an established goal or outcome. The objective of self-monitoring is to remove the hassle of calculating and monitoring performance or status. This technology simplifies the concept for individuals to be aware of how well they are performing against the target behaviour, while enhancing the probability that they can continue to generate the behaviour. Eventually, self-monitoring is to encourage and persuades people to change their attitude and behaviour to perform good deeds.

6. Surveillance

Surveillance technology is described as any computing technology that allows one party to monitor the behaviour of another with the aim to change the behaviour in a certain way in achieving the desired result.

7. Conditioning (Reinforcing)

Conditioning technology refers to an interactive computer system which uses the concepts of positive reinforcements to shape complicated behaviour or transfer current behaviours into habits. In order to successfully generate, the end users must have some interest in receiving positive feedback and have to be aware about the connection between target achievement and rewards. In fact, the rewards are also available in different ways; through the accumulated points, rankings of higher scores, progression to a higher level, and more.

Conclusion

The purpose of the study is to redesign synchronous blended learning by intercepting the self-transcendent from Positive Psychology. The redesign framework was summarized for researchers and instructors to follow when they are designing similar learning

environment. Persuasion technology is evidently related in influencing self-transcendent by using various method. The adoption and implementation of principle design factors and strategy tools of persuasive will improve the redesigning synchronous blended learning. As for future recommendation, it is hoped that researchers have the ability to examine in depth the effectiveness and the impact of the interception of self-transcendent from Positive Psychology to redesign the the synchronous blended learning.

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Use of Student Language in Whatsapp

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ABSTRACT

The era of Society 5.0 makes technology easier for human convenience and comfort in carrying out daily life. One of the technologies in the Society 5.0 era is that the existence of the internet in life makes it easier for students to contact lecturers. They no longer have to look for lecturers' whereabouts. Only by writing messages in Whatshaap students will get information from the lecturer. However, not infrequently, messages conveyed by students are considered to cause problems that can make lecturers feel unhappy. This paper is structured to describe the forms of words that are categorized as impolite by the lecturer. This writing method is descriptive qualitative. The data is taken from the student's Whatshapp to the lecturer. The existing data is then categorized using ethnographic theory. The analysis was carried out on the writing of spelling and diction in Whatshapp. The results of the analysis show that (1) standard spelling deviations are mostly capitalized and foreign word writing; Comma punctuation has the most usage irregularities, (2) casual words, the word takbaku is widely used by students to communicate. However, generally they will use polite greetings when opening a conversation. With this paper, it is hoped that students will better understand their position in communication so that interactions with lecturers can run smoothly.

Keywords: *Era Society 5.0, IoT, Whatshapp language, students, lecturers*

Introduction

The world today is in an era of rapid technological development. This era is known as Society 4.0. The digitization of industrial and social activities is a marker of the Society 4.0 era. Globalization and the use of digital technologies such as the Internet of Thing, Artificial Intelligence, and robotics bring people's behavior to change [1]. The changes, for example, are the ways of managing business, trade, entertainment, socialization, public services, and in communicating. To optimize the use of this digital technology, Japan envisions a future life with the name Society 5.0.

Society 5.0 Fostering Spirituality and Humanity

Society 5.0 is a concept initiated by the Japanese government. This term can be interpreted as society 5.0, namely a society that is secured by developing technology. The idea of a society 5.0 is an anticipation of the difficulties that will occur in the 4.0 era, even though the existence of Industry 4.0 is actually a step to facilitate communication and has a positive impact on the economy. Digitalization, sustainable energy, smart mobility, healthy living, civilian security, and technology in the workplace are the goals of the Industry 4.0 era [2].

The achievement of the goal of the 4.0 era is to improve communication in all sectors using technology [3]. However, communication using technology is still an obstacle[4]. Deepening understanding of Information Technology is a problem that often hinders communication. The inability of IT users causes communication to run smoothly or haltingly. Those are only some of the problems faced in the 4.0 era. It is the problems that arise in the Industry 4.0 era that will be resolved in the era of Society 5.0 or society 5.0 [5]. The concept that was initiated by the Japanese government was used to solve problems that arose in the Industrial 4.0 era. It is not only manufacturing problems that are solved, but also to solve social problems with the help of the integration of physical and virtual spaces. With this 5.0 era, it is hoped that people's lives will be better[6].

Education in the 5.0 era was influenced by technology in the 4.0 era. The use of gadgets or gadgets, the internet, is something that cannot be ruled out by students. His days are spent on computers, video games, digital musical instruments/music players, video cameras, cell phones, and other equipment in this digital era. This difference in conditions affects the mindset of this generation with the previous generation. The closeness of children to digital technology products is referred to as digital native, digital generation[7].

This paper aims to describe the use of student language in Whatshapp (WA) messages. As a digital product, the WA application is very close to campus life. Especially student and lecturer communication. With this application, both parties establish communication to provide and request information. However, in WA, students sometimes use language that is not up to standard. For example, the choice of diction, writing of spelling, maybe also sentence structure.

Research on student language in the Whatsapp application was conducted by Pratomanti, Riana, Setiadi, (2017). In their research, they concluded that there were politeness deviations in student speech in messages via WA. Deviations related to linguistic elements, for example, the use of slang, impolite expression of intent, and inappropriate use of paralinguistic aspects [8].

Research Methods

The data of this study are the language of students who experience deviations in the WA message. The data source is student messages sent to the lecturer. The so-called students are Semarang State Polytechnic students who take Indonesian language courses in the odd semester of the 2020-2021 academic year. The data were collected using a purposive technique because the characteristics of the data had been determined in advance [9]. The data is collected using the theories presented in another section.

Writing about the student language in the WA message aims to describe the language of the student in the WA message addressed to the lecturer. The results of the analysis are presented in descriptions and other views as needed.

Data analysis was carried out using an inductive-qualitative approach based on content analysis [9]. In this content analysis, Spradley (1980) suggests four steps to be followed in ethnographic research, namely domain, taxonomy, components, and assessment of cultural themes [10]. In this study, the domain was used to sort student messages into categories of data and not data and then arranged correctly according to their respective details. Taxonomic analysis is used to classify data according to categories. Each category is understood in depth and then divided into subdomains to the very last detail. In a componential analysis, the collected data are organized or organized by type, form, function, and other categories. This arrangement is carried out on data that has differences or contrasts to take the common thread of the relationship between categories. Analysis of cultural themes tries to explain the relationships contained in the analyzed domain.

Results and Discussion

Results

Analysis of student messages in WA to lecturers reveals several forms of irregularities in language. The following are the results of this analysis.

1. Spelling

Spelling irregularities were found in the WA message. Most of the deviations are the absence of capital letters at the beginning of words in self-names/personal names and / or kinship greetings, such as, "*selamat pagi ibu*, (good morning mother) ...", "... *mohon maaf bu Netty* (I'm sorry, mrs. Netty.) "*saya isna kboirina...* (I am isna kboirina). Other irregularities, for example in writing the name of the day, for example, "...*pengumpulan hari kamis pukul 23.59 bu?*" (thursday's collection at 23.59, ma'am?). In the Indonesian Language Spelling Guidelines (Ejaan Bahasa Indonesia/EBI), capital letters are used as the initial letters of the personal name, kinship relations used for address or reference, and the name of the day. Thus, the correct writing of the words in bold print is **Mrs.**, **Mrs. Netty**, **IsnaKhoirina**, and **Kamis**.

In connection with the application of the capital letter rule, there are application deviations in the writing of abbreviations. The abbreviation of the name taken by the initial letter is written in capital letters. In the data, students wrote the abbreviation for Mid-Semester Examination as **uts**(Ujian Tengah Semester). If in accordance with the guidelines, the correct writing is **UTS**.

In writing words / terms, some students wrote the word *izin* (permission) into *ijin*. We still found the writing of foreign terms, such as **schedule**, not italicized. In addition, it was also found that the writing of messages like this, "*maaf nggih bu pesan sebelumnya ada ke typo an* (sorry, yes mam the previous message was on the typo). Foreign terms in the writing must be italic, unless the spelling of the term has been adjusted in Indonesian. **Schedule** is a foreign word with unfamiliar spelling so that it must be italicized as a *schedule*. However, in Indonesian there is a word that is synonymous with this word, namely the word *jadwal*. The term *typo* is the social language (slang) of young people. This word comes from a *typography* error or a *typo*. Maybe, because it was considered too long, the term was cut into a *typo* just like that. However, actually the use of a *salah ketik* or *saltik* is more appropriate than a *typo*.

In WA messages, almost all students do not use a comma (,) to separate the greetings from the other parts. For example, “*Selamat siang bu*” (Good afternoon ma'am), “*Terima kasih Bu*” (Thank you ma'am), “*Nggih bu*” (Yes ma'am), “*Berartisudah ya bu?*” (That means yes ma'am?), “*Baik bu terima kasih*” (Fine ma'am, thank you). In sentences in which there is an address, a comma is used between the greeting and the word that precedes it. Thus, the writing of these words is as follows: “*Selamat siang, Bu*”; (Good afternoon, Mam); “*Terima kasih, Bu*” (Thank you, Mom); “*Nggih, bu*” (Yes, Mam”; “*Berartisudah, ya, Bu?*” (That means, yes, Mam?); “*Baik, Bu, terima kasih*” (Fine, Mam, thank you).

Regarding the punctuation of the comma, the apostrophe (') is still used to write the word “*assalamu'alaikum*”. In the manual (EBI), the apostrophe is not used to write the word *assalamualaikum*. This includes other words, *doa* (prayers), *Jumat* (Friday), *taat* (obedience), *manfaat* (benefits), and so on.

2. Choice of words / diction

In starting the message, students generally used the Arabic greeting, "assalamu'alaikum". The use of the greeting, "selamat pagi" (good morning), “selamat siang” (good afternoon) is also encountered. Sometimes a greeting is used both ways. "Assalamu'alaikum, selamat pagi bu,” (Assalamu'alaikum good morning ma'am)

In responding, students use Javanese "nggih, njih, Inggih" to say yes to the lecturer. Student response in affirming the lecturer's words is sometimes also stated by the word "ready, okay". The use of the Javanese language is understandable because they are in a Javanese cultural environment. It could be, they think, that the word "Inggih, njih, nggih" is more subtle than the word “ya” (yes) atau “iya” (yes). Moreover, in the Javanese language system, the words ya, iya are categorized as ngoko (coarse) vocabulary while nggih, Inggih, njih are categorized as krama (fine) vocabulary. The diction “siap” (ready) and “oke bu” (okay ma'am) were used by some students. Answers like these are often found in the WA group for peers.

Foreign terms are used by students in several purposes, for example, they use the term **deadline** rather than **tenggat waktu** atau **batas akhir**. The word “size” is used to describe the size of the video file. They will ask, “...**size** video dibatasi tidak bu?” (... video size limited not ma'am?) instead of "...ukuran video (... video size).

Some students use apologies before starting the subject. There are also those who express their apologies in Javanese, "ngapunten nggih bu". Acknowledgments are generally used when closing a message. However, a student uses the word "makasih" (thank you) to say thank you. The use of the Javanese language may be considered more "fitting". The use of the word "makasih" (thanks) is a short form of "terima kasih" (thank you) which is often used in oral speech.

In the use of persona pronomina, it is sometimes encountered that students use the words "tak (Jawa: aku)" (I), "aku" (I) dan "njenengan". (you). Examples of each "belum **tak** coba bu" (have not I tried mam); "bentar **aku** telfon" (wait, I call); "bisa tanya langsung ke **jenengan** bu" "Can ask directly to you mom". In Javanese, the word "tak" in the text is used synonymously with the word "saya" (I) or "aku" (I) in bahasa Indonesia. So, the phrase "belum tak coba" (haven't tried yet" can be interpreted as "belum saya/aku coba" (not yet I/I try) "I / I haven't tried it yet". However, the use of the word "tak" (I) can be used as an indicator that the language used by students is not the standard language. In order to be good, the word "tak" (I) is changed to "saya" (I), so the message becomes, "belum **saya** coba" (I haven't tried it)

Bahasa Indonesia has the word "aku" (I). However, this word is categorized as a familiar word or a variety of language situations in non-formal situations. Thus, this word is not used in a formal sense. Even though in WA, the communication is made between students and lecturers; and for lecturers, leaders, parents or elders used a variety of standard languages in communication. The word "njenengan" (you) comes from "panjenengan" (you) in Javanese which means "kamu" (you) or "Anda" (you). This choice of words could be based on reasons to respect the lecturer. However, the form of the word "panjenengan" (you) to "njenengan"(you) experienced a degradation of meaning. In a connotative, the meaning of this word becomes lower and (appropriate) is used for people of the same age or older people who have lower social status. In order to be categorized as a polite form, students can replace the word Ibu (Mam) or mention the name, so that it becomes, "...bisa tanya langsung kepada **Ibu/Bu Netty**" (can ask directly to Mrs. / Mrs. Netty).

On another part, students negate statements with the words, "nggak" (no) or "gak" (no), "ga" (no). For example, "tapi instruksinya **gadijelaskan**" (... but the instructions are not explained). The word

"“nggak, gak, ga” is used as a substitute for tidak (not) in social language. There are also students who use the word "mboten" (no) as a substitute for tidak (no). The word "mboten" is a krama Javanese vocabulary which means **no**.

Word “kita” (we) is a word that is often confused with its usage. In the data, students use “kita” words to realize the relationship between him and his group. This is a failure of reason. If students are talking about him and his group, the word “kami” (we) should use, not “kita”. An example of this data is, “kemarin **kita** sudah memfotokopi Tugas Akhir, dan sudah **kita** masukkan ke loker...”. (yesterday **we** had photocopied the Final Project, and **we** have put it in the locker). In the text, students are talking about their assignments, but they use “kita” to call their group. If “kita” word is used, it means that the second party or the person spoken to / lecturer is involved in his work. In fact, in this context, the lecturer is the task provider and is not involved or not the student work group. So, the correct plural first-persona pronoun in this sentence is “kami”. The change is thus “kemarin **kami** sudah memfotokopi Tugas Akhir, dan sudah **kami** masukkan ke loker...” (yesterday **we** had photocopied the Final Project, and **we** have put it in the locker).

Discussion

Technological developments have an impact on its users. The influence of IT is very big in this millennial era. Gadgets are no stranger to them. Because of the broad relationship, it is very easy for them to learn the features that are in these devices. From the device, indirectly, a child will learn the use of language. There is something that the child does not understand is that the use of language is limited by signs called the rules of selingkung. Language on the internet, chatting on WA, Facebook, are different from the language procedures in official forums. This seems to be what anyone who cares about language should be aware of and pay attention to.

Era Society 5.0 carries a mission to solve problems that arise in the Industry 4.0 era. The ability to use language in accordance with the space / situation is a problem that is also faced in the 4.0 era. The user of the device is exposed to several language communication spaces. In the real world, they are faced with formal and informal situations. These two situations call for the use of different styles. In cyberspace,

they have other varieties, which are agreed upon by the environment. A person who is faced with the use of a variety of different languages, can experience confusion in determining / choosing languages and types of communication[11].

The data show that the use of formal and semi-formal Indonesian is contaminated with a variety of not standard or slang variations. Everyday varieties obtained by students in life using devices are used to communicate with lecturers. The language in the device does not provide a formal-informal space barrier. The device does not show language differences in each formal space. What is there is the communication that is considered appropriate in the user's life.

In order to be understood, of course the language used must be communicative language. The use of communicative language is part of Society 5.0, which is fully used for the convenience of society. Communicative language is structured by adjusting the variety of languages to the situation. The diction used is the one that is acceptable. The incompatibility of variety with the situation at hand can cause a shift in values and meanings in viewing, addressing, and overcoming problems[12].

Deviations that are not corrected immediately will become a habit. A habit will become a truth. However, the wrong truth in the use of language can be a shift. The word "saya"(I) can be considered "foreign" and then disappears and the place is replaced by the word "aku"(I) which has a different function. It is also possible that we will lose the word "*kami*" (we) because of the massive use of the word "kita" (we) which is not correct.

Conclusion

From the results of the analysis, it can be concluded that the use of the students' language in the Whatsapp message still needs to be monitored. Guidelines for writing Indonesian spelling have not been fully applied in writing messages. Spelling irregularities are still often encountered, especially in the practice of writing capital letters, writing compound words, writing foreign words, abbreviations, and applying punctuation.

Generally, the diction used by students shows politeness. However, from another perspective, their diction seems to be influenced by the

use of colloquial language or slang. The use of a word that is wrong but massive in use should give more attention to avoiding language shift due to the wrong choice of words in a linguistic situation. The use of Javanese words is possible as a smoothener in speaking with lecturers. Mixing these codes may occur because generally the sender of the message is a Javanese student.

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Analisis Prospek Society 5.0 di Sektor Ekonomi Pertanian Asean

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ABSTRAK

Masyarakat 5.0 adalah konsep teknologi yang berpusat pada manusia. Pada Era masyarakat 5.0 masyarakat bisa memilih secara bijaksana penggunaan mesin pertanian yang digunakan. Penelitian ini menganalisis bagaimana penggunaan mesin pertanian di negara ASEAN, apakah terdapat hubungan antara penggunaan mesin pertanian dengan pembangunan suatu negara, pendekatannya melalui Gross National Product (GNP) dan Gross National Income (GNI). Mesin pertanian di negara ASEAN didominasi mesin traktor dan combine harvester. Hasil analisis dengan menggunakan analisis korelasi Pearson dan Spearman adalah terdapat hubungan yang kuat penggunaan mesin pertanian jenis traktor di negara Indonesia dan Thailand dengan Gross National Produk (GNP), tetapi hubungan sedang di Negara Vietnam. Untuk penggunaan mesin combine harvester di tiga negara menunjukkan hubungan yang kuat dengan Gross National Produk (GNP) Terdapat hubungan yang kuat sampai sangat kuat penggunaan mesin pertanian traktor dan combine harvester dengan Gross National Income (GNI) di tiga negara ASEAN yakni Indonesia, Thailand dan Vietnam

Kata Kunci: ASEAN, masyarakat 5.0, mesin pertanian, revolusi industri 4.0

Pendahuluan

Masyarakat 5.0 merupakan konsep dari keberadaan teknologi yang berpusat pada manusia. Konsep ini menyatakan bahwa kondisi kehidupan bermasyarakat yang sudah terintegrasi dengan sistem teknologi berupa IoT (Internet Of Things) untuk menyelesaikan masalah sosial. Masalah sosial dapat diselesaikan dengan berintegrasi pada ruang dunia maya dan nyata. [1];[2];[3];[4]

Pada proses pembangunan suatu negara, penggunaan teknologi amat penting karena dapat meningkatkan produksi dan produktivitas, pada konsep pembangunan berkelanjutan dipahami sebagai keseimbangan pertumbuhan ekonomi yang berkelanjutan dan regenerasi

ekologi. Pembangunan berkelanjutan membutuhkan penerapan teknologi yang efisien dan efisien beradaptasi dengan kondisi lokal [5]. Mengingat sektor pertanian membutuhkan upaya pengelolaan alam secara berkesinambungan, maka perlu untuk menggunakan teknologi pertanian berbasis kearifan lokal.

Penelitian ini menganalisis bagaimana penggunaan mesin pertanian di negara ASEAN, apakah terdapat hubungan antara penggunaan mesin pertanian dengan Gross National Product (GNP) dan Gross National Income (GNI)

Metode penelitian

Data yang digunakan pada penelitian ini adalah data time series, yang di akses dari web Food Agriculture Organization (FAO) tahun 2020. Adapun data yang diakses meliputi data penggunaan mesin traktor, Combine Harvester, Other Agricultural Tractor (Two Axle tractor), Pedestrian Controlled Tractor (Single Axle tractor), Milking Machines dan Baller (Straw and Fodder Balers Including Pick Up Balers). Negara yang diambil sebagai contoh adalah negara Indonesia, Vietnam dan Thailand dengan alasan negara tersebut menjadi negara penghasil beras terbesar di lingkungan ASEAN. Data diambil dari tahun 1961 sampai dengan tahun 2018. Pada penelitian ini hanya menggunakan mesin traktor dan combine harvester

Analisis Data

Analisis data yang digunakan menggunakan untuk membuktikan hubungan antara mesin traktor dan mesin combine harvester pada GNP dan GNI, Adapun analisis menggunakan analisis korelasi Pearson, notasinya sebagai berikut:

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x}) (y_i - \bar{y})}{\sqrt{[\sum_{i=1}^n (x_i - \bar{x})^2][\sum_{i=1}^n (y_i - \bar{y})^2]}}$$

Keterangan:

- rxy: koefisien korelasi r pearson
- n: jumlah sampel/observasi
- x: variabel bebas/variabel pertama
- y: variabel terikat/variabel kedua.

Syarat menggunakan analisis korelasi Pearson adalah data normal, tetapi apabila hasil analisis normalitas dengan menggunakan One-Sample Kolmogorov-Smirnov Test, hasilnya data tidak normal maka menggunakan analisis Rank Spearman, Notasi Korekasi Spearman adalah sebagai berikut:

$$rs = 1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

Di mana:

rs = Koefisien Korelasi Spearman

$\sum d^2 = Total Kuadrat slisih antar ranking$

n = Jumlah Sampel Penelitian

Kategori Hubungan antar variabel:

Nilai $r = 0.0$ sd 0.19 Kategori hubungan sangat rendah

Nilai $r = 0,2$ sd $0,39$ Kategori hubungan rendah

Nilai $r = 0,4$ sd $0,59$ Kategori hubungan Sedang

Nilai $r = 0,6$ sd $0,79$ Kategori hubungan Kuat

Nilai $r = 0,8$ sd $0,10$ Kategori hubungan sangat kuat[6]

Hasil dan Pembahasan

Penggunaan Mesin dan Macam Mesin Pertanian di Negara ASEAN

Teknologi pertanian yang diterapkan negara di lingkungan ASEAN berupa penggunaan beberapa mesin pertanian, rata rata didominasi mesin traktor dan mesin combine harvester. Sebelum dianalisis korelasi hubungan antara mesin traktor dan combine harvester pada GNP dan GNI dianalisis uji normalitas dapat dilihat pada tabel 1 berikut:

Tabel 1. One-Sample Kolmogorov-Smirnov Test Mesin Traktor dengan GNP dan GNI di Negara ASEAN

One-Sample Kolmogorov-Smirnov Test					
No	Asymp. Sig. (2-tailed)	MESIN	GNP	GNI	
INDONESIA					
1	Asymp. Sig. (2-tailed)	Traktor	0,11	16,1	20,0
	Asymp. Sig. (2-tailed)	Combine	16,1	15,8	0,00
VIETNAM					
2	Asymp. Sig. (2-tailed)	Traktor	0,00	0,05	0,00
	Asymp. Sig. (2-tailed)	Combine	0,00	0,05	0,00
THAILAND					
3	Asymp. Sig. (2-tailed)	Traktor	0,00	0,03	0,01
	Asymp. Sig. (2-tailed)	Combine	0,00	0,03	0,01

Hasil analisis One Sample Kolmogorov-Smirnov Test pada negara Indonesia hasilnya data normal, di negara Vietnam menunjukkan data tidak normal pada mesin traktor, combine harvester, GNP dan GNI, maka digunakan analisis korelasi Spearman. Hasil analisis One Sample Kolmogorov-Smirnov Test di Negara Thailand untuk normalitas menunjukkan data tidak normal baik pada mesin traktor, combine harvester GNP dan GNI, maka digunakan analisis korelasi Spearman

Korelasi Penggunaan Mesin Traktor, Combine Harvester dengan GNP dan GNI di Negara ASEAN

Hasil analisis uji korelasi menunjukkan korelasi antara mesin traktor dan GNP di Negara Indonesia adalah 75,2 % dengan nilai signifikansi 0,00 artinya ada hubungan antara penggunaan mesin traktor dengan GNP, hubungannya pada kategori kuat. Korelasi antara penggunaan traktor dengan Gross Nasional Income (GNI) menunjukkan nilai 77,9 % pada kategori hubungan yang sangat kuat.

Pada uji korelasi antara Mesin combine harvester dengan GNP adalah 79,3 % dengan nilai signifikansi 0,00 artinya ada hubungan antara penggunaan mesin combine harvester dengan GNP, hubungannya masuk pada kategori kuat. Pada analisis korelasi antara penggunaan combine harvester dengan Gross Nasional Income (GNI) menunjukkan nilai 83,3 %, masuk pada kategori hubungan yang sangat kuat. Di Negara Thailand dan Vietnam penggunaan combine

harvester mempunyai hubungan yang sangat pada GNI, Sehingga dapat dirangkum dalam tabel berikut

Tabel 2. Korelasi Penggunaan Mesin Traktor, Combine Harvester dengan GNP dan GNI di Negara ASEAN

KORELASI MESIN TRAKTOR DAN COMBINE PADA GNP DAN GNI DI INDONESIA			
No	Jenis Mesin Dan Kategori Korelasi	Indikator Makro	
		GNP	GNI
1	Mesin Traktor	75,2	77,9
	Kategori Hubungan	Kuat	Kuat
2	Mesin Combine Harvester	79,3	86,3
	Kategori Hubungan	Kuat	Sangat Kuat
KORELASI MESIN TRAKTOR DAN COMBINE PADA GNP DAN GNI DI VIETNAM			
	Jenis Mesin Dan Kategori Korelasi	Indikator Makro	
		GNP	GNI
1	Mesin Traktor	50,2	74,4
	Kategori Hubungan	Sedang	Kuat
2	Mesin Combine Harvester	56,7	82,2
	Kategori Hubungan	Sedang	Sangat Kuat
KORELASI MESIN TRAKTOR DAN COMBINE PADA GNP DAN GNI DI THAILAND			
	Jenis Mesin Dan Kategori Korelasi	Indikator Makro	
		GNP	GNI
1	Mesin Traktor	70,7	79,9
	Kategori Hubungan	Kuat	Kuat
2	Mesin Combine Harvester	99,8	99,7
	Kategori Hubungan	Sangat Kuat	Sangat Kuat

Sumber : Data FAO, 2020 di olah

Konsep Masyarakat 5.0 adalah masyarakat yang mampu mengelola teknologi untuk kepentingan masyarakat, maka pada Masyarakat Ekonomi ASEAN (MEA) Negara Indonesia bersama dengan negara lain di ASEAN perlu untuk mengidentifikasi dan memiliki data yang valid tentang penggunaan mesin yang paling banyak membantu petani, dan meminimalisir kerugian pada petani. Hal ini karena konsep

masyarakat 5.0 lebih cocok untuk masyarakat yang memang kurang memiliki tenaga kerja sehingga menggunakan mesin, tetapi apabila negara ASEAN masih potensial sektor pertaniannya maka selayaknya pemerintah lebih bijak menggunakan mesin pertanian

Untuk mengatasi dampak negatif berkurangnya kesempatan kerja bagi buruh petani, maka diperlukan fasilitasi untuk tumbuhnya alternatif kesempatan kerja bagi buruh yang terdampak oleh penggunaan alsintan. [7], walaupun biaya alsintan 35,54% lebih rendah dibandingkan secara manual, paket alsintan mampu menggantikan tenaga kerja manual pada kegiatan perawatan [8]

Kesimpulan

1. Mesin pertanian di negara ASEAN didominasi mesin traktor dan combine harvester
2. Terdapat hubungan yang kuat penggunaan mesin pertanian jenis traktor di negara Indonesia dan Thailand dengan Gross National Produk (GNP), tetapi hubungan sedang di Negara Vietnam. Untuk penggunaan mesin combine harvester di tiga negara menunjukkan hubungan yang kuat dengan Gross National Produk (GNP)
3. Terdapat hubungan yang kuat sampai sangat kuat penggunaan mesin pertanian traktor dan combine harvester dengan Gross National Income (GNI) di tiga negara ASEAN yakni Indonesia, Thailand dan Vietnam

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The Role of Service Quality to Increase Customer Satisfaction of Bank Syariah Mandiri Jember

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ABSTRACT

Bank products are usually in the form of services to customers who will conduct banking transactions. Banks must continue to improve the quality of services in order to provide satisfaction to their customers. This study aims to analyze and determine the effect of service quality consisting of physical evidence, reliability, responsiveness, assurance, and empathy on customer satisfaction at Bank Syariah Mandiri Branch of Jember. The population in this study were all customers of Bank Syariah Mandiri Branch of Jember, amounting to 137,600 customers. The number of samples is determined on the basis of the Slovin formula and is known to be 100 customers. This study uses a measuring instrument in the form of a questionnaire, therefore it is necessary to test the validity and reliability test. Multiple linear regression is used to determine the effect of independent variables on the dependent variable. The results showed that physical evidence, reliability, responsiveness, assurance, and empathy had an effect on customer satisfaction at Bank Syariah Mandiri Cabang Jember.

Keywords: *service quality, customer satisfaction, Islamic banks*

Introduction

The development of Islamic banks in Indonesia has entered the 3rd decade. Since it was first initiated in 1992 by Bank Muamalat Indonesia (BMI), other Islamic banks have emerged. This is all due to the bright prospects in the Indonesian Islamic finance sector which is also supported by the existence of Law Number 21 concerning Sharia Banking in 2008. This law later becomes the legal umbrella as well as evidence of recognition of the presence of Islamic banking in Indonesia. As of June 2019, the number of Islamic banks in Indonesia is 189 Islamic banks consisting of 14 Islamic Commercial Banks (BUS), 20 Sharia Business Units (UUS), and 164 Sharia Rural Banks (BPRS) [1].

With the increase in the number of Islamic banks operating in the Indonesian banking sector, it has indirectly increased the level of competition between banks in all aspects of banking transactions. Every company must be prepared to face increasingly fierce business competition with other companies from around the world to face globalization which is often said to be the era of a world without borders. Thus, the environment faced by a company will also become increasingly complex. This increasingly high competition requires banks to implement marketing strategies that can win the competition. In any service business, customer satisfaction is something that needs to be considered by every business actor in the service sector.

Customer satisfaction is very important for service business people to always pay attention to. Customer satisfaction can be defined as the level of a person's feelings after comparing the performance (or results) he feels compared to his expectations [2]. The comparison between expectations and performance will produce a feeling of pleasure from the customer. If the performance matches or even exceeds expectations, the customer will feel happy or satisfied.

Table 1. Complete List of Islamic Banks in Indonesia

1	PT. Bank Aceh Syariah
2	PT BPD Nusa Tenggara Barat Syariah
3	PT. Bank Muamalat Indonesia
4	PT. Bank Victoria Syariah
5	PT. Bank BRISyariah
6	PT. Bank Jabar Banten Syariah
7	PT. Bank BNI Syariah
8	PT. Bank Syariah Mandiri
9	PT. Bank Mega Syariah
10	PT. Bank Panin Dubai Syariah
11	PT. Bank Syariah Bukopin
12	PT. BCA Syariah
13	PT. Bank Tabungan Pensiunan Nasional Syariah
14	PT. Maybank Syariah Indonesia

Source: National OJK 2020

Conversely, if the performance is below expectations, the customer will feel disappointed or dissatisfied. Customer satisfaction is the overall attitude shown by customers for goods or services after they obtain and use them [3]. Customer satisfaction is a customer

response, which is an assessment of the features of a product or service, even the product or service itself, which provides a level of pleasure in consuming related to meeting needs [4]. Satisfaction can also be interpreted as a feeling of satisfaction, pleasure and relief due to consuming a product or service having received a good service [5]. Customer satisfaction is formed by the quality of service felt by customers. Many factors can cause customer satisfaction to increase or decrease. Customer satisfaction carried out by customers involves customer confidence in a product so that a sense of confidence in the correctness of the actions taken can arise. The customer's self-confidence for customer satisfaction which he takes represents the extent to which the customer has confidence in his decision to choose a product. [6] said that customer satisfaction is the level of a person's feelings after comparing the performance of the product he feels with his expectations. Consumer satisfaction or dissatisfaction is a response to the perceived mismatch or confirmed evaluation between previous expectations and the actual perceived performance of the product after use. One of the factors that can always increase or decrease the level of customer satisfaction is the quality of service provided by the service provider.

Service quality is a very important factor that needs to be considered for organizations engaged in services, this is because in marketing service products, the interaction between producers and consumers occurs directly. Service quality is something that is perceived by customers [7]. Customers will judge the quality of a service they feel based on what they describe in their beak. Customers will turn to other service providers who are better able to understand customer specific needs and provide better service [8]. Service quality that can satisfy consumers will have an impact on repeated purchases, which means an increase in sales. With good service can create customer satisfaction and help maintain distance from competitors [9]. Quality service is the consumer's perception of being satisfied when the transaction process occurs. Service is a treatment of consumers in the form of behavior and attitudes in satisfying consumers. There have been many studies that link service quality to customer satisfaction.

[10] conducted a study entitled "The Influence of Service Quality and Institutional Image on Customer Satisfaction and Loyalty" which results are that service quality has no effect on student satisfaction

at Muhammadiyah University in East Java. [11] conducted a study entitled "The Impact of Service Quality and Institutional Image on the Satisfaction and Loyalty of Master of Management Students" which resulted in the quality of service and institution's image to public affect student satisfaction. [12] conducted a study entitled "The Impact Of Service Quality, Price, Products, And Trust On" Kober Mie Setan "Consumer Satisfaction", the result is that service quality, price and product have a significant effect on customer satisfaction. [13] conducted a study entitled "The Effect of Service Quality, Company Image, and Location on Customer Satisfaction at Ijen View Bondowoso Hotel" where the result is that there is a variable effect of service quality on customer satisfaction with a coefficient of 0.42 with p value < 0.01 . . Research [14] with the title "The Influence of Price, Promotion, Service Quality on Customer Satisfaction of Online Ojek Services" OM-JEK "Jember" states that price, promotion, service quality variables affect customer satisfaction of online motorcycle taxi services "Om-Jek" Jember. Several other studies that also analyze the relationship between service quality and customer satisfaction include: [15]-[40].

Bank Mandiri Syariah is one of the Islamic banking institutions that takes part in banking activities in Indonesia. This bank was founded in 1955 as the National Industrial Bank. Bank Syariah Mandiri has changed its name several times and last changed its name to Bank Syariah Mandiri in 1999 after previously being named Bank Susila Bakti which is owned by the Bank Dagang Negara employee welfare foundation and PT Mahkota Prestasi. This bank is one of the Islamic banks that is very popular with people in the city of Jember. In Islamic banks, all transactions must be based on a contract approved by sharia. Thus, all transactions must follow the rules and regulations that apply to the sharia muamalah contract. The second difference is in the rewards given. Conventional banks use the cost concept to calculate profits, which means that the interest promised in advance to saving customers is a fee or fee that must be paid by the bank.

Meanwhile, Islamic banks use the profit sharing approach, meaning that the funds received by the bank are channeled to financing. The profit obtained from this financing is divided into two, for the bank and for the customer, based on the profit sharing agreement in advance. The third difference is the target of credit / financing.

Society 5.0 Fostering Spirituality and Humanity

Savers in conventional banks are not aware that the money they have saved is being lent to various businesses, regardless of the halal of the business. In Islamic banks, distribution and savings from the public are limited by sharia principles, meaning that loans are not allowed to illegal businesses such as gambling, forbidden drinks, pornography and other businesses that are not in accordance with sharia. The development of Islamic banks in Jember Regency has also increased. This is in line with the growing number of Islamic banks operating in Jember Regency. The existence of Islamic banks in the city of Jember is quite good because residents in this city tend to be Islamic and still uphold Eastern cultural customs so this is a big opportunity for Islamic banking and sharia business units (Table 2).

Table 2: List of Sharia Banks in Jember Regency 2020

No	Sharia Bank Name	Address
1.	Bank Mandiri Syariah	Jl. PB Sudirman No. 41 – 43, Pagah, JEMBERLOR, Kec. Patrang
2.	PT. Bank Mandiri Syariah	Jl. Karimata No. 49, Summersari
3.	Bank BRI Syariah KC Jember	Jl. Trunojoyo, Kauman Kepatihan, Kec. Kaliwates
4.	Bank Mega Syariah Unit M2S – KCP	Jl. Gajah Mada 1, Kav. No. 9, Tembaan, Kepatihan, Kec. Kaliwates
4.	Bank Jatim Syariah KC Jember	Jl. Gajah Mada No. 278, Kec. Kaliwates
5.	Bank Muamalat Cabang Jember	Jl. Jl. PB Sudirman NO. 46, Pagah, Jemberlor, Kec. Patrang
6.	BNI Syariah Jember	Jl. Jendral Ahmad Yani No. 39, Kampung tengah, Kepatihan, Kec. Kaliwates

Source: OJK Regency of Jember 2020

With the increasing number of sharia banks operating in Jember Regency, every business actor in the banking sector, especially the Jember Branch of Bank Syariah Mandiri, should continue to improve customer satisfaction by improving the quality of services they have. From the explanation based on theory and previous research, the purpose of this study is to analyze and determine the effect of service quality consisting of physical evidence, reliability, responsiveness, assurance, and empathy on customer satisfaction at Bank Syaria'h Mandiri Branch Office of Jember Regency.

Research Methodology

This research is a causality research. Causality research aims to measure the strength of the relationship between two or more variables, it also shows the direction of the relationship between the independent and dependent variables. In other words, causality research questions the problem of cause and effect [41]. The population in this study were customers of Bank Syari'ah Mandiri Branch of Jember Regency, amounting to 137,600. In this study the sample taken is expected to describe the true results of the population [42]. Determination of the sample based on the Slovin formula which finally obtained respondents as many as 100 customers. The independent variables in this study include: physical evidence (X1), reliability (X2), responsiveness (X3), assurance (X4), empathy (X5). While the dependent variable is customer satisfaction (Y). Each independent variable has an indicator or dimension to describe the research variable.

Physical evidence (X1) is a form of service provided by Bank Syari'ah Mandiri Branch of Jember Regency that can be seen directly, for example physical facilities, employee equipment and communication facilities. Indicators of physical evidence variables include: employee appearance, modern equipment, equipment and facilities, employee identification. Reliability (X2) means the ability to provide the promised service immediately, accurately and satisfactorily. Indicators of the reliability variable include: the ability to handle customer complaints, handle problems quickly and finish at a specified time, and handle problems professionally. Responsiveness (X3) means the desire of staff to help customers and provide responsive services, indicators of responsiveness variables include: readiness to serve customers, willingness to help customers, officers to provide information. Guarantee (X4) means everything, which includes the knowledge, ability, courtesy and trustworthiness of the staff, free from danger or doubt. Indicators of the guarantee variable include: employees are able to instill trust in customers, customers feel safe in conducting transactions, have a positive image in the eyes of the community. Empathy (X5) means everything that is provided by the Bank Syari'ah Mandiri Branch of Jember Regency which includes the convenience of good communication, personal attention and understanding the needs of customers. Indicators of the empathy variable include:

employees treat customers with care, employees are easily contacted by customers, prioritize customer interests. Customer satisfaction (Y) is the level of a person's feelings after comparing the performance or results he feels compared to his expectations. Indicators of customer satisfaction variables include: satisfaction with overall services, level of satisfaction, willingness to recommend.

The validity test was used to measure the validity of a questionnaire [43]. A questionnaire is declared valid if the questions on the questionnaire are able to reveal something that will be measured for the questionnaire. The criteria applied to measure whether a data is valid or not is if r-count is greater than r-table it can be said to be valid [44]. Reliability testing aims to determine the consistency of the measurement results of the variables. A questionnaire is said to be reliable if a person's answer to a statement is consistent over time. An instrument is said to be reliable if it has a positive alpha value and is greater than 0.600.

To determine or measure the intensity of the relationship between the dependent variable (Y) and several independent variables (X), the type of analysis used is multiple regression analysis. The regression equation model used can be formulated as follows: $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$. Hypothesis testing is carried out to determine whether the independent variables individually affect the dependent variable. As for the provisions for acceptance or rejection if the significant number is below or equal to 0.05 then alternative H is accepted and H₀ is rejected. The coefficient of determination (R²) in essence measures how far the model is able to explain the variation in the dependent variable. Small value (R²) means that the ability of the independent variables (physical evidence, reliability, responsiveness, assurance, and empathy) in explaining the variation of the dependent variable (customer satisfaction) is very limited.

Results and Discussion

Results of the Respondents' Statistical Descriptions

Based on the gender of the respondent, the results of the descriptive statistics show that there are 54 female respondents and 46 male respondents. The number of female respondents who have been customers for less than 2 years is 13 people or 13%, and the period of being a customer for more than 2 years is 41 people or 41%, of the

total 54 female respondents. Respondents who are male are 46 people. The number of male respondents who have been customers for less than 2 years is 19 or 19%, and 27 people have been using them for more than 2 years.

Testing Instrument Data

The results of the data validity test show that the correlation between each indicator to the total construct score of each variable shows valid results, because $r_{count} > r_{table}$. So it can be concluded that all statement items related to the research variables are declared valid. Reliability testing in this study is to use the alpha formula which results show that all variables have sufficient Alpha coefficients or meet the criteria to be said to be reliable, namely above 0.600, so that further items in each concept of the research variable used are feasible as measuring instrument.

Multiple Linear Regression Analysis

Table 3. Results of Multiple Linear Regression Analysis

No.	Variable	Regression Coefficient	Standart Error
1	Constant	0,455	0,333
2	Tangible (X1)	0,164	0,043
3	Reliability (X2)	0,189	0,061
4	Responsevenes (X3)	0,193	0,050
5	Assurance(X4)	0,253	0,050
6	Empathy (X5)	0,168	0,059

Hypothesis test

The hypothesis in this study was tested for correctness by using a partial test. The test is done by looking at the t statistic with the t table statistical value and the level of significance (p-value), if the significance level generated from the calculation is below 0.05 then the hypothesis is accepted, on the contrary, if the significance level of the calculated results is greater than 0.05 then hypothesis is rejected.

Table 4. Hypothesis Testing Results with t-test

No	Variable	Significance Calculate	Significance Level	t-count	t table	Information
1	Tangible (X1)	0,000	0,05	3,853	1,6612	Significant
2	Reliability (X2)	0,002	0,05	3,116	1,6612	Significant
3	Responsevenes (X3)	0,000	0,05	3,887	1,6612	Significant
4	Assurance(X4)	0,000	0,05	5,016	1,6612	Significant
5	Empathy (X5)	0,006	0,05	2,823	1,6612	Significant

The results of the physical evidence test have a calculated significance value of 0.000 and less than 0.05 and t count (3.066) > t table (1.6612). This means that the hypothesis which states that physical evidence has a significant effect on customer satisfaction is accepted. It also shows that physical evidence affects customer satisfaction. The better the physical evidence will have an impact on increasing customer satisfaction. The reliability test results have a calculated significance value of 0.002 and smaller than 0.05 and t (2.826) > t table (1.6612). This shows that the hypothesis which states that reliability has a significant effect on customer satisfaction is accepted. This also shows that reliability affects customer satisfaction. This means that better reliability will have an impact on increasing customer satisfaction. The result of the responsiveness test has a calculated significance value of 0.000 and is less than 0.05 and t count (3,415) > t table (1,6612). This means that the hypothesis which states that responsiveness has a significant effect on customer satisfaction is accepted. This also shows that responsiveness affects customer satisfaction. This means that better responsiveness will have an impact on increasing customer satisfaction. The results of the guarantee test have a calculated significance value of 0.000 and less than 0.05 and t count (4.033) > t table (1.6612). This shows that the hypothesis that guarantees have a significant effect on customer satisfaction is accepted. This also shows that assurance affects customer satisfaction. This means that the better the guarantee will have an impact on increasing customer satisfaction. The results of the empathy test have a calculated significance value of 0.006 and smaller than 0.05 and t count (3.155) > t table (1.6612). This means that the hypothesis which says that empathy has a significant effect on customer satisfaction is accepted. This also shows that empathy affects customer satisfaction. This means that better empathy will have an impact on increasing customer satisfaction.

Coefficient of Determination

The coefficient of determination shows how much the dependent variable contributes to the dependent variable. In other words, the coefficient of determination is used to measure how far the independent variables explain the dependent variable. The result of the calculation of the coefficient of determination obtained is 0.935. This means that 93.5% of the variation in customer satisfaction variables can be explained by physical evidence, reliability, responsiveness, assurance,

and empathy, while the remaining 0.065 or 6.5% is explained by other variables not proposed in this study such as facilities, location, and others.

Discussion

The Effect of Physical Evidence on Customer Satisfaction.

The results of the calculation of the physical evidence variable have a calculated significance value of 0.000 and less than 0.05 and t (3.066) > t table (1.6612). This also shows that physical evidence affects customer satisfaction, which means that the better physical evidence will have an impact) on the increasing customer satisfaction The results of the study which also discussed the relationship between service quality and customer satisfaction were carried out by: [45], [46], [47], [48].

The Effect of Reliability on Customer Satisfaction.

The calculation results for the reliability variable show the calculated significance value of 0.002 and less than 0.05 and t count (2.826) > t table (1.6612). This means that the hypothesis which states that reliability has a significant effect on customer satisfaction is accepted. This also shows that reliability affects customer satisfaction, which means that better reliability will have an impact on increasing customer satisfaction. These results are in line with research conducted by: [49], [50], [51], [52], [53].

The Effect of Responsiveness on Customer Satisfaction.

The results of statistical calculations show that the responsiveness variable has a calculated significance value of 0,000 and is less than 0.05 and t count (3,415) > t table (1,6612). This means that the hypothesis that responsiveness has a significant effect on customer satisfaction is accepted. This also shows that responsiveness affects customer satisfaction, which means that better responsiveness will have an impact on increasing customer satisfaction. These results are in line with research conducted by: [54]-[58].

The Effect of Guarantee on Customer Satisfaction

The results of the analysis show that the guarantee variable has a calculated significance value of 0.000 and is smaller than 0.05 and t count (4.033) > t table (1.6612). This means that the hypothesis which states that guarantees have a significant effect on customer satisfaction is

accepted. This also shows that guarantees affect customer satisfaction, which means that the better the guarantee will have an impact on increasing customer satisfaction. These results are in line with research conducted by: [59]-[60].

The Effect of Empathy on Customer Satisfaction.

The results of statistical tests show that the empathy variable has a calculated significance value of 0.006 and is smaller than 0.05 and $t \text{ count } (3.155) > t \text{ table } (1.6612)$. This means that the hypothesis of empathy has a significant effect on customer satisfaction is accepted. This also shows that empathy affects customer satisfaction, which means that better empathy will have an impact on increasing customer satisfaction. These results are in line with research conducted by: [63], [64], [65], [66].

Conclusions and Suggestions

Conclusion

The results showed that physical evidence has a significant effect on customer satisfaction. Physical evidence such as neat employee appearance, sophisticated equipment, and employees using ID cards can affect customer satisfaction. This means that better physical evidence will have an impact on increasing customer satisfaction. The calculation results show that reliability has a significant effect on customer satisfaction. This also shows that reliability which includes the ability to solve problems, be responsive in handling problems, and handle problems in a professional manner can affect customer satisfaction. This means that better reliability will have an impact on increasing customer satisfaction. The results of statistical tests show that responsiveness has a significant effect on customer satisfaction. This also shows that responsiveness which includes the readiness of employees to serve customers, willingness of employees to serve customers, and providing clear information to customers can affect customer satisfaction. This means that better responsiveness will have an impact on increasing customer satisfaction. The results showed that it has a significant effect on customer satisfaction. This also shows that guarantees that include trust, security, and a good image in the eyes of customers can affect customer satisfaction. This means that the better the guarantee will have an impact on increasing customer satisfaction. The results of statistical tests show that empathy has a significant effect

on customer satisfaction. This also shows that empathy, which includes attention to customers, ease of contact with employees, and employees who always put customer interests first, can influence customer satisfaction. This means that the better the empathy will have an impact on the better customer satisfaction.

Suggestion

Based on the research that has been done, the suggestions that can be given to the Bank Syariah Mandiri Jember are: the company should in an effort to increase customer satisfaction further improve the quality of its services, so that by paying more attention to the quality of its services it is hoped that it will ultimately increase customer satisfaction so as to obtain better results. good again.

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A Comparative Study: Folktale Structure of *Malin Kundang* (Indonesia), *Si Tanggang* (Malaysia), and *Nakhoda Manis* (Brunei Darussalam)

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ABSTRACT

This article is aimed to compare three folktales from Indonesia, Malaysia and Brunei Darussalam based on the structure which are the theme, plot, characters, and setting, including to explore why these similarities occur. The method used in this research is content analysis. The three folktales have similar theme, they tell about a child who is being cursed into stone for disobeying his parents. This research method uses content analysis, in which the research technique uses comparative principles in the structure of the story theme, plot, characters, and setting. In fact, the results showed that there were many similarities in terms of themes, plot, characters, and story settings. The highest similarity is between the folktales of Malin Kundang and Si Tanggang, while in the folktale of Nakhoda Manis, the initial setting of the story is different from the other two stories. The folktale of Nakhoda Manis has variations in the plot introduction stage. Furthermore, the story of Si Tanggang presents both mother and father characters, while the folktale of Malin Kundang and Nakhoda Manis only present the character of a mother. The similarity that occurs among those three folktales is due to the migration story process among the Malay family areas, or known as Austronesian language family, since the three countries were classified in the same Malay family. All in all, those three folktales convey message about the consequences borne by a child when disobeying his parents, that is also considered as Islamic religious message, since Islam grows rapidly among Malay family area or Austronesian language family.

Keywords: *Folklore, Comparison, Story Structure, Story Migration, Malay Family*

Introduction

Now living folklore is transformed into digital folklore, making it easier to find and discover folklore from various countries. The

inventors of digital communication tools remove geographical boundaries, turning local folklore into a global cultural phenomenon [1]. Likewise, the folklore will be discussed in the following. The global phenomenon finds that there are folk tales that have similarities one to another; they are the ones come from Indonesia, Malaysia, and Brunei.

The three countries above are categorized as allied countries, namely the Malay family. Previously, these three countries were associated with the Malay language as the lingua Franca, and the group of Malay islands was united, but the arrival of invaders such as Portuguese, Spanish, Dutch, English, etc., had divided the Malay territory[2]. Since being colonized, the way of thinking and behavior of the Malays has gradually changed so that the concept of the Malay nation itself has also changed.

Furthermore, the main focus of this discussion is folklore, which is a hereditary story from the past which is believed to be a true event, usually the folklore is the origin of a place[3], [4]. Folk literature is a treasure that is very valuable in a society. Folklore develops in a society that is believed to be shared and belonged to everyone. The folklore itself was carried out orally from generation to generation[5]. In addition, Malay folklore has been a valuable literary treasure for the Malay community, because it is a part of literature that belongs to the Malay people and is transmitted from one generation to the next. In this case, the Malay folklore is the result of the pronunciation of the Malay people who are mostly Muslim and the context of the story describes the culture of the Malay community[4].

In general, comparative studies of oral literature or folklore, as described below, have been carried out by many researchers, for example, comparisons of Indonesian fairy tale regarding the similarities and differences in the story structure of the 12 stories of angels found in Indonesia[6]. Other comparative study is also found in the folktales of *Ciung Wanara* and *Cindelas* in terms of the similarity of forms, story motifs, and comparison of cultural content[7]. Comparison of the folktales of *Malin Kundang* and *Dampu Awang* based on structural analysis[8]. Comparison of the folktales of *Malin Kundang* with the script of the drama, *Malin Kundang Menggugat*, has also been done[9]. However, a comparative study on folktales from 3 countries which are still one family, which are Indonesia, Malaysia and Brunei Darussalam has not been carried out yet, especially folktales with the theme of

disobedient children. Thus, this research is looking for the similarities and differences in the structure of the folktales consisting of themes, plot, characters, and settings, and this research is also examining why these similarities occur.

Research Methods

Comparative literature is a study comparing two or more literary works that have similarities. Nada and Remak said that studying comparative literature is not only done within the scope of literary works that exist in one country but can also be done with other countries even though with the same language it shows the relationship of historical bond and the process of influencing and its influential factors. stated that the similarity in the themes of literary works can arise from the similarity of geographical aspects and the existence of historical relationships which are important factors in the creation and development of a culture[10].

Moreover, the method used in this research is content analysis, which is basically empirically oriented, explaining in character, related to real symptoms, and aims to be predictive of the impact of a communication[11]. Hence, A content analysis researcher views a text as something that is open to be understood subjectively, reflects a variety of meanings and is highly context-dependent. The aim is to organize and derive meaning from the collected data and draw realistic conclusions[12]. In this case, the content analysis used is a qualitative content analysis, in which the data is presented in a form of description to attract several interpretations. The selection of analysis method depends on the extent to which the researcher tries to reflect the text statement about a subject of the analysis itself[13]. Furthermore, the comparative techniques used are based on the structure of the story, they are theme, plot, characters, and settings.

In fact, the research data sources, which are folktales of *Malin Kundang*, *Si Tanggung* and *Nakhoda Manis* were downloaded from the internet page[14]–[16]. The writers used the observation and note-taking technique in the data collection process: the writers read, describe the similarities and differences in the text, and examine the contents of the three folktales, and finds the causes for these similarities.

Findings

1. Similarities in themes

The folktales of *Malin Kundang*, *Si Tanggang*, and *Nakhoda Manis* have one similar theme in common, about a child who disobeys his parents after having wealth. When he was still poor and lived in the village, *Malin Kundang*, *Si Tanggang*, and *Manis* (after becoming rich, his name was changed into *Nakhoda Manis*), he was a child who was devoted to his parents. In fact, *Malin Kundang* and *Si Tanggang* want to be devoted children to their parents and want to change the fate of their family by migrating. It is quite different from *Si Manis*, he wants to study and learn trading somewhere far from his village to gain more experience. In fact, new territory and wealth have changed the three main characters to become arrogant and disrespectful to their parents, especially a mother who gave birth to and raised them.

2. Similarities in the story plot

There are some similarities found in the storylines of these three folktales, from orientation to resolution. There are some variations in the story, for example, in the orientation part, *Si Manis* is rich and lives in wealth. The other similarities can be found in the complication part, when *Malin Kundang*, *Si Tanggang*, and *Manis* ask permission to migrate and their parents allow them with a heavy heart, the only variations appears in *Nakhoda Manis* story, who wander to seek experience not to seek wealth. Moreover, the similarities are also portrayed in the climax part when *Malin Kundang*, *Si Tanggang*, and *Nakhoda Manis* are returning to their hometown, being rich, and refusing to acknowledge their mother. This condition leads to the plot in which the mother is disappointed because of her child's treatment and then, she prays to God, known as Allah, so that her child realizes his/her mistake. At the stage of resolution, these three folktales have similar incident when the ship belonged to those three disobedient children was hit by a storm and a big wave, so that it sank and at the place of the incident, a large rock appeared like a ship.

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Table 4 The Plot in MK, ST and NM Folktales

Plot	Folktales		
	Malin Kundang	Si Tanggang	Nakhoda Manis
Orientation (exposition)	Introducing the village and the life of Malin Kundang and his mother in poverty	Introducing the village and the life of Si Tanggang with his mother and father in a poor condition.	Introducing the village and the life of Nakhoda Manis along with his wealthy mother.
Minor Complication	Malin Kundang asked his mother's permission to wander so he could change his fate. His mother reluctantly agreed.	Si Tanggang wants to work as a ship crew because of his poor life. His parents reluctantly agreed.	Nakhoda Manis has a passion for trading and studying with merchants abroad. His mother reluctantly agreed.
Climax/ Major Complication	Malin Kundang and his wife returned to their hometown in a state of wealth. Her mother welcomed her son by the sea. However, Malin Kundang did not want to acknowledge his biological mother, because he was poor and dirty.	Si Tanggang and his wife returned to their hometown. He is already rich. His parents came to the anchored ship of Si Tanggang, but Si Tanggang did not acknowledge his poor and dirty parents	Nakhoda Manis and his wife arrived at the village in a state of great wealth. His mother came to the ship that was anchored, however, Nakhoda Manis did not acknowledge his poor and dirty parents
Minor Complication	Mande Rubayah was sad and disappointed and then prayed to God to ask for His justice	Deruma was sad and disappointed and then prayed to God to show the truth	Dang Ambun was sad and disappointed then prayed by cursing his son
Resolution	Storms and waves hit Malin Kundang's ship, and the ship became rocks, while his wife became fish.	Storms and big waves broke Si Tanggang's ship. He and his wife and crew members were also cursed to stone.	A storm and big waves flung his ship and flipped over the edge of the cliff and turned into stone

3. Similarities in Characters

The main characters in these three folktales are a son, a mother (except for the story of *Si Tanggang*, there is a father figure), and a wife. In this case, *Malin Kundang*, *Si Tanggang*, and *Nakhoda Manis* have similar characteristic when they were still children and lived in the village. Also

Society 5.0 Fostering Spirituality and Humanity

when they were already adults and become rich people. However, in *Si Tanggang* story there is an additional character, that is *Bapak Si Tanggang*.

Table 2 The Figures & Characteristics in MK, ST and NM Folktales

No	Figures & Characteristics	Similarities & Differences Identification		
		Malin Kundang	Si Tanggang	Nakhoda Manis
1.	A son (a good, loving child, after being rich becomes a son of disobedience)	Malin Kundang	Si Tanggang	Manis
2.	A mother (poor, dirty, wrinkled)	Mande Rubayah	Si Deruma	Dan Ambun
4.	A wife (beautiful and rich, noble child)	name is unknown	Puteri Sultan	name is unknown
5.	A father	-	Si Talang	-

4. Similarities in the Setting

The similarities found are, the three of them come from maritime territory and their main source of living is becoming fishermen. Even though *Nakhoda Manis* has many houses and lives wealthy, but the events also take place in the seaside village. Moreover, the story ends with a terrible and tense atmosphere, and also regret.

Table 4 The Setings in MK, ST and NM Folktales

Setting	Folktales		
	Malin Kundang	Si Tanggang	Nakhoda Manis
Place	1) Fishing village	Fishing village	Fishing village
	2) Air Manis Beach, Padang, West Sumatera, Indonesia	Malaysia	Kampong Ayer, the upstream of Brunei River, Brunei Darussalam
	3) Ship	Ship	Ship
Atmosphere	1) life suffers from poverty	life suffers from poverty	Rich life, wander to find new experiences
	2) Tense due to storms and big waves	Tense due to storms and big waves	Tense due to storms and big waves
	3) Regret	Regret	Regret

Discussion

The three folktales discussed above are *Malin Kundang*, *Si Tanggang*, *Nakhoda Manis*, have many similarities. For example, the three folktales

have similar theme. The plot also has great similarities, especially *Malin Kundang* and *Si Tanggang*, who are somewhat a little bit different from *Nakhoda Manis*. In this case, *Malin Kundang* and *Si Tanggang* came from poor families, while *Nakhoda Manis* came from a rich family. Moreover, the three of them have the motivation to leave the village, but they have different goals. It is mentioned that *Nakhoda Manis* decided to move to another place in order to seek experience. Migrating is done to find a more decent living, broaden horizons or deepen knowledge. Migrating is known as a process of interaction between community members and the outside world in the form of experiential and geographic adventures by leaving their hometowns to try their luck in other peoples' countries[17]–[19]. This process of wandering or migrating made the story developed. At other stages, the events are generally the same. Likewise, many similarities are found in the characters and story settings.

The highest similarity is between the folktales of *Malin Kundang* and *Si Tanggang*, while in the folklore of *Nakhoda Manis*, the initial setting is different from the other two stories. The folktale of *Nakhoda Manis* has variations in the plot, orientation stage. The story of *Si Tanggang* has variation of the parent characters consisting of the mother and the father, while the folktale of *Malin Kundang* and *Nakhoda Manis* only have mother.

The mother figure becomes the main character in determining the completion of the story. Disobedient act to a mother turns the child's figure to a stone. This is in line with the religious belief in Malay region where Islam is developing rapidly. Therefore, the moral message conveyed by this story is that children who disobey their parents will suffer. The dominant similarity in these three folk tales is the process of migrating from one place to another. This process is acceptable from one place to another because it is still belong to one similar cultural and religious group.

Conclusion

The three folktales analyzed have a lot in common from all the factors, such as theme, plot, characters, and setting. The similarity occurs because Indonesia, Malaysia, Brunei Darussalam are still one family, known as the Malay family or the Austronesian language family, which in ancient times, before the invaders came, this area was one

large area. The Malays are an ethnic group of the Austronesian people, especially those who inhabit the Malay Peninsula, western, central, eastern to southern Sumatra, southern Thailand, the southern coast of Burma, the island of Singapore, coastal Borneo including Brunei. The proximity of the region and still in the same family, called Malay, made the folklore migrates between islands or countries. In the migration process, various stories occurred.

The theme of the folktales is related to moral messages to honor a mother. If a child does not respect his parents, especially the mother, he/she will get misery. This is also related to the understanding of Malay culture which was influenced by Islam since it is developed rapidly in the Malay region. In Islam, there is a dialogue between the companions of the prophet and the Prophet Muhammad, in which the companions ask "Who should we respect, 3 times the Prophet declared your mother". This moral message is the main message of the folk tales that have been discussed above.

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Development of Character Education Teaching Materials Their Relevance to the Era of Society 5.0

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ABSTRACT

The problems in this research are: (1) why is it necessary to develop character education teaching materials with relevance to the era of society 5.0? (2) How is the development of character education teaching materials relevant to the era of society 5.0? This study aims to find the reasons why it is necessary to develop character education teaching materials for its relevance to the era of society 5.0, (2) to describe how the development of character education teaching materials is relevant to the era of society 5.0. This type of research is Research and Development (R&D). In this article some of the R&D stages are taken, namely the first stage in the form of a preliminary study, therefore this study uses a qualitative paradigm. The data collection techniques used were (1) interviews, (2) documentation, (3) observation, and (3) content analysis. Triangulation technique was used to check the interview, observation, and documentation. To ensure the validity of the data, the triangulation technique of sources and methods was used. The data analysis technique used interactive analysis. The results of the study conclude that (1) the reasons for the need to develop character education teaching materials are of relevance to the era of society 5.0, in the era of society 5.0 no longer degrades humans as in the industrial revolution 4.0. In the era of society 5.0, people were more human (humanism) who upheld the values of character. (2) the development of character education teaching materials relevant to the era of society 5.0 is carried out by exploring the noble values of the nation and also the noble values of the teachings of one of the nation's founding figures who are honorable and able to benefit mankind.

Keywords: Character Education, Teaching Materials, the Era of Society 5.0

Introduction

The problem currently being faced by students, especially junior high school students, is the decline in character values. Civics as one

of the subjects in schools have a mission to shape children's character. Therefore, it is appropriate if in Civics subjects, children are enriched with understanding and application of character education. Based on this mindset, character education teaching materials were developed.[1]

Several other reasons why character education teaching materials are needed are from the results of preliminary studies that researchers have conducted in several junior high schools in Surakarta City, Boyolali Regency, and Klaten. Empirical data shows that the availability of teaching materials is not in accordance with the demands of the curriculum and the characteristics of the objectives and the demands of solving learning problems. Data from the results of the preliminary study was carried out by giving questionnaires to students of class VIII SMP in three schools, namely SMP Negeri 12 Surakarta, SMP Negeri 1 Ngemplak, Boyolali, and SMP Negeri 1 Klaten. Each school was taken by 60 students, so that the total number was 180 students. From the results of the preliminary study, information was obtained that the existence of Civics teaching materials containing character values at this time still needs to be improved. There is no learning module that implements character education for grade VIII junior high school students.[2]

From the results of interviews with SMP Civics teachers, it was found that the current SMP Civics textbooks were inadequate. From the material aspect, it looks incomplete and disjointed, which makes understanding blurry and unclear. From the aspect of character education, Civics SMP textbooks do not contain much character education. The study contains more cognitive material. The teachers strongly agree that the Civics book that is currently in use contains character education to eliminate the impression that Civics are just memorization.[3]

Students' enthusiasm in taking Civics lessons is still considered lacking, because children already think that Civics are only memorizing lessons, with a lot of material and boring. So, the teacher must be clever at making the students not bored. The teacher's hope is that the presence of character education-based social studies teaching materials in the form of learning modules that contain many useful character values and overcome all existing deficiencies. According to the informants, the character of junior high school students is currently less strong, less independent, not high fighting power, and easily discouraged.[4]

From the results of a review of the PKn books of Class VIII SMP that are currently in use, it can be reported as follows. From the material aspect, many of them are theoretical, less sharp in terms of developing character education. The Civics books currently in use show less behavior. Even if the book shows behavior, the behavior that reflects character is not optimal. As is well known, character education is currently a major aspect that must receive special attention.

Teaching materials in the form of character education learning modules are thought to be able to strengthen the character of students. So far, there are very few Civics teaching materials or learning CDs for junior high school students that contain character values. Therefore, the product in the form of this teaching material is urgent to be held and developed. Based on the description above, the research on "Development of Character Education Teaching Materials of relevance to the era of society 5.0 is very urgent and urgent to be implemented.

Research Methods

Research procedures regarding the development of character education teaching materials are adopted and modified based on the model proposed by Gall, Gall & Borg.[5] The model development procedure is described as follows. The preliminary study stage was carried out by applying a qualitative descriptive approach. The objectives of this exploration phase are (1) to evaluate existing SMP Civics teaching materials, (2) to conduct a needs analysis of the model to be developed. The main information that needs to be sought is the importance of developing a new model, in this case the development of character education teaching materials in Civics learning.[6]

The initial stage of this development research is in the form of an exploratory study. In this preliminary study, the form of research is qualitative in nature. At this exploration stage, the data collection techniques used were questionnaires, in-depth interviews, observations or observations, documentation, and content analysis. The validity of the data used triangulation technique. Triangulation used was data / source triangulation and method triangulation.[7]

The data analysis technique used is an interactive analysis technique in the form of Components of Data Analysis: Interactive Model for qualitative data. This model consists of three components of analysis that are simultaneously interrelated with one another. The three

components are (1) data reduction, (2) data displays, and (3) conclusion drawing / verification (drawing conclusions / verification).[8]

The model development stage consists of three main activities, namely (a) making the draft model, (b) testing the model, and (c) refining the model. The three activities are described as follows: A model is considered good if the model has a good impact on its users. The resulting model development product is a character education-based Civics teaching material model. This model is believed to be able to improve character education for students, especially junior high school students in Surakarta City, Boyolali Regency, and Klaten.

The research method used in this third stage is experiment. Experiments were carried out to test character education-based social studies teaching materials. If at the trial stage the focus is on the process of preparing teaching materials, then in this test the focus is on learning achievement. In addition to learning achievement, another focus is knowing the character of students achieved after learning with Civics teaching materials based on character education compared to learning using existing SMP Civics teaching materials.[9]

Research Results and Discussion

The results of the preliminary study include three things: (1) the results of the literature study / document analysis, (2) the results of the field surveys, and (3) the results of the preparation of the initial product or the draft model. The results of the preliminary study in this study are useful for knowing the conditions, potentials, and strengths that exist in school. The results of this preliminary study are used as an empirical basis for developing applicable and quality teaching materials. The teaching materials referred to here are in the form of modules, both for teachers and students, syllabus, lesson plans (RPP), and Class VIII Civics Learning CDs at SMP Negeri 12 Surakarta, SMP Negeri 1 Ngemplak, and SMP Negeri 1 Klaten.[10]

From the results of the preliminary study, it was found that the Civics books used for grade VIII students varied considerably. There are schools that use social studies books published by the Ministry of Education and Culture of the Republic of Indonesia for schools implementing the 2013 Curriculum. There are also schools that use IPS books published by Yudistira, Airlangga, and Tiga Serangkai which are based on the Education Unit Level Curriculum (KTSP).[11]

Most of the material studied is still theoretical (cognitive). Studies that lead to behaviors appear to be lacking. There is no study that directly discusses the noble values of Ki Hajar Dewantara (Ministry of Education and Culture, 2014). Based on these facts, the writer is very motivated to write a module full of character education and the noble values of the teachings of Ki Hajar Dewantara. From this basis, the presence of the character education module that the author developed is very possible for students to use as enrichment.[12]

From the interview results obtained responses from teachers and school principals as well as students' responses about the importance of character education, SMP Civics study books, and Ki Hajar Dewantara's noble values in the book. Teachers and school principals see that character education is needed. One of Ki Hajar Dewantara's teachings relevant to the era of society 5.0 is The Tri-principle (continuity, convergency, concentric-city). The era of society 5.0 that is related to this tri-con principle is prohibition to be an imma'ah (a person who does something merely because others do so). It is mentioned in a hadith that was compiled by at-Tirmidzi and he considered it true. "Don't you become an imma'ah! You said: "If other men do good, then we will do so; if they do bad things (dzolim), we also will do so. But strengthen yourself. If other men do good, then we will do so; if they do bad things (dzolim), don't you emulate it. "

Civics subjects have taught character education. As evidence that in class VIII social studies lessons, there is education about loving the environment, teaching how to protect the environment and teaching how to get along in society, so that there is a harmonious relationship between people and do not hurt each other. The material of loving the environment means that it is relevant to the 16th point of character education from the Indonesian Ministry of Education and Culture. Maintaining the environment is relevant to the 18th point, namely responsibility. How to get along in society is relevant to point 17, namely social care. Student responses about the practice of character values are reported as follows. Regarding student concern (empathy), in general students still have empathy for others. However, there are some students who show empathy for friends who have an accident as long as they are not in a hurry. To friends who apologize for a mistake, all will forgive. However, there are some students who forgive but with several conditions. One way of showing the respect of students to the

teacher is by greeting and walking slowly when they pass. However, not all students show such behavior.

The results of observations / observations in this study include three aspects, namely 1) observations of spiritual attitudes (during learning), 2) observations of social attitudes (during discussion), and 3) observations of conveying, listening, communicating, and contributing (during presentation). Spiritual attitude includes three indicators, namely praying starting and ending learning, greeting, and giving thanks. The results of observations of social attitudes include five aspects, namely not giving up, having an opinion, empathy, respect, and tolerance. The results of the observation of skills competencies include four aspects, namely communicating, listening, arguing, and contributing.

Conclusion

This study concludes two things, namely (1) the reasons why it is necessary to develop character education teaching materials for their relevance to the era of society 5.0 and (2) the strategies used in the development of character education teaching materials are relevant to the era of society 5.0. Several reasons why the development of character education teaching materials has relevance to the era of society 5.0 are as follows: (1) From several informants' answers about the importance of character education teaching materials as mentioned above. (2) The era of society 5.0 is different from the Industrial Revolution 1.0, 2.0, 3.0, and 4.0. In the industrial revolution or the era of society 5.0 no longer degrades humans as in the Industrial Revolution 4.0. The era of society 5.0 is very humanistic, trying to humanize humans.

The strategies used in the development of character education teaching materials with relevance to the era of society 5.0 are as follows (1) by exploring the noble values of the nation's noble culture, (2) by internalizing the noble values of the teachings of one of the founding fathers, for example Ki Hajar Dewantara. One of the teachings of Ki Hajar Dewantara that is very relevant in welcoming the era of society 5.0 is the leadership trilogy, which includes *ing ngarsa sung tuladha*, *ing madya mangun karsa*, *tutwuri handayani*.

The Leadership Trilogy which encompasses *Ing Ngarsa Sung Tuladha*, *Ing Madya Mangun Karsa*, *Tutwuri Handayani*, is the seventh noble values of Ki Hajar Dewantara's teachings. The Islamic morality that can be stated as acting as the base for this concept of leadership

trilogy lies on the Prophet SAW and the companions themselves. If you are a winning conqueror, for you there is an example in the prophet, namely when he won over his enemies in the battles of Badar, Hunain, and Makkah liberation. Were you defeated, may God not ordained it, thus take a lesson from him in the battle of Uhud, when he was among his wounded and dead companions.

If you want to establish the truth and do good things while you do not have any helper nor protector, then observe him when he was weak in Makkah. There was no helper to help nor anyone to protect while he asked others to join him in the truth and share it. [10].

If you were a trader who are in the journey bringing the goods, pay attention to the affairs of the entourage leader heading to Basra. If you were a judge, behold the mediator who went to the Ka'bah before sunrise, to put Hajar aswad, that was disputed by the leaders of Makkah, in its place. Then look upon him once more when he was in the courtyard of Medina mosque to judge people fairly, equating the indigent and the rich.

The third noble value of Ki Hajar Dewantara's teachings is termed "**Educational Means.**" It is the efforts and activities that are carried out in order to reach the educational goals. Educational means are basic tools, namely how to teach. Istiqamah means taking the correct path (religion), and never straying to the left or right. It covers all implementation of obedience to God, both physically and spiritually, leaving all forms of God's bans. Imam Nawawi (2006: 252) stated that istiqamah means that one always living in obedience to Allah SWT. It is one short word yet full of meanings; the guidelines for all affairs. [13]

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The aggressiveness of Youth Impact of Information During a Pandemic in the Age of Society 5.0

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ABSTRACT

A pandemic period is a problem that has the most attention in handling people around the world. This study aims to determine the impact of information on the aggressiveness of adolescents during the pandemic. The research method used a quantitative approach with survey research methods and simple random sampling techniques. The research subjects were 71 teenage students. Data collection using the Information Scale consists of 60 valid items and has a reliability value, $\alpha = 0.963$. The aggressiveness scale consists of 26 valid items, with a value of $\alpha = 0.913$. Analysis of data using linear regression analysis techniques, the results of statistical analysis showed that the value of F is 8.219 with a sig value of 0.05, which means that the information variable does not have a significant effect on aggressiveness. The magnitude of the influence of the information variable on aggressiveness is 10.6%, and external factors influence the rest. The correlation test results show that the information variable has a positive relationship with the aggressiveness variable. The result means that the more people receive information, the aggressiveness can increase.

Keywords: *Information, Aggressiveness, Youth*

Introduction

When a pandemic hits and changes people's lives worldwide, it causes various impacts on life, including psychological changes and changes in physical conditions [1]–[3]. A person does not easily forget changes in psychological disorders. Different information is a source of news, but not all sources of information can soothe psychological conditions, especially adolescents, during a pandemic. The development of adolescents who can develop and express their

abilities during a pandemic period faces obstacles to build all their powers. Another problem is that the Covid-19 pandemic period cannot be predicted until it will end even though this unhealthy condition's impact continues. Various effects of information about a pandemic can be psychologically pleasing to a person, but it can cause multiple adolescents' aggressive behaviors [4]–[6].

The problem is that the pandemic period has not ended, and various countries take turns to impose large-scale restrictions on their people. Different cases cause family issues, namely, adolescents' psychological handling, which also affects the country's regulations' status to comply with large-scale restrictions [7], [8]. Meanwhile, adolescence is in a period of development that should explore knowledge and express one's abilities [9]. It is supposed to gain experience by releasing children to formally get information from school and transform their knowledge for themselves and others [10]. But during a pandemic, teens are confined at home during their school days with information and expertise for days with no exact time limit on when problems facing teenagers around the world are resolved [11], [12].

Therefore, the problem of adolescents in receiving various information requires attention from different fields of scientific disciplines. How to find out to what extent the impact of information during the Covid-19 pandemic can negatively affect adolescents. The research was directed to determine the effect of information on youth aggressiveness during the pandemic. Adolescents are considered a generation with a high immune power against the Covid-19 virus, but what about psychological vulnerability? The benefits of research on the effect of information on adolescents' aggressiveness will be information and procedures to help adolescents who are beginning to experience psychological problems.

Information to adolescents requires information selection to form the mindset during their growth and development in adolescence [13]. During a pandemic, a lot of data is confusing that parents need to select to prevent aggressive behavior's psychological impact. The effect of information can be physical changes and changes in psychological conditions, namely changes in behavior [14], [15]. Aggressive behavior is influenced by low emotional maturity in adolescence and lack of ability to manage emotions. Still, it needs to be reviewed from several theories about the wrong side of aggressive behavior by looking

for the positive side, from the perspective of positive, aggressive behavior in adolescents. In line with Guswani & Kawuryan (2011) statement, aggressive behavior consistently appears in interpretational relationships, and the low emotional maturity will control oneself from aggressive behavior [16].

Impact of Information

Sources of information play an essential role for individuals and adolescents in determining attitudes or decisions to act daily. Sources of information exist in various places and media that are easy to get, including schools, homes, institutions of a commercial organization, books, magazines, newspapers, libraries, and other shopping places. In essence, where an object or event is located, information can be created, recorded, and stored via print or electronic media [17], [18].

Information can be in the form of various media in the era of society 5.0, but multiple media can have a negative and positive impact on people who receive information. It is in line with Yusuf's (2009) statement that there are many types of information sources. Books, magazines, newspapers, radios, tape recorders, CD-ROMs, computer diskettes, brochures, pamphlets, and other information recording media are places where information is stored or, let's say, sources of information, specially recorded information [18].

The negative side impact of information is that it can lead to aggressive behavior in adolescents. Still, aggressiveness is not only negative; it can also be in the form of positive aggressiveness. Negative aggressiveness cannot control destructive emotions, but the impact of aggression on receiving information can be reflexive thinking in the brain with a positive catch, namely an awakening of spirit to build a more advanced life. Dodge and Crick (1990) stated a strong relationship between function and aggressiveness performed by a child. Aggressiveness occurs due to the child's inability to process social information and cognitive processing [19]–[21].

Aggressiveness

Knort et al. (2007) define aggressive behavior as harmful and destructive to both personally and others. Aggressive behavior is linked to mental and emotional states and is often associated with bullying, statements, strength, abusive behavior, and irritability. Based

on the explanation in DSM IV, aggressive behavior can be classified as conduct disorder (CD) and oppositional defiant disorder (ODD). The main characteristics of CD are direct aggressive behavior in animals and humans and rage. Whereas in ODD, malicious behavior, enemies, and non-compliance with regulations [22].

Aggressive behavior forms in verbal language, sentences that can offend those around them, rude behavior in hitting, breaking things, throwing, kicking, hitting until there is a fight, and undesirable uses of sharp weapons. Aggressive behavior in adolescence will be very detrimental to adolescents' lives in the future because it will be very detrimental to others. Prawesti (2003) suggests that how to know the aggressiveness of an individual towards a specific object, needs to know the symptoms or aspects of aggression behavior, namely aggression that is carried out by injuring or hurting the body, both oneself and others, such as pinching, hitting, kicking, etc [23].

According to Bandura and Wilters, aggressiveness can be learned through two methods: instrumental learning, which occurs when a behavior is reinforced or given reinforcement or rewarded. The behavior tends to be repeated at other times. And observational learning occurs when someone learns a new behavior through observation or observation of others, which is called a model [3], [24]–[26].

Ramirez et al. (2001) divided aggression into two dimensions: aggressive in objectivity or action and aggressive in subjectivity or emotion. Objectivity shows that aggressive behavior is practical, explicit, and external. Meanwhile, subjectivity shows that aggressiveness is related to inner feelings. These feelings are a combination of thoughts, emotions, and behavioral tendencies that lead to aggressive behavior [22], [27], [28].

Bush and Perry (1992) classify aggression into four aspects: physical aggression, verbal aggression, anger, and hostility. Physical and verbal aggression represents the motor components of aggressiveness. Anger and hostility represent the affective and cognitive components of aggressiveness.

- a. Physical aggression (psychological aggression) is a form of aggressive behavior carried out by physically attacking to injure or harm someone. This aggressive behavior is characterized by physical contact between the aggressor and the victim.

- b. Verbal aggression (Verbal Aggression) is the aggressiveness with words. Verbal aggression can take the form of swearing, satire, slander, and sarcasm.
- c. Anger (Anger) is indirect aggression or indirect aggression in feelings of hatred towards someone or something or cannot achieve their goals.
- d. Hostility is a cognitive component of aggressiveness, which consists of feelings of wanting to hurt and injustice. [29], [30]

Aggressive can take the form of physical aggressiveness and verbal aggressiveness. Physical aggressiveness is done by injuring or hurting the body, and verbal aggressiveness is done by saying dirty or harsh words. But the facility's aggression in facing the era of society 5.0 will have enthusiasm in building problems that were previously complicated into issues that are easy to overcome.

Buss and Perry (1992) classifies aggressiveness as physical and verbal aggressiveness, active or passive, directly or indirectly. Each of these three classifications interacts with each other, resulting in forms of aggressiveness.

- e. Active physical aggressiveness that is done directly, for example, stabbing, hitting, pinching
- f. Indirect physical aggressiveness is active, for example, trapping to harm others.
- g. Passive physical aggressiveness that is done directly, for example, provides a path for other people.
- h. Passive physical aggressiveness is done indirectly, for example, refusing to do something.
- i. Direct active verbal aggressiveness, for example, criticizing others, stabbing, hitting
- j. Indirect active verbal aggressiveness, for example, spreads untrue gossip to others.
- k. Passive verbal aggressiveness is carried out directly, for example, not wanting to talk to other people.
- l. Passive physical active verbal aggressiveness is done indirectly; for example, keep quiet even though you disagree. [30]

Studies to understand aggressive behavior need attention from various disciplines concerned with providing information to adolescents.

Different theories that can be used to assess aggressive behavior and the impact of data transferred on adolescents offer opportunities to obtain solutions. However, few studies of the effects of information on aggressive adolescent behavior can be done by assessing it through qualitative and quantitative research. Theories that can be linked to adolescent behavior with aggressiveness include psychoanalytic theory.

Several theories that can explain one of them are the theory that explains aggressiveness as an innate behavior and an instinct for living things. This theory is divided into three groups, namely psychoanalytic theory, ethological theory, and sociobiological theory.

1. Psychoanalytic Theory

Sigmund Freud, a psychoanalytic character, classifies individual instincts into two parts: life instinct and the death instinct. The life instinct (also called eros) contains constructive and sexual energy, while the death instinct (called Thanatos) contains destructive energy. Expressing the desire for death can take the form of self-aggression or self-harm, resulting in suicide. However, there is a living instinct in humans so that the desire for death is not immediately expressed. Other expressions of longing for death are directed outward and lead to aggression toward others. Whether it is a tendency that leads to actions or actions that cause pain, injure, destroy, and other destructive activities negatively affect oneself or others.

2. Ethological Theory

As an ethological figure, Lorenz argues that aggressiveness is a fighting instinct owned by living things aimed at the same species. Fighting among a species is not a crime because its function is to save one species' life against disturbance or other species' threats. This aggressiveness, which is an instinctive behavior, has a survival value for the organism.

3. Sociological Theory

In this case, Barash states that social behavior and physical structure are influenced by evolution in the view of sociobiological theory. According to this theory, living things of various species tend to show specific social behavior patterns for their survival. Creatures carry out acts of aggression because the function of these actions is an attempt to adapt themselves.

The mechanism of aggressive behavior, the impact of information sources on adolescents, begins with the reception of information in the cognitive process as a transformer of information entering the brain. The acceptance of the cognitive process that is received will form cognitive psychology that will produce aggressive behavior. The acceptance of various kinds of beneficial and unprofitable information can cause psychological problems in aggressive behavior in adolescents who are not yet mature in managing emotions.

Method

This research variable is the aggressiveness variable, which is the dependent variable, while the information is the independent variable. The variable characteristic is high school adolescents' aggressiveness towards the variable towards the independent variable of information acceptance during the Covid-19 pandemic. The study population was 71 adolescents of class III high school students in Malang for the 2019/2020 school year. While the sampling technique uses the entire population of 76 teenage students in a population called population studies.

The research paradigm is based on Dodge and Crick (1990) approach, which states a strong relationship between function and aggressiveness by a child [19]. Aggressiveness occurs from cognitive processes and the inability of adolescents to process social information. In the era of welcoming society, 5.0. acceptance of incoming information through a cognitive process. Processing processes that negatively impact behaviors and feelings: confused, uncertain, hopeless, anxious, alienated, depressed, confused, easily swayed, and have no grip. But in a positive processing process, it can build a constructive thought process that accompanies the process towards the era 5.0 society.

The data collection approach used the data collection method, namely through the research and information scale's aggressiveness scale. The measuring instrument in this research uses the Aggressiveness scale and the scale of information as a measuring tool used in the study. The aggressiveness scale consists of authoritarian, superior, egocentric aspects, the desire to attack, and prejudice. Simultaneously, the information scale consists of elements of authority, novelty, objectivity, assumptions, relevance. All measuring instruments have been carried out with validation tests using Product Moment and reliability testing using Cronbach's Alfa, and data analysis using regression tests.

Results and Discussion

The results of research data analysis on aggressiveness as an impact of information using regression analysis techniques can be seen in Table 1.

Table 1. ANOVA Regression Test Analysis Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	107.685	1	107.685	8.219	.005 ^b
	Residual	904.034	69	13.102		
	Total	1011.718	70			
a. Dependent Variable: Aggressiveness (Y)						
b. Predictors: (Constant), Information (X1)						

Based on the results of statistical analysis using the regression test, it was found that the F value was 8.219 with a sig 0.05, which means that the information variable did not have a significant effect on aggressiveness.

Table 2. Result of Correlation Test Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.326 ^a	.106	.093	3.61966
a. Predictors: (Constant), Information (X1)				

The magnitude of the influence of the information variable on aggressiveness is 10.6%, and external factors influence others. Based on the correlation test, it is known that the information variable has a positive relationship with the aggressiveness variable. The meaning of the result is that the greater the information received by a person can increase his aggressiveness.

According to Arifianto (2016), when there is a continuous transition, both from the social and physical environment, it can result in adolescents having difficulty adjusting to experience various conflicts both within themselves, their environment, family, friends, and their social environment. Then there will be feelings of confusion, uncertainty, despair, anxiety, alienation, depression, confusion, easily swayed by and without a handle [31].

Dollard (1939) one of the theories put forward by this group is the frustration-aggression theory pioneered. According to the group, frustration always creates aggression, and aggression is solely the result

of frustration. Therefore, when frustration increases, aggressiveness will also increase. The intensity of frustration depends on several factors, including how much someone is willing to achieve their goals, how significant the obstacles are, and how much frustration they experience [32], [33].

Goleman explains that emotions are feelings or affections that come from physiological components that then shape behavior. This behavior will become a permanent psychological dimension in each individual so that it can be used to distinguish personalities from one individual to another [34].

Knorth et al. (2007) divided two types of aggressive behavior, namely proactive and reactively aggressive. Proactive aggression is exemplified in adolescents who generally have social abilities that comply with rules or norms, have fairly good language skills and intelligence, and have low self-control in achieving goals. Teens with proactive aggression usually need strength and attention. Meanwhile, aggressive reactive, more commonly known as hot-blooded, is automatic and often misperceptions increased anger and frustration [22].

Aggressiveness from the point of view of ethological theory relates to ecosystems to macrosystems due to interactions between individuals and the environment. Xu and Zhang (2008) suggest that aggressive and anti-social behavior is a big enough problem in childhood and does not rule out social disruption. They were further explained by Knorth et al. (2007) that biological and environmental factors cause ethologically behavior aggression [22], [35], [36].

Aggressive and violent behavior is not a new phenomenon. Aggressive and violent behavior dates back 25,000 years among Greeks, Egyptians, and Romans. Events such as the Holocaust, the Columbine school shooting in Colorado, or the terrorist attacks on the World Trade Center on September 11, 2001, have left people wondering about violent behavior. The prevalence of aggressive and violent behavior at this time has been used as a trigger for social problems that deserve attention around the world [28].

The culture of aggressiveness already exists in certain areas. There are games in the form of violence, hitting the body, playing with whips, and hitting the back with rattan, bamboo, playing hitting in the mud, all of which have become models for young people in the next

generation. This culture is passed down from generation to generation. Violence in games, which is, directly and indirectly, a tradition in society, is considered to reduce one's dignity if not followed. In line with Geen (2001), he explains that violence is physical aggression that can continuously occupy the highest level, such as the occurrence of attacks that are very extreme to cause death [37], [38].

It is a symbol in certain people's cultures in defense of self-respect or honor related to position, power, property, and wife. Certain cultures have existed since time immemorial. The fights in the Madurese community could not be separated with sharp objects, which were also symbols of the community's weapons. These sharp weapons are often used for demonstrations and riots that can occur in certain places or areas. Violent behavior that occurs as described above indicates an inability to manage emotions.

Aggressiveness will occur with habits that have ever seen and will become a model in his life. The patterns seen by adolescents become a model that will be applied to overcome and deal with life problems. Aggressive behavior is very close to making emotional attributes have a synergistic relationship. Various aggressive behaviors are obtained from imitating good behavior models and from bad behavior models. Therefore, it can be separated between good behavior models that will produce good aggressive behavior. Although emotional attributes are difficult to separate from the problem from the impact of information on behavior, not all aggressive behavior forms are bad behavior. This opinion is in line with Shultz, Izard, and Bear (2004), which explain that emotional attributes have a relationship with aggressive behavior. Children sometimes imitate angry behavior based on what they see [39].

Conclusion

Adolescents who are less able to receive information can make them happy and experience frustration. In adolescents who can receive information comfortably will feel satisfied. However, what should be noted is that frustration creates several different responses and does not always lead to aggressiveness. So that aggressiveness is only one form of response that emerges.

When there is a continuous transition, both from the social and physical environment, it can result in adolescents having difficulty

adjusting so that adolescents experience various conflicts both within themselves, their environment, family, friends, and their social environment. Then there will be feelings of confusion, uncertainty, despair, anxiety, alienation, depression, confusion, easily swayed by and without a handle.

Aggressiveness has nothing to do with instinctive problems, but is determined by external conditions (frustration) so that these conditions will create a strong motive for someone to act aggressively. One theory put forward by this group is the frustration theory of aggression, pioneered by Dollard and his colleagues (1939). According to the group frustration always creates aggression and aggression is solely the result of frustration. Therefore, if frustration increases, aggressiveness will also increase. The intensity of frustration depends on several factors, including how much someone is willing to achieve their goals, how big the obstacles are, and how much frustration they experience [32], [33], [40]–[43]. According to Watson (1984) in 1941 Miller revised his theory by stating that frustration creates a number of different responses and does not always lead to aggressiveness. So aggressiveness is only one form of response that emerges [44]–[47].

Personality development is the result of the interaction between innate and environmental factors [48], [49]. It is further explained that each individual learns about language, belief systems, rules in the social environment, and behavior following the rules or norms contained in an area. Likewise, the information received by adolescents from their environment can affect personality development [50]–[52].

The information has become an essential part of community development. Community development has entered the era of society 5.0, depending on the data being spread. Good and impaired quality of information, especially that adolescents receive, can affect the quality of human resources in welcoming the era of society 5.0.

Based on the statistical analysis results using a regression test, the information variable does not have a significant effect on aggressiveness. External factors influence the influence of the information variable on aggressiveness and the rest by other variables. Based on the correlation test, it is known that the information variable has a positive relationship with the aggressiveness variable. These results mean that the greater the information a person receives, the more aggressiveness a person

receives. Another conclusion is that if the information received is more positive, and the formed aggressiveness leads to more positive behavior. Meanwhile, when viewed from the research results, aggression is physically or verbally against other individuals or objects.

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The Contribution of the Interview Test in The New Student Admission System

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ABSTRAK

This study aims to evaluate the implementation of the interview test in the new admissions system for D3, D4 and Applied Masters in Study Programs in Vocational Higher Education, both on its contribution to institution and its relevance to prospective students' initial knowledge of the competence of the study program. There was a debate between pros and cons of the implementation of the interview test in the new students admission system in Vocational Higher Education. The debate includes questions about the results of interviews on the efficiency in the admission system and the institution budget and whether it supports the success of the study program in getting prospective students who have sufficient initial knowledge of the study program. This research uses a qualitative approach. The population of this study were all Vocational Higher Education. The case sample is Politeknik Negeri Jakarta. The respondents are the Head of the Study Program and the Head of Financial Administration and the Head of Academic Affairs. Data were collected using a selection interview technique and questionnaire. The data that has been collected is then discussed and analysed, calculated based on the percentage calculation. From the results of the discussion and analysis, it can be concluded that there is a low contribution from implementation of the interview test to Politeknik Negeri Jakarta, a low contribution to the academic field and a low contribution to the financial administration sector, low relevance to the knowledge and expertise of the study program. The interview test is more appropriate to be carried out in study programs whose expertise and competence have been obtained from the knowledge and learning experience while studying in high school.

Key words: *interview test, contribution, relevance, peospective student*

Introduction

Vocational Higher Education opens admissions for new students through the SNMPN, SBMPN, and Independent channels. Prospective students who pass the written test selection in several study programs

must take an interview test as part of the new student admission system. Paying attention to the obligations of prospective new students to undergo an interview test before being declared fully accepted as a Vocational Higher Education student becomes interesting to research on the contribution of interview test in the new student admissions system to institution and its relevance to the knowledge of prospective study program students. This study took a sample of cases at Politeknik Negeri Jakarta, evaluative in nature, in the context of efficiency, effectiveness, accountability and competitiveness in Vocational Higher Education which is still a Work Unit. The interview test conducted in this study is a selection interview test: interviews are conducted to fill a position in education [1], [2].

Research that raises the evaluation of the contribution of the interview test in the New Student Admissions System to Vocational Higher Education Institutions and its Relevance to the Knowledge of Prospective Students in the Study Program is new and original. The results of previous research that have been carried out are research on interviewing as a communication interaction in qualitative Research [3], and research regarding the use of supporting interview sheet instruments for misconception detection diagnostic tests for understanding analysis of Buffer-Hydrolytic Concept [4].

The research problem can be broken down into 3 parts, namely whether or not the interview test is needed by all study program as part of the new student admission system, what contributions can be contributed from the interview test to Vocational Higher Education institutions in academic field and financial sector, and is there relevance interview test to the knowledge of prospective study program students.

Interview concept dan Types

Interviews are usually conducted at the admission of new employees or admission of new students. Interviews are a form of data collection that is most often used in qualitative research [5]. Interviews as a question and answer with someone (official, ect.) who is required to be asked for information or opinion or a matter [6].

The interview test can be conducted based on the interviewee and based on the objectives. Based on the interviewee, namely individual interviews, group interviews, and conference interview [6]. Based on the objectives, namely interview formality, recruitment interview, screening

interview, selection interview, and admission interview [1], [2]. Types of interview questions can divide into types of free interviews, open interviews, guided interviews, and closed interviews [6].

Research Methods

Research on the Contribution of Interview Test in the Student Admissions System to Vocational Higher Education Institutions and Its relevance to Knowledge of Prospective Study Program Students uses a qualitative approach, is evaluative in nature. For this reason, research data were collected using guided interviews and closed interview types [6]. Guided interview questions model in the form of essay questions or semi-structured and guided, in the form of questions with limited answers, namely two answer options provided.

The population of this research is all study programs (D-3 and D-4 and Applied Master levels) owned by Politeknik Negeri Jakarta totaling 36. The sample in the study was determined to be 13 with details: 8 study programs that carry out interview tests and 5 study programs that do not implement test, 1 head of academic affairs field and 1 head of financial administration sector. The data that collected from each interview item classified in order to formulate the common opinions and answers of the respondents. The results of the questionnaire answers calculated as a percentage. The success indicators of each problem item provided in the table below.

Table 1. The Success Indicator

Percentage	Indicator	
51 – 100	High Contribution	High Relevance
Percentage		Indicator NO
00 – 50	Low Contribution	Low Relevance

Results and Discussion

The sample of this research is 13 Study Programs, with details: 2 D3 Study Programs, namely the Finance and Banking Study Program and WNBK Study Program. There are 9 applied undergraduate programs, namely Accounting and Finance, Applied Business Administration, BisPro, Graphic Desain, MIKCE, Broadband Multimedia, Financial Management, Finance and Islamic Banking, Multimedia and Network Engineering. There are 2 applied master programs, namely Applied Masters in Electrical Engineering and Applied Master in Manufacturing Technology Engineering. The research data becomes a source of

analysis and conclusions. If calculated as percentage, the research sample is 36%.

1. Interview Test in the New Student Admission System

Based on the research data, the study program states that the interview test needs to be carried out to get superior prospective students, but from the essay answers and their relevance to the prospective student's knowledge of the study program, the results of this study find that the interview test can only be required and carried out by the study program that tests basic knowledge skills that have been learned while studying in high school and undergraduate graduates, for example mathematics study programs, Indonesian language study programs, English study programs, computer study programs, applied master's study programs in electrical engineering, applied master's in manufacturing technology engineering, and WNBK who explore their own potential, IQ limitations and learning outcomes that are poured into the report card scores.

Study programs that specifically accept prospective students from senior high school (SMA, SMK, Madrasah Aliyah), such as Accounting and Financial, Financial Management, MICE, Business Administration, Graphic Desain, Finance and Islamic Banking, Broadband Multimedia, and others do not require a special test. Because the knowledge and abilities of prospective students regarding the study program's expertise competencies are minimal, it is feared that the question material will extend to the problem of weight, height and passion and subjective factors from the examiners which are not really needed to be test material.

2. Study Program Targets of the Interview Test Implementation

The finding of the study program respondents' answers regarding the targets of carrying out the interview test are written as follows: to find out the real condition of students, adjusting students' interests and talents, capturing students according to their interest and abilities, matching the interests and passions of prospective students with the goals of study programs, capturing prospective students who pass the written test and make it the main choice, have interests and abilities relevant to the field of design, know the English competence of prospective students, determine the background of expertise, motivation, potential for success and research plans, get an overview

of the thesis research topic plan that will be carried out prospective students.

Referring to the findings of the answers above, it can be analysed that the target of the study program in carrying out the interview test is still acceptable, for example to find out the English competency of prospective students, and to get an idea of the thesis research topic plan that will be carried out by prospective applied master students. As for the target of capturing interests, passion and determining the background of expertise and motivation, these are less relevant targets. The determination of such varied targets is thought to arise because the main objective of the interview test has not been found and there is no manual on the requirements and procedures for implementing the interview test for all study program.

3. Contribution of the Interview Test to Politeknik Negeri Jakarta

There are two object orientations in this research, namely (1) the contribution of the implementation of the interview test in Politeknik Negeri Jakarta admissions system to Politeknik Negeri Jakarta and (2) the relevance of the implementation of the interview test in Politeknik Negeri Jakarta admissions system to the initial knowledge of prospective students regarding the competence of the study program. The contribution of the interview test implementation in Politeknik Negeri Jakarta admission system to Politeknik Negeri Jakarta is seen from 2 parts, namely from the academic sector and from the financial administration sector.

The contribution of the interview test so far in the academic field is the number of students registered as students of Politeknik Negeri Jakarta, which actually can be predicted from the results of the written exam. Other contributions have not been found because there is no evaluation and measurement. The argument that the interview test can capture candidates who understand the objectives of the study program, get graduates on time, or get qualified prospective students as contributions to the academic field is an argument that is not right on target because all the arguments mentioned above can be achieved when the study program carries out its responsibilities in carrying out learning and students experience a learning process that allows them to graduate and achieve the competencies set by the study program. For this, each study program has the duty and obligation to

prepare as complete a document as possible that can be accessed and understood by students and senior high school graduates or prospective students before registering as participants in Politeknik Negeri Jakarta Admissions selection.

The contribution of the interview test in the financial administration sector is proven to be able to provide tuition fees for a number of prospective students who are accepted, which actually has been predictable since passing the written test, but on the other hand, conducting the interview test adds to the expenses of Politeknik Negeri Jakarta finances, which is actually sufficient through written selection because the quality of graduates will be seen when they have finished attending education and are declared to have graduated from the study program they entered. Other contributions have not been found yet because there is no evaluation and measurement.

From the percentage obtained in items 27, 28, 29, 30, the following trends can be found. Referring to the percentage table below, it can be stated that the “Low Contribution” of the Special Test for Politeknik Negeri Jakarta, for the Academic field, and for the Financial Administration sector.

Table 2. Percentage Calculation Results

Statement	Yes	No
Contribution of interview test to PNJ	31.8	68.2
Contribution of interview test for academic field	38.5	61.5
Contribution of interview test for the financial Administration sector	30.8	69.2
Relevance of interview test to achieve the competencies set by the study program	39.5	69.2

4. The Relevance of the Interview Test with the Knowledge and Expertise of the Study Program

Most of the study programs stated that the interview test of prospective students was not relevant to the knowledge and expertise of the study program because the expertise of the study program was something new to them. Not all prospective students know or understand the knowledge and expertise of the study program. Referring to the percentage table above, it stated that "Low Relevance" Interview Tests for the Knowledge of prospective students towards Study Program expertise.

Conclusion

The interview test conducted by the study program has not shown a philosophical and main objective, the enthusiasm is to get information about the interests and passions of prospective students, while they have minimal knowledge of the expertise of the study program because not all high school graduates learn science which is their expertise and competence study program.

There has not been found a manual for the implementation of interview tests to be carried out by all study programs that regulate the requirements and conditions for the materials that should be asked and the form of questions to prospective students, academic and non-academic achievements requirements, the weighting percentage of passing from the written test and from the interview test, requirements examiner lecturers, any study program allowed to carry out the interview test.

Based on the results of research, discussion and analysis of case samples, it stated that a low contribution from the implementation of the interview test to Politeknik Negeri Jakarta, a low contribution to the academic field and in the financial administration sector, was low in relevance to the knowledge of prospective students on the Study Program Expertise.

Acknowledgement

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Phonological Variation of Basa Cerbon Absorption Vocabulary from Sundanese Language

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ABSTRACT

This study aims to find out the phonological variation of Cerbon Language from Sundanese vocabulary. Because as a language that lives in a Sundanese-speaking community, naturally there is absorption between the two languages so that Cerbon language gets additional vocabularies from the Sundanese language. This study uses a synchronous review with a qualitative approach. Sources of data are informants and from a Sundanese dictionary. The object of the research is Cerbon language speech which mastered by all speakers in Cerbon. The research data obtained using a questionnaire and collected using the field pupuan method. The research data analyzed using the symptoms of language variations. From the results of the discussion, it was found that the absorption of vocabulary as a whole and changes in writing, pronunciation and spelling. Phonological processes found in the form of symptoms of change, addition, reduction of phonemes in basic morpheme, metathesis.

Keywords: *cerbon language, phonological variation, absorption vocabulary, sundanese language*

Introduction

The terms *basa* and *Cerbon*, instead of *language* designations and *Cirebon*, used to honor the recognition of local residents regarding their identity. *Basa Cerbon* is actually the Javanese language used by teak speakers in *Cerbon*. It is thought that the Javanese language entered *Cerbon* in the 14th century [1]. In the social interaction of the community, especially in trade and social interactions, the two ethnic groups: Sundanese and Javanese give and receive each other to be equally used in inter-ethnic communication. This event allows language touch or language contact, mutual influence and exchange or absorption.

The openness of the Sundanese language community in *Cerbon* to accept the influence of the Javanese language and vice versa, is

likely to: (1) create language variations in the fields of phonology, morphology, or syntax, (2) raise the distance of Javanese vocabulary in *Cerbon* from Javanese which is considered standard, (3) creating Javanese vocabulary in *Cerbon*, and (4) giving birth to Javanese hybrids in *Cerbon*. On the other hand, Javanese speakers in *Cerbon* also have the opportunity to create phonological variations, lexical variations, hybrids, reduplications, metathesis, or locally made vocabulary [1] to enrich the vocabulary of *Cerbon*.

Among the several possible effects of mutual influence as mentioned above, the writing of this article narrows the focus of the discussion on the phonological variation of the Sundanese borrowed vocabulary. On the basis of the absorption of Sundanese vocabulary, the vocabulary of *Cerbon* looks different from the vocabulary of Javanese in Yogyakarta and Surakarta [1], [2].

Absorption Vocabulary and Language Variation

Absorption vocabularies or loan words are words that are absorbed from other languages and adjusted according to the language of the recipient [3]. Absorption vocabularies are words that are absorbed from other languages [4]. From the two opinions regarding absorption vocabularies, it can be formulated that absorption words are words that are absorbed from the source language into the target language. Absorption vocabularies can be viewed as a translation process. There are two types of absorption vocabularies based on the process, namely adoption and adaptation. Adopted absorption vocabularies are the process of absorbing the source language into the target language by taking the whole word, while adaptation Absorption vocabularies undergo changes in writing, pronunciation and spelling.

Language variation can occur in a morphological and phonological process and is caused by factors outside the language system. Factors outside the language system such as geographic location factors, user factors, social group factors, formality level factors or registers. These variations can be seen from the differences in the sound or pronunciation system, grammar, vocabulary, and how the geographical distribution is [5].

Phonological variation is a variation contained in a word that does not cause a difference in meaning [4], phonological variations often occur due to homorganic sounds, for example in *Cerbon* the sound

[a] becomes [ɔ] in the word [təntara] becomes [təntarə], between the phonemes / d / and / t /, for example plered [plɛred] into pleret [plɛret]. Between the phoneme / g / and / k / for example gletuk [glɛtək] becomes kletuk [klɛtək]. The phonological processes examined in this article include the symptoms of change, addition, reduction of phonemes in basic morpheme, metathesis and contraction.

Research Methods

The lexicon of *basa Cerbon* is the linguistic element mapped in the research results, while phonological variations are the focus of the discussion. This study uses a synchronous review with a qualitative approach. Sources of data are informants and from a Sundanese dictionary [6]. The object of the research is the *Cerbon* language speech which is mastered by all speakers in *Cerbon*. The research data obtained using a questionnaire and collected using the fieldwork or participant observation method [7]. Activities with informants were carried out through interview procedures and recording techniques. The research data analyzed using the symptoms of language variations. The results of data analysis presented descriptively argumentative.

Results and Discussion

From the results of the research, it found that the absorption vocabulary data from Sundanese used as *Cerbon* vocabulary words [1]. The phonological process of absorption of Sundanese language can distribute into symptoms without change, symptoms of change, addition, reduction of phonemes in basic morpheme, metathesis and contraction.

Phonological process of absorption vocabulary from Sundanese language with symptoms without change, namely:

Sundanese Variation	Phonological Variation <i>Cerbon Language</i>	English
bonteng [bɔntɛŋ]	bonteng [bɔntɛŋ]	cucumber
gero [gɛrɔ]	gero [gɛrɔ]	call
malawija [malawija]	malawija [malawija]	farming
sirsak [sirsak]	sirsak [sirsak]	soursop
upah [upah]	upah [upah]	give/pay

The phonological process of absorption vocabulary from Sundanese language with symptoms of change can be in the form of assimilation or dissimilation. The findings of symptoms of change include:

Sundanese Variation	Phonological Variation <i>Cerbon Language</i>	English
gurita [gurita]	grita [grita]	octopus
bandara [bandara]	pendara [pəndara]	<i>petai china</i>
bueuk [buök]	buwek [buwək]	owl
candak [candak]	cendak [cəndak]	hold on/take
kaperego [kapərəgɔ]	kepergok [kəpərgɔk]	get caught
keuyeup [køyöp]	kuyup [kuyöp]	rock crab
iteuk [itök]	itek [itək]	stick
situ [sitɔ]	setu [setɔ]	lake
laleur piteuk [lalör pitök]	laler pitek [lalər pitək]	<i>langau/fly</i>

The phonological process of absorption vocabulary from Sundanese with additional symptoms, namely:

Sundanese Variation	Phonological Variation <i>Cerbon Language</i>	English
itung [itɔŋ]	ngitung [ŋitɔŋ]	calculate
kacang suuk [kacaŋ suök]	kacang suwuk	peanut
	[kacaŋ suwɔk]	peanut
tongkrong [tɔŋkrɔŋ]	totongkrong [tɔtɔŋkrɔŋ]	squa
sabab [sabab]	sababe [sababɛ]	because

The phonological process of absorption vocabulary from Sundanese with reduction symptoms, namely:

Sundanese Variation	Phonological Variation <i>Cerbon Language</i>	English
peledug [pələdug]	pledug [plədug], [blədug]	dust
calingcing [caliŋciŋ]	clingcing [cliŋciŋ]	startfruit
gurita [gurita]	grita [grita]	octopus
ngoloyor [ŋɔləyɔr]	ngloyor [ŋləyɔr],	swim
	ngoyor [ŋyɔr]	swim
oge [ɔgɛ]	ge [gɛ]	also
sasagon [sasagɔn]	sagon [sagɔn]	sago
upah [upah]	upa [upa]	give wages

The phonological process of absorption vocabulary from Sundanese with metathesis symptoms, namely:

Sundanese Variation	Phonological Variation <i>Cerbon Language</i>	English
cekel [cəkəl]	kecel [kəcəl], gecel [gəcəl]	hold on
laleur piteuk [lalör pitök]	laler tipek [lalər tipək]k	<i>langau/fly</i>

Conclusion

Basa Cerbon absorbs Sundanese vocabulary considering its presence in the Sundanese-speaking community. Absorption vocabulary from Sundanese is found to be fully absorbed and has undergone changes

in writing, pronunciation and spelling. Phonological processes found in the form of symptoms of change, addition, reduction of phonemes in basic morphemes, and metathesis. The inclusion of the absorption of Sundanese vocabulary in *Basa Cerbon* enriches the vocabulary and makes it different from the Javanese language spoken in Yogyakarta and Surakarta.

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The Vowel Inventory in Patani Malay Dialect: An Analysis of Distinctive Features

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ABSTRACT

This paper identified vowel inventory in Patani Malay Dialect (PMD) through a distinctive feature analysis. The data were obtained through interviews with 20 informants consisting of 10 informants from Kampung Nad Kubur, Mukim Khautoom, Yarang District, Pattani Region; and the other 10 informants from Hua Saphan Sateng Village, Muang District, Yala Province. The data obtained were processed and analyzed using Halle's (1995) auto-segmental theory with geometric distinctive feature approach. The findings show that the PMD vowel inventory among previous researchers has not met the explanation. Most previous researchers have assumed that the PMD has an unmatched number of vowel phonemes because of different origins and locations. This paper shows that the PMD vowel inventory consists of 12 vowel phonemes with eight vowels phoneme [a], [e], [i], [o], [u], [ɔ], [ɛ], [ɨ] and four phonemes nasalize vowels of [u], [ɛ], [ɨ] and [a]. Typically, PMD vowels occupying the position of the first syllable or second syllable preceding the nasalized consonant will have nasal feature of the nasalized consonance by default as in the word /tanam/ [tanɛ] 'tanam', /malam/ [ma]ɛ 'malam'. The PMD vowel phoneme contains several distorted features such as [cons], [+son], [-nasal], [+sounds], either [coronal] or [dorsal] features.

Keywords: *inventory, distinctive features, vowel, dialects, Patani Malay.*

Introduction

This study examined the distinctive features of vowel inventory in Patani Malay Dialect, spoken by Melanesian Patani in Southern Thailand. In Thailand, the majority of people speak Thai for daily communication. Thai serves as the country's official language, national language, educational language, language of literature, and the *lingua franca* across different races. However, the majority of Melanesian

community living in Southern Thailand speaks Malay. The Malay language used is divided into two dialects, namely Patani Malay Dialect (PMD) and Satun Malay Dialect (SMD). The PMD is spoken in four southern border provinces of Pattani, Yala, Narathiwat; and four districts of Songkhla (Tiba, Sebayoi, Canak, and Nathawi). The PMD spoken in Southern Thailand is very similar to the Kelantan Malay Dialect [19], [16].

States that the use of PMD in daily communication in the southern border region also serves as the medium of instruction in private religious schools, educational institutions, boarding schools, and pre-schools, along with the standardized Malay language [14]. This study analyzed the vowel inventory in PMD, especially in Kampung Nad Kubur, Pattani province; and Hua Saphan Sateng Village, Muang District (central), Yala province, Thailand. Residents of these districts are native speakers of PMD who have long maintained the original form of PMD. Twenty informants were selected, consisting of five males and five females from both locations to obtain as much data as possible related to the vowel inventory.

Statements of The Problem

Previous studies showed that there are two different opinions about PMD. PMD vowel phonemes for all variations divide the vowel phoneme sound system into four variations, namely Pattani (PN) 1 and PN 2; Yala (YL) 1, YL 2 and YL 3; Narathiwat (NT) 1 and NT 2; and Songkhla (SK) 1 and SK 2 variations [14].

States that the PMD variations of PN 1 and PN 2 have 11 vowel phonemes consisting of eight oral vowel phonemes and three nasal vowel phonemes, described as follows [14]:

Table 1 The vowel phoneme inventory of PN 1 dan PN 2 variations

Tongue position	Front	Centre	Back
High	i	μ	u, uâ
Centre-high	e		o
Centre-mid	E, Eâ		
Low		a	, â

Source: Quoted and adapted from Ruslan (2005: 47)

The PMD variations of YL 1, YL 2 and YL 3 have 12 vowel phonemes consist of eight oral vowel phonemes and four nasal vowel phonemes, described as follows:

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Table 2 The vowel phoneme inventory of YL 1, YL 2 dan YL 3 variations

Tongue position	Front	Centre	Back
High	i	μ	u, uâ
Centre-high	e		o
Centre-mid	E, Eâ		
Low		a, aâ	,

Source: Quoted and adapted from Ruslan (2005: 47)

The PMD variations of NT 1 and NT 2 has 12 vowel phonemes consist of eight oral vowel phonemes and four nasal vowel phonemes, described as follows:

Table 3 The vowel phoneme inventory of NT 1 dan NT 2 variations

Tongue position	Front	Centre	Back
High	i	μ	u, uâ
Centre-high	e		o
Centre-mid	E, Eâ		
Low		a, aâ	,

Source: Quoted and adapted from Ruslan (2005: 47)

The PMD variations of SK 1 and SK 2 have 12 vowel phonemes consists of eight oral vowel phonemes and four nasal vowel phonemes, described as follows:

Table 4 The vowel phoneme inventory of SK 1 dan SK 2 variations

Tongue position	Front	Centre	Back
High	i	μ	u, uâ
Centre-high	e		o
Centre-mid	E, Eâ		
Low		a, aâ	,

Source: Quoted and adapted from Ruslan (2005: 57)

The four tables above show various total vowel phonemes in both oral and nasal vowels in the PMD variations of PN 1, PN 2, YL 1, YL 2, YL 3, NR 1, NR 2, SK 1, and SK 2. This is in contrast with the study of Suthasinee Suwanyuha (2006), who stated that the PMD has three types of vowels, namely the front vowel /i/, /e/, /E/, middle vowel /œ/, and back vowel /u/, /o/, / /, /a/.

Most previous research considered the inventory of Kelantan dialect vowels have eight vowels or more. However, found that the

Kelantan dialect has six phonemes vowel phonemes, which is consistent with the other Melanesian vowel phonemes and Malay dialects [3].

It can be concluded that there is a significant difference between the number of vowel phonemes investigated [14], [17]. Ruslan Uthai (2005) found that there are various PMD vowel phonemes in the provinces of Pattani, Yala, Narathiwat, and Songkhla; while Suthasinee Suwanyuha (2006) stated that there are only eight PMD vowels in total consists of three types of vowels (front, middle, and back vowel) named in namely /i, e, E, œ, a, u, o, /. Hence, this study aims to fill this gap by identifying the number of vocal inventories in PMD through distinctive feature analysis based on auto-segmental theory [14], [17].

Objectives of The Study

This study identified the number of vowel inventories in PMD through distinctive feature analysis based on Halle's (1995) auto-segmental theory through the geometric distinction feature approach.

Methodology

This study used qualitative design with both fieldwork and documentary methods. The fieldwork was carried out through three different methods, those are observation, interview method, recording method for 20 informants aged fifty years and above. Ten informants were from Kampung Nad Kubur, Mukim Khautoom, Yarang District, Pattani Region; and the other ten were Hua Saphan Sateng Village, Muang District, Yala Province. The fieldwork helped the researchers to explore and obtain in-depth information. The interview became an important part of the fieldwork to validate the observed data [10].

Halle's (1995) Geometric Distinctive Feature

Distinctive features were introduced by Trubetzkoy and Jakobson in 1958 to express the characteristics of a segmental phoneme. Another distinctive feature was also developed in the book *The Sound Pattern of English (SPE)* [5]-[6]. They assume that the concept of distinctive features is natural, which contains articulation, auditory, and perception mechanisms for all speakers of language [5]-[6]. Subsequently, distinctive features were developed and modified to create an improved phonetic structure that shows the production of phonemes from the lungs through vocal cords, throat cavities, nasal cavities, and oral cavities [7], [20].

There are two important aspects distinguishing features in the model, namely, *anatomical mechanisms* that describe phonetic sounds; and *facts* that show feature functions [7]. These features exist at different levels and are connected by a line. The distinctive features of geometry model can be seen as follows [7]:

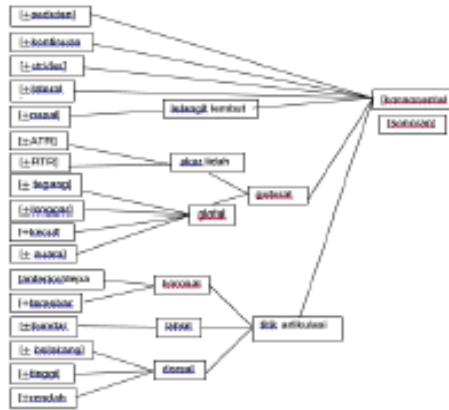


Figure 1 Halle's (1995) geometric distinctive features (Source: Adapted from Halle (1995))

features are divided into two parts, namely independent articulation tools and bound articulation tools. Free articulation tools consist of $[\pm\text{suction}]$, $[\pm\text{continuant}]$, $[\pm\text{strident}]$, and $[\pm\text{lateral}]$. These features are directly connected to the root. On the other hand, the articulation device is composed of six articulation devices, namely the soft palate, tongue root, glotal (larynx), labial, coronal and dorsal [7].

There are three main branches of geometric distinctive features [7]. The first branch is the *articulatory point node*, which consists of three main articulation nodes, namely the coronal, labial and dorsal nodes. Coronal node includes alveolar and palatal consonants consisting of $[\pm\text{anterior}]$ and $[\pm\text{distributed}]$ features. The labial node includes labial consonant only consists of the $[\pm\text{round}]$ feature; and the dorsal node includes the $[\pm\text{back}]$, $[\pm\text{high}]$, and $[\pm\text{low}]$ features. The second branch is the *gutural node*, which consists of oral consonants. This node includes the tongue root and larynx. The tongue root consists of $[\pm\text{loose}]$, $[\pm\text{wrinkled}]$, $[\pm\text{sound}]$, and $[\pm\text{tense}]$ features; while the larynx consists of $[\pm\text{RTR}]$ (retracted tongue root) and $[\pm\text{ATR}]$ (advanced tongue root) features. Last, the third branch named the *soft palate node* has a $[\pm\text{nasal}]$ feature consists of nasal consonants [7].

The Pmd Vowel Inventory

Vowels are sounds produced by air from the lungs coming out through the throat cavity and oral cavity continuously without any restrictions [2]. Vowel sounds are vocal sounds determined by the position of the tongue and the shape of the lips. Theorized that the difference between vowel sounds and consonant sounds, as well as the differences in distinctive features between vowels, are caused by the shape of the lips and the position of the tongue. In this case, the shape of the lips is differed by the round and flat shapes, while the position of the tongue is divided into high, low, front and back.

Previous studies show that the PMD has a total of eight vowel phonemes, namely, /i/, /e/, /E/, /a/, /↔/, /o/, /u/ and / / which produce eight vowel sounds, those are, [i], [e], [E], [a], [↔], [u], [o] and []. Typically, the inventory of vowel phonemes is arranged based on the position of the tongue, whether in the front, middle or back positions. The inventory of PMD vowel phoneme inventory is depicted as follows:

The PMD Vowels

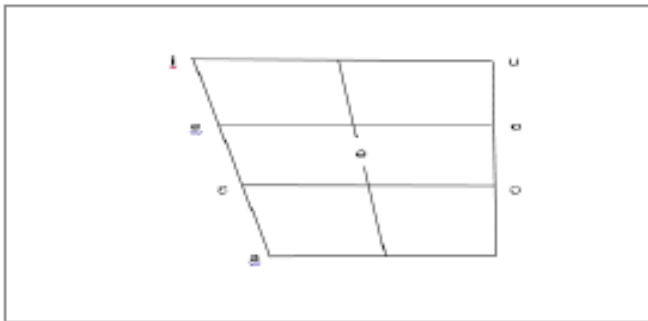


Figure 2 The PMD vowel phoneme inventory

Figure 2 shows that the PMD vowel phoneme inventory consists of three types that include eight phonemes, namely front vowel, middle vowel and back vowel. This vowel phoneme inventory is determined through the position of the tongue and the shape of the lips. The front vowel consists of the high front vowel /i/, the front half high vowel /e/, the lower half front vowel /E/ and the low front vowel /a/. The middle vowel consists of the middle vowel /↔/, which has two variations, namely the middle vowel [↔] and the flat backed vowel

[2]. The back vowel consists of the high back vowel /u/, the back half vowel /o/ and the lower half vowel /ɔ/. Samples of the PMD vowel phonemes inventory are listed as follows:

HS	NK	Maksud	English
[/ibukaki]	[/ibukaki]	mata kaki	ankle
[kaki]	[kaki]	kaki	feet
[bude]	[bude]	senjata/menembak	weapon/shoot
[pase]	[pase]	pasir	sand
[tEN)/]	[tEN)/]	tengok	look
[kEc&E]	[kEc&E]	kecek/cakap	talk
[k ^h anE)]	[k ^h anE)]	kanan	right
[/an)/]	[/an)/]	anak	child
[hij&a]	[hij&a]	hijau	green
[/ula]	[/ula]	ular	snake
[timo)]	[timo)]	timbul	arise

In addition, the PMD has four types of nasal vowels. Ruslan (2005) noted that the nasal vowel of the PMD consists of [u], [E], [ɔ] and [a]

DMP	Maksud	English
[busu)/]	busuk	rotten
[kutu)/]	mentah	raw
[kɔpE)/]	kempit	wedge
[pEcE)/]	picit	pinch
[k t ^h)]	kotok	?
[sɔÄ)]	serak	scatter
[kɔca)/]	kecap	soy sauce
[μÄa)/]	sapu	sweep/broom

The DMP also has derivative vowel resulted from the process of vocal censorship. It is the process of changing the vowel into nasal because of the nasal features from the nasal consonants such as [ma] kE] 'makan', [mi)nu)N] 'minum', and others.

The Representation of PMD Vowel Distinctive Features

4.3.1. The Representation of Vowel Distinctive Features. Based on Halle's (1995) distinctive geometric features, there are three main

branches to determine whether a feature is phoneme segment, vowel phoneme, or a consonant phoneme. The first branch, named the *articulatory point nodes*, consist of coronal, labial and dorsal nodes. The second branch, named the *guttural node*, consists of oral consonants and laryngeal nodes that include terminal features $[\pm RTR]$ and $[\pm ATR]$. Last, the third branch is the soft palate node that consists of the nasal consonant. Based on Halle's (1995) table of geometric distinctive features, the representation of PMD vowel distinctive features is as follows:

Table 6 The Distinctive Faetures of PMD Vowel

Feature	The vowels of Patani Malay Dialect							
	i	e	E	a	«	u	o	
Syllabic	+	+	+	+	+	+	+	+
Sonoran	+	+	+	+	+	+	+	+
Sounded	+	+	+	+	+	+	+	+
Consonantal	-	-	-	-	-	-	-	-
High	+	-	-	-	-	+	-	-
Low	-	-	-	+	-	-	-	-
Back	-	-	-	-	-	+	+	+
Front	+	+	+	+	-	-	-	-

Halle's (1995) geometric distinctive model is depicted in a tree diagram as follows:

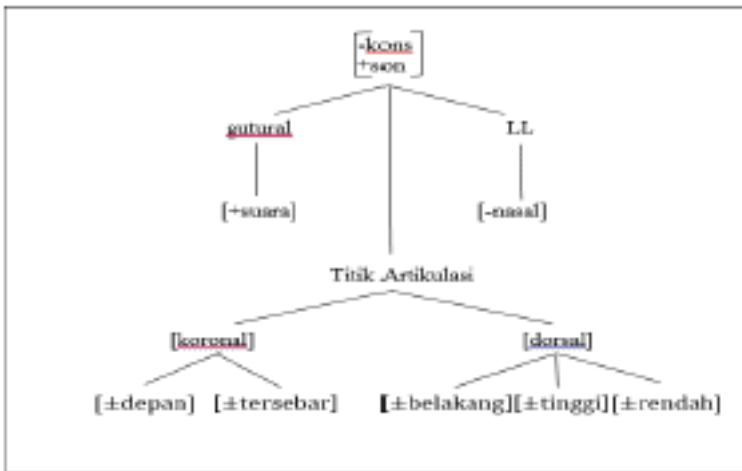


Figure 3 The distinctive features of DMP vowel

Diagram 4.1 above shows that the PMD vowel phoneme contains several distinctive features such as [-cons], [+son], [-nasal], [+sound], or [coronal] features that consists of [\pm forward] [\pm spread] *or* [dorsal] that includes [\pm back] [\pm high] [\pm low]. Hence, examples of Halle's (1995) geometric distinctive features of vowels /a/ and /e/ are illustrated as follows:



CONCLUSION

In sum, the PMD vowel phoneme consists of eight vowel phonemes, namely [i], [e], [a], [\leftrightarrow], [o], [u], [E], [] *and* four nasal vowel phonemes, those are [u], [E], [] and [a]. This is in line with [14], who stated that the PMD has 12 vowel phonemes including eight oral vowel phonemes and four nasal vowel phonemes in YL, NT and SK. Meanwhile, PN has 11 vowel phonemes. In addition, derivative vowels resulted from the influence of nasal consonants in the PMD are consistent with other languages. For example, in [ma]k] 'makan', [mi nu]N] 'minum', and other words with derivative vowels resulted from the process of vocal cognition (the process of changing the vowel into nasal because of nasal features from the nasal consonant).

This study points out that the auto-segmental theory of vowel inventory in the PMD has provided an in-depth understanding of phonetics from the series of segments mapped through connecting lines. In conclusion, Halle's (1995) geometric distinctive feature approach can validate the vowel inventory in the PMD with compiled grammatical output.

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Restoration of Pancasila Values in Coastal and Archipelagic Management in The Era of Globalization

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ABSTRACT

Indonesia is the largest archipelago country in the world for it covers thousands of islands, having total length of 95,181 km coastline, the second longest after Canada. Indonesia is home to abundant natural resources, yet it is poorly exploited. This study aims to philosophically analyze the integrated coastal and archipelagic management based on Pancasila values to achieve social welfare and prosperity. This is a non-doctrinal legal research, utilizing philosophical and conceptual approaches under participatory paradigm. Results of this study show that state bears the responsibility in granting permits to individuals or private parties. However this does not lessen state authority over supervision (toezichhoudensdaad), management (beheersdaad), administration (bestuursdaad), and policy making (beleid). There are two philosophical values of state authority. First, state holds full control over coastal areas and supervise the management. Second, state authority represents public trust toward its government to strive for optimum management in order to actualize social welfare. It implies that every permit granted by the government to any private party or individual must be based on the intention of creating social welfare and justice. State authority is the basis for carrying out governmental actions in coastal and archipelagic management.

Keywords: restoration, coastal management, Pancasila, globalization.

Introduction

Coastal areas are dynamic habitats where land and marine ecosystems meet. Brackish water is a breeding ground for marine organisms, thus it has high resource potential. However, littoral zone is vulnerable to environmental damage due to excessive exploitation. Besides, conflict of interest among stakeholders in the use of coastal areas worsens the condition. Lawsuit on the reclamation of the north coast of Jakarta as filed to the Jakarta Administrative Court, is an example of conflict over coastal area. This condition represents recognition of locals right

to live, environmental preservation for the sustainability of terrestrial and marine ecosystems, as well as economic interests of the local population.

Spatial conflict occurs due to changes in space allotment. For example, reclamation which changes the spatial use (conversion) of waters around mangrove forest into pond cultivation. This is detrimental to the livelihood of traditional fisherman who depend on fish catches. Conversion of mangrove waters into ponds will harm naturally grown fishery resources and marine biota. Similar happens to conflict between oil/ natural gas industry and fishpond farmers.

Based on the description above, problems of this research were formulated. First, this study describes how restoration of Pancasila values affect coastal and archipelagic management to realize social welfare and prosperity in this globalization era. Besides, what are the implications of restoration of Pancasila value in coastal and archipelagic management in this globalization era? This study aims to seek, find and analyze how restoration of Pancasila values affect coastal and archipelagic management to realize social justice and prosperity during this globalization era; and to analyze the implications.

Research method

This is a non-doctrinal legal research which aims to reveal coastal problems and its existing complexities. This study set forth justice and welfare based on Pancasila values using philosophical and conceptual approaches. This research considers participatory paradigm, as dynamics of society and legal problems have become part of social system. Ontologically law does not only represent norms, but also values of a living society; law is extracted from religious principles and cultural values of Indonesian society. The forms of this basic value are religious value, humanity, unity, democracy, and social justice [1]. In terms of epistemology aspect, it does not only look at law in the sense of state law. While in terms of axiological aspect, it is related to the objectives of law, namely justice, legal certainty, and benefit.

Result and Discussion

Restoration of Pancasila values in coastal and archipelagic management.

Restoration means returning or restoring to original state [2]. Contextually, it means conflicts related to coastal and archipelagic

management must be immediately returned or restored to the state of peace, order, prosperity, and justice based on Pancasila values.

Efforts to restore Pancasila values must be carried out simultaneously as a national program. Therefore, it is expected that restoration of Pancasila values will bring out justice and prosperity, especially in terms of coastal and archipelagic management. Soekarno, who gave the first iteration of Pancasila, proposed the principle of social welfare. In his speech of June 1st 1945, Soekarno emphasized basic state philosophy (*filosofische grondslag*). He pointed out that there shall be no poverty in welfare. He also strongly refused to comply with capitalists [3].

Pancasila depicts justice as social welfare for every people of Indonesia. Justice value is based on and inspired by the first, second, third, and fourth principles of Pancasila. Social welfare applies in all aspects of life; material and spiritual. It includes justice in economic, political, legal, social and cultural fields. Social welfare in the context of coastal area management requires three elements. They are rule of law, law enforcement, and adequate knowledge on the potential utilization of coastal resources [4]. These elements are necessary to avoid conflict. Therefore, legal drafting on coastal and archipelagic management shall accommodate interests of investor and local communities. Sievanen pays attention to local people who are often marginalized regardless how long their native ancestors had resided in the area. [5] Legal juridical concept related to coastal and archipelagic management shall be carried out with due respect and recognition for the unity of customary law communities, their traditional rights and local people. In other words, any legal product shall be able to integrate interest within coastal area. Integrated management represents dynamic and continuous process in making decisions on the use, development, as well as protection of coastal area and marine resources. It requires five basic principles, namely legal certainty, openness and community participation, integration, management decentralization, and sustainable development [6].

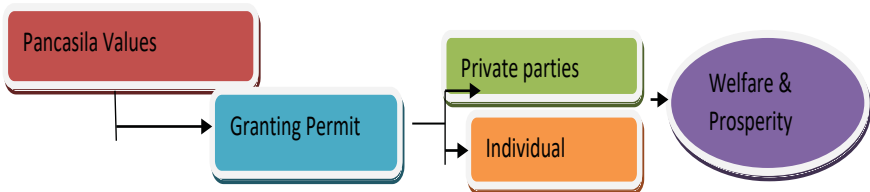
Implication of the restoration of Pancasila values in coastal and archipelagic management.

Restoration of Pancasila values in coastal management implicates realization of Pancasila values. State bears the responsibility to realize this implications by applying strict licensing mechanism before issuing

permit to individuals or private parties. Note that, granting permit does not lessen state authority over supervision (*toezichthoudensdaad*), management (*beheersdaad*), administration (*bestuursdaad*), and policy making (*beleid*). There are two philosophical values of state authority. First, state holds full control over coastal areas and supervise the management. Second, state authority represents public trust toward its government to strive for optimum management in order to actualize social welfare. Thus, permit granted by the government to any private party or individual must be based on the intention of creating social welfare and justice.

Pancasila still symbolize guiding star, according to Mahfud MD, it has four values as a guiding principle, first: The law must not impose national disintegration. The law should be able to provide protection to the entire nation and able to guarantee the integrity of the nation. Second, social justice must be guaranteed by law so that there is no exploitation against the weak in free competition era. Third, legal development must be carried out in a democratic manner. Therefore, efforts to build democracy are necessary, since it is in accordance with the principle of a rule of law (nomocracy). Fourth, the law must not create differences in treatment for fellow citizens, but be able to encourage the realization of religious tolerance on the basis of humanity and civility. [7] Therefore, Pancasila remains the ideology of the Indonesian State even in this era of globalization.

Problematic management permit which does not bring benefit to prosperity of the people and social welfare, will only cause conflicts and thus can be filed to the Administrative Court. AAUPB or prevailing laws and regulations can be used as "testing stones" to contest permits that are detrimental to public interests. The Administrative Court has the authority to declare null and void such contested permit. The chart below illustrates this description.



Social welfare and prosperity can be initiated by denying permit submission which substantially may cause legal problem within society, namely poverty. Welfare connotes to fulfillment of one's physical and spiritual needs; while poverty means failure to fulfill life necessities, either it is relative poverty or absolute poverty. Lack of resources to meet the basic daily needs is a characteristic of absolute poverty. There are at least five basic needs that shall be fulfilled, namely: clothing, shelter, food, health, and education [8].

Conclusion

1. Effort to restore the values of Pancasila must be carried out simultaneously or accross the nation. Therefore, restoration of Pancasila values in coastal and archipelagic management can be realized to achieve social welfare and prosperity.
2. Restoration of Pancasila values implicates manifestation of the values itself. State bears the responsibility to realize this implication by applying solid licensing mechanism for individuals or private parties.

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The Influence of Social Media Marketing (4C) Using Instagram on BananaBim's Repurchase Intention

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ABSTRACT

The purpose of this study was to determine the effect of social media marketing (4C) using Instagram on repurchase intention (a study on BananaBim in the city of Palu). The object of this research is the people of Palu who have bought BananaBim products and are followers of the BananaBim Instagram account. This research method uses quantitative research methods with descriptive causal research type. The sampling technique used was purposive sampling using multiple linear regression. Data collection was carried out through google form with 75 respondents. The results showed that all independent variables consisting of context, communication, collaboration and connection simultaneously had a significant effect on repurchase intention (Y) (Study at BananaBim in Palu city) of 5, 12%. The variable that dominates in this study is the context variable which has a magnitude of influence is 37.2%. Based on the results of this study, BananaBim should maintain the social media marketing (4C) that has been done to keep consumers from making repurchases.

Keywords: *social media marketing, repurchase*

Introduction

The emergence of the internet has changed the way people communicate, the availability of a better internet network for the community will make it easier for people to communicate [1]. The Internet is a broad public network that originates from computers and connects all types of users around the world to each other so as to get information [2]. The data obtained by APJII (2017) explains that the number of internet users in Indonesia in 2017 has reached 143.26 million people or equivalent to 54.68 percent of the total population

of Indonesia. This number shows an increase of 10.56 million people from the survey results in 2016. It can be seen from the 2017 APJII picture Social media is in second place with a result of 87.13%, meaning that most Indonesians use the internet to access social media.

Instagram is currently a social media that is on the rise with monthly active users reaching 1 billion users with an increase of around 200 million from 2017 and ranks the 4th most used social media in Indonesia after YouTube, Facebook and Whatsapp. In November 2017, there were 25 million business community accounts in Indonesia that used Instagram which were dominated by Small and Medium Enterprises (UKM). This figure jumps when compared to the number of business community accounts of 15 million in just about 4 months, or since July 2017. 200 million of them have actively visited business profiles every day. j Cruisdigital.com (2018)

There are so many social media users, especially Instagram, so business people can take advantage of Instagram social media to reach the market. One businessman who is aware of the influence of technological advances in advancing his business is BananaBim, which is one of the businesses owned by residents of the city of Palu where this business is engaged in the culinary sector. BananaBim was founded on January 29, 2018 BananaBim is a business in the form of snacks made from bananas with the types of bananas used, namely plantains and paddy bananas which have been processed and then produce nuggets with various flavors and a mixture of toppings provided. BananaBim itself has the nickname the king of banana- In Town which means King Banana in the city, this epithet appears when BananaBim present in the city of Palu and able to attract the public to make BananaBim as snacks.

The researchers compared BananaBim's marketing methods with those of its competitors. BananBim's competitors do the same marketing way using Instagram, but there are a few techniques that make BananBim stand out. Competitors are not more active in updating the testimonials given by their customers. Meanwhile, BananaBim did a re-posting of consumer testimonials to the BananaBim account. Although the number of comparisons of followers between competitors is more than the followers owned by BananBim, BananaBim is able to compete as evidenced by the total sales in a day of around 250-300 boxes.

The success of BananaBim's Instagram social media marketing is of course inseparable from consumer behavior itself, through uploaded photos and videos on the @bananabim_ Instagram account. We can see how many people are updating the status of BananaBim products or looking for information. We can see that the number of followers on the BananaBim Instagram account is growing every day and has reached thousands of followers.

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The marketing mix has an important role in influencing consumers to buy a product or service offered by the company. The elements of the marketing mix consist of all the variables that the company can control in order to satisfy consumers. understanding the marketing mix according to Kotler and Armstrong [3] that "Marketing mix is good marketing tool is a set of products, pricig, promotion, distribution, combined to produce the desired response of the target market".

The marketing mix contains a set of marketing tools known in the term 4P, namely product, price, place, and promotion, while in service marketing it has several additional marketing tools such as people, physical evidence (physical facilities), and processes (process), so it is known as 7P. Customer satisfaction is the key to creating customer loyalty.

One important aspect of the marketing system that needs to be considered is consumer behavior. Consumers are the ultimate goal of companies in marketing their products. However, consumers have diverse attitudes and behaviors in shopping for the products offered. For that, companies in creating their products must be in accordance with consumer tastes. Related to this, there are consequences of various stimuli by companies in the environment.

Consumer behaviors is the study of how individuals, groups and organizations select, buy, use, and how goods, services, ideas, or experiences to satisfy their desire kebutuhan and [3]. The understanding of consumer behavior from some experts means that researchers can understand that consumer behavior is a decision making to make purchases, use goods or services directly so as to meet needs and wants.

Social media is a website-based feature that can form networks and allow people to interact in a community. Applications for social media ourselves, we can carry out various forms of exchange, collaboration, and get to know each other in the form of visual and audiovisual writing, for example, such as Instagram. Social media itself has a different understanding for each expert.

Kotler and Keller [3] define that "social media are a means for consumers to share text, images, audio, and video information with each other and with Companies, and vice versa." This means that social media is a means for consumers to share text, images, and informational videos with each other and with companies to the contrary.

The ease of creating an account on social media is one of the driving factors for many people to use social media as a means of communication with the outside world. Without exception companies that see opportunities in social media that can be used as marketing media. One example of social media that is often used in marketing is the Instagram social media application.

Rangga Aditya [4] defines Instagram as "Instagram is a combination of words that come from instant and gram, like a polaroid camera which in its time was better known as instant photo, while the word gram comes from the word telegram where the way telegram itself works is to send information to other people quickly".

Researchers can understand that Instagram is an application used to upload photos quickly. As time goes by, Instagram has also begun to innovate, namely Instagram social media users can post several forms of video. Repurchasing interest occurs after consumers make purchases that are influenced by pleasure, hobbies and loyalty to the product so that consumers get satisfaction from the same product. The satisfaction that consumers get will affect their inner thinking to make repeat purchases.

Repurchase is "repurchase intention of the individual's judgment about buying again a designated service from the same company, taking into account his or her current situation and likely circumstance" [5]. Repurchase intention is a desire or desire that arises in oneself. consumers to buy products or services that they like and have previously bought them, based on the results of an evaluation of the suitability of the

product or service's performance in the hope that consumers can make repeat purchases.

Consumers will have more intentions to repurchase a product or service if the value offered by a product or service is of very good value. This value really gives a positive and attractive impression. Consumers are often interested in making purchases because they are based on a desire accompanied by emotions so that the purchase intention increases.

The framework describes the independent variable. It can be seen that the independent variables in this study are social media which consists of context (X1), communication (X2), collaboration (X3), connection (X4), and the dependent variable, namely repurchase intention (Y) based on existing explanations, researchers can arrange the framework is in the following image:

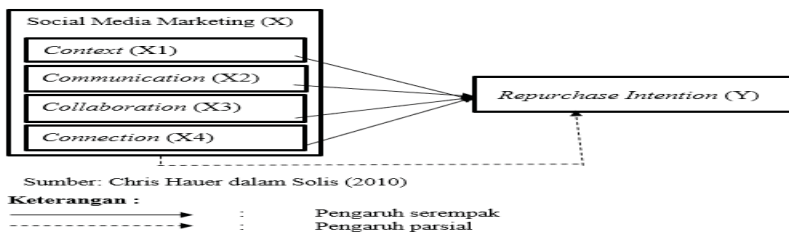


Figure 1 Research Framework

Metode research

Type of this research is the causal decriptive which carried out to determine the independent variables, either one or more variables (independent) without making comparisons, or connect between one variable with another variable. Data management techniques used for this research are primary and secondary data [6].

Population is a generalization region consisting of the object or subject that has certain qualities and characteristics defined by the researchers to learn and then withdrawn kesimpulannya a [6]. This research is intended with the population, namely the people of Palu city who have visited and are exposed to information about bananabim on Instagram social media. The data management techniques used for this research are: 1) Observation is a process to obtain first-hand data by observing people and places at the time of the research ; 2)

Interview is a data collection technique if the researcher wants to conduct a preliminary study to find problems that must be researched, and also if the researcher wants to know the things of the respondent that are more in-depth and the number of respondents is small / small ; 3) Documentation, is evidence of research activities that immortalized through a device such as a camera to describe the situation at the time of the study ; 4) The questionnaire is a data collection technique which is done by giving a set of questions or written statements to the respondent to be answered [6] .

According to Sugiyono [6], the sample is part of the number and characteristics of the population. To determine the size of the sample, the researcher refers to the theory of Roscoe in Sugiyono, if the research will conduct a multivariate analysis (correlation or multiple regression, for example), then the number of sample members is at least 10 times the number of variables studied (independent + dependent). Based on these considerations, the authors determined the number of samples with the provisions of 15 x 5 variables, namely 75 respondents, thus the sample of this study was 75 people. The nonprobability sampling technique used purposive sampling technique, according to Sugiyono, nonprobability sampling is a sampling technique that does not provide equal opportunities / opportunities for each element or member of the population to be selected as a sample.

Sampling in this study is nonprobability sampling. Non probability sampling is a sampling technique that does not provide equal opportunities / opportunities for every element or member of the population to be selected as samples [6]. The technique used in this research is purposive sampling. Purposive Sampling is a sampling technique with certain considerations, for example conducting research on food quality, so the data source sample is food experts, or research on political conditions in an area, so the data source sample is people who are political experts [6].

Therefore, the researchers determined the criteria for respondents who were sampled in this study were respondents who had received information through Instagram social media, searched for information on BananaBim through Instagram social media, bought BananaBim because of information from Instagram social media, had bought back BananaBim products, become a BananaBim Instagram follower, domiciled and residing in Palu City.

5-point Likert is used to measure attitudes, opinions and perceptions of a person or group of people about social phenomena [6]. The measurement scale used in this study is the Likert scale. The Likert scale is used in measuring the attitudes, opinions and responses of a person in a collection of individuals about existing phenomena. The answer to each instrument item that uses the Likert scale has a gradient from very positive to very negative, in the form of words and then given a score.

Results and Discussion

The validity test is a tool that assesses what should be measured, as well as to find out whether the instrument is valid. The minimum requirement to be considered eligible is $r = 0.3$. So, the correlation between items with a total score of less than 0.3 means the items in the instrument are declared invalid. Conversely, if the total score is equal to 0.3 or more (at least 0.3) then the instrument is declared valid [6]. The results of the research for the validity test in this study can be shown in Table 1 as follows:

Table 1. Results of the Research Instrument Validity Test

Research Variable Dimensions	Statement Items	Corrected Item-Total Correlation	r-critical	Cronbach Alpha (α)
Context (X_1)	X_{1-1}	0.489	0.30	0.648
	X_{1-2}	0.489	0.30	
Communication (X_2)	X_{2-1}	0.458	0.30	0.622
	X_{2-2}	0.458	0.30	
Collaboration (X_3)	X_{3-1}	0.682	0.30	0.806
	X_{3-2}	0.682	0.30	
Connection (X_4)	X_{4-1}	0.430	0.30	0.602
	X_{4-2}	0.430	0.30	
Repurchase Intention (Y)	Y_1	0.558	0.30	0.762
	Y_2	0.521	0.30	
	Y_3	0.556	0.30	
	Y_4	0.477	0.30	
	Y_5	0.595	0.30	

According to the results of the validity test outlined in table 1, it is proven that all items stated in the researcher questionnaire are declared valid. This is in line with the theory put forward by Sugiyono as well as explaining that the question items in this study have correlation, because the value (total correlation) is positive while having a value greater than 0.3. The factor analysis formula used is as follows:

$$Y = a + b_1.X_1 + b_2.X_2 + b_3.X_3 + b_4.X_4 + 1$$

The equation above shows several items that can be explained as follows:

Y = Repurchase intention; α = Constant; b_1 - b_5 = Regression coefficient of each variable; X_1 = Context; X_2 = Communication; X_3 = Collaboration; X_4 = Connectin

Research results

The research leader is the people of Palu city who have received information about BananaBim through Instagram social media marketing and have bought Bananabim products in Palu and become followers of the @bananabim_ Instagram account. The results of the sample calculation using the Roscoe theory in Sugiyono and obtained a sample of 75 respondents. The research sample was drawn using a non-probability sampling technique which was determined by purposive sampling. Furthermore, data collection was carried out by distributing research questionnaires online. Data collection in this study took approximately 2 months.

The classical assumption test is used to detect problems in testing multiple linear regression models. This research can be overcome by using the classical test model form. The form of the classical assumption test model of the normality of the regression equation results can be described as the basis for decision making where if the data spreads around the diagonal line and follows the direction of the diagonal line, the regression model fulfills the normality assumption.

The first test, namely the normality test, aims to test whether in a linear regression model the related variables and independent variables both have a normal distribution or not [7]. A good regression model is to have a normal or near normal data distribution. Normality detection is done by looking at the distribution of data (points) on the diagonal axis and graphs.

The statistical test results, each question item with dots follows the direction of the diagonal line, so it can be assumed that the linear regression model fulfills the normal assumptions. The next test is the multicollinearity test which aims to test whether the regression model has a correlation between the independent variables. A good regression model should not have a correlation between the independent variables.

Society 5.0 Fostering Spirituality and Humanity

The second test in this study, namely the multicollinearity test, aims to test whether the regression model has a correlation between independent variables. A good regression model should not have a correlation between the independent variables. Multicollinearity is a situation where the independent variables are correlated with one another.

Multicollinearity can be seen from the Variance Inflation Factors (VIF) and Tolerance which can identify the presence or absence of multicollinearity problems. If the VIF value is <10 or the Tolerance value is > 0.10 , then the regression model used in this study is considered to have no multicollinearity problem between the independent variables [7]. The results of the multicollinearity test in this study can be seen in table 2 below:

Table 2. Multicollinearity Test

Variable	Tolerance	VIF	Information
Context (X_1)	0.778	1,286	≤ 10
Communication (X_2)	0.921	1,086	≤ 10
Collaboration (X_3)	0.752	1,330	≤ 10
Connection (X_4)	0.926	1,079	≤ 10

Tolerance value that is getting smaller or closer to 0 and the VIF value if <10 indicates that the model does not occur multicollinearity. Based on table 4 above, it can be seen that the Tolerance value obtained is close to 0 and the VIF value <10 . So, a low tolerance value is the same as a high VIF value (because $VIF = 1 / \text{tolerance}$). The cut off value that is commonly used to indicate multicollinearity is a tolerance value <0.10 or equal to the VIF value <10 . Based on such descriptions and calculations, it can be concluded that in this study there is no multicollinearity problem.

The next stage, namely heteroscedasticity testing, aims to test whether in the regression model there are inequalities between variables from the residuals of one observation to another. The consequence is that the heteroscedasticity in the regression model is that the estimators obtained are inefficient, both in small and large samples.

The results of the heteroscedasticity test carried out on each question by the researcher, the residual emission diagram does not form a pattern, where the dots are spread out. The next stage, namely

proving the hypothesis in this study, is carried out using multiple linear regression analysis tools, where the analysis tool is used to find out how the dependent variable can be predicted through two or more independent variables as predictive factors.

This study tries to see how much influence 4C using an isntagram has on the repurchase intention of BananaBim in Palu City. The level of confidence used in this study to calculate the effect using multiple linear analysis, namely the 95% confidence level with a significant level ($\alpha < 0.05$). the results of multiple regression analysis are obtained in table 5 below:

Table 3. Multiple Linear Regression Calculation Results

Dependent Variable Y = Repurchase intention					
Independent Variable		Unstandardized Coefficients		Standardized Coefficients	Sig t
		B	Std. Error	Beta	
1	(Constant)	0.358	0.458		0.438
	Context (X ₁)	0.335	0.085	0.372	0,000
	Communication (X ₂)	0.154	0.061	0.218	0.015
	Collaboration (X ₃)	0.279	0.085	0.317	0.002
	Connection (X ₄)	0.148	0.062	0.206	0.020
Multiple R = 0.716 Sig. F = 0,000 R Square = 0.512 $\alpha = 0.05$ 95% confidence level					

The results of the regression test in table 5 above obtained that the sig F = 0.000 value is smaller than $\alpha = 0.05$, thus it can be concluded that the four independent variables, namely the context variable, communication, collaboration, connection under study, together or simultaneously provide a significant influence on the repurchase intention variable on BananaBim in the city of Palu, amounting to 5.12%, so this research hypothesis is accepted

Discussion

The regression test results, it is proven that the context variable on social media that affects repurchase intention in this study, namely the delivery of messages through uploads on Instagram accounts looks attractive with the presence of features and matching color combinations and captions that are so attractive with promo offers and

discounted prices. . Innovations are made so that the Instagram gallery looks neat and superior to competitors, then there are promo offers and price discounts to keep consumers from getting bored seeing BananaBim's Instagram account.

The communication variable in social media that affects repurchase intention in this study is an effective promotional tool in BananaBim using Instagram as a promotional tool to consumers, so that consumers don't have to come to the outlet if they want to find out what menus and toppings are available. The last indicator is admin response, BananaBim is quick to repost again when consumers mark a post on BananaBim's Instagram account. The communication variable is always a matter of consideration for consumers in making repurchase intentions at BananaBim in the city of Palu which can have a positive impact on consumer decisions to repurchase, and companies are expected to always maintain and maintain variable communication indicators

The collaboration variable has a significant effect on repurchase intention. As the indicators used in the collaboration variable, namely understanding information about products and responding to information about products. Consumers can easily understand and respond to information about additional toppings, free topping, there are special menus that are not sold every day, even events that are held by BananaBim. The collaboration variable is always a matter of consideration for consumers in making a repurchase or repurchase intention at BananaBim in the city of Palu.

The connection variable has a significant effect on repurchase intention. How the indicator used is the connection variable, namely the ease in interacting between the giver and recipient of the message, consumers easily make purchases because BananaBim has collaborated with online motorcycle taxis. The reciprocal relationship indicator gives BananaBim loyal customers the opportunity to get special gifts on BananaBim special days. This opinion will mean that the company's ability to interact with consumers to fulfill their desires is closely related to the way the company works so that it can keep consumers from making repurchases.

Conclusion

Social media marketing variables consisting of context, communication, collaboration and connection using Instagram simultaneously have a significant effect on repurchase intention at BananaBim in the city of Palu. Context variable has a significant effect on repurchase intention of BananaBim in Palu city. The communication variable has a significant effect on repurchase intention of BananaBim in the city of Palu. The collaboration variable has a significant effect on repurchase intention at BananaBim in the city of Palu. The connection variable has a significant effect on repurchase intention of BananaBim in the city of Palu. BananaBim's business is always promoting continuously and updating the BananaBim blog account, besides that BananaBim can also add other social media for promotion such as Facebook and WhatsApp applications. BananaBim speeds up the consumer ordering process, especially in the field of online ordering such as grabfood. So that there is no cancellation of orders from both parties. Good service will have a good impact. So that bad service will hinder one's actions in making repurchase intention. BananaBim is quick to spot competitors using social media as a marketing tool. One of them is by doing something that can keep consumers looking at BananaBim and keep the trust of consumers so that they can make repurchase intention on an ongoing basis. For example, by giving discounts on free delivery costs and extra portions to consumers. For future researchers who want to research or continue this research, it is advisable to continue and develop this research by looking for other variables that can affect repurchase intention in the context of social media marketing using Instagram.

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