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# PROCEEDING

**INTERNATIONAL CONFERENCE OF ETHICS ON  
BUSINESS, ECONOMICS, AND SOCIAL  
SCIENCE (ICEBESS)**

***"SURVIVING THE PANDEMIC: EDUCATION AND BUSINESS  
STRATEGIC EMPOWERMENT AS A KEY FACTOR IN  
REVITALIZING NATIONAL ECONOMY"***

**HOSTED BY FACULTY OF ECONOMICS  
UNIVERSITAS NEGERI YOGYAKARTA  
YOGYAKARTA - INDONESIA**



October 15th-16th, 2021

**INTERNATIONAL CONFERENCE OF ETHICS ON BUSINESS, ECONOMICS, AND  
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**Topics:**

**“Surviving the Pandemic: Education and Business Strategic Empowerment as A Key  
Factor in Revitalizing National Economy”**

**Grand Inna Maliboro, 15-16 Oktober 2021**

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**ICEBESS** is an annual conference held by Faculty of Economy, Universitas Negeri Yogyakarta since 2014, responds the issues of Management Challenges, Information Technology and Global Risk Impacts on Economics and Business Education. Amidst the current Covid-19 outbreak, this conference promote ideas related the effect of the outbreak. This conference responds to the issues related to the impact of those on economics, management, accounting, and education. The current theme in this conference is Surviving the Pandemic: Education and Business Strategic Empowerment as A Key Factor in Revitalizing National Economy. Previous ICEBESS session (2020) lead scholars to respond to the issues of Management, Information Technology and Global Risk Impacts on Economics and Business Education in the context of Covid19 disruption in future education and manpower planning. The global economy 2021 is facing an increased risk of stagnation, climate change is striking harder and more rapidly than expected, and a fragmented cyber space threatens the full potential of next generation technologies — all while citizens worldwide protest political and economic conditions, and voice concerns about systems that exacerbate inequality. Accordingly, ICEBESS continuously tries to invite scholars, practitioners, and students to respond to the issues.

Yogyakarta, Oktober 2021

Dr. Siswanto, M.Pd.

The Dean of the Faculty of Economics

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# A Classroom Action Research: Emerging Technology in Blended Learning to Enhance Social Science Students' Learning Interests

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**Abstract**—This research was intended to know the ways to improve social science students' learning interests in class VII B at State Junior High School 2 Pakem using blended learning. This research utilized classroom action research proposed by Kemmis & Mc Taggart. It consisted two cycles, whereas each cycle contained planning, action, observation, and reflection. It covered three meetings in each cycle. Observation, take notes, documentation, questionnaire, and test were utilized to be the data collection method. The instruments used were questionnaire, documentation, students and teachers' observation sheet, and tests to know the quality of students' learning process. Data analysis technique in this research used qualitative descriptive analysis. The result shows that blended learning, combining a conventional and virtual class which the characteristics related to each other was used to improve social science students' learning interests in class VII B at State Junior High School 2 Pakem. Students engage in the learning process without and with teachers' guidance. Students were expected to be independent learners. This learning strategy improved students' learning interests which can be seen from the students' average score in cycle I and cycle II. The first cycle produced 63,5% average score while it produced 81% in the second cycle. The result passed the targeted minimum average score since it was more than 7.5.

**Keywords**— Learning interests, social science learning, blended learning

## I. INTRODUCTION

Education is a process of human development. It is stated in in the constitution 1945 No 20-year 2003 about national education system which is explained in Surahman (2017: 2) elaborating that education is a conscious means and planning to develop skills and characters and realize an active learning process to develop students' potentials to have spirituality, self-control, character, intelligence, virtue, and skill needed by themselves, society, nation and country. It is intended to have serious attention in all educational aspects to develop human resource quality.

Education is an important need to guarantee life span in facing this competitive era. School is an institution which becomes one of factors determining the success of education. One of the important factors is teachers. Teachers are expected to create fun and interesting learning environment to increase students' learning interest.

Creating fun and interesting learning is not easy as it occurs in social science learning. In fact, social science learning process that only takes place in the classroom directed to memorize, not to build or develop students' characters and potentials. Approach in learning process is still dominated by the teachers (teacher oriented). Unfortunately, this teacher-oriented approach is no longer relevant applied to current learning. Teacher-centered learning does not provide opportunities for students to learn

actively in the classroom. There are still many teachers who use lecture method without being balanced with interactive learning to independent learners. This condition makes the learning process less interesting and affect students' interest in learning because students are only required to write and listen to what the teacher says. Regarding the existence of technology advances, teachers and students are much more required to create innovation during learning process. Teachers are required to create or design systematic and continuous learning conditions as it will enjoy the students.

Regarding the results of initial observations carried out by researchers in class VIII B State Junior High School 2 Pakem, students showed a very low interest in learning, classroom conditions regard as the evidence in this obstacle. The condition occurred in several cases on 1) students' less attention to learning. Students were passive and sometimes busy playing around or chatting with their classmates. The results of observations revealed only 10 out of 32 students paid attention to the teacher's explanation and only 3 children willing to ask questions. 2) The teacher tendency on using lecture method during class without any media support such as power points or others. The learning process was still teacher-centered and tends to be monotonous. It made students difficult to understand and lazy to take notes. It could be seen from the student notebooks, which mostly only contained answers to enrichment practice questions and only a few students whose notes are almost complete. 3) Social science learning was carried out in the classroom intended to finish their worksheets and textbooks. Students have not been directed to access the internet for learning even though the school has a ICT laboratory, having adequate number of computers, and there is Wi-Fi access which eases students to access the internet. Assignments are still given by the teacher orally or doing enrichment exercises contained in the worksheets and textbooks, without any consideration in doing it online. 4) Social science students' low achievement. Other than being proven by test scores or class assignments that are less than the minimum criteria of mastery learning (*KKM*), such factors greatly affect student learning outcomes which are indicated by the presence of students in class whose scores have not reached the minimum criteria of mastery learning that have been set 72. The average student still got a score below 60 when viewed from the results of tests that have been given by the teacher. 5) Students had not been able to collaborate to work together in the classroom, as evidenced when researchers observed the learning process the teacher was assigning students to make mind mappings about social interactions in groups, but only one or two people worked individually. Others were busy drawing, telling stories with friends, and unable to concentrate on their task.

The problems above reveal that schools must improve the quality of education; schools must be able to move all components that become subsystems in an education quality system. According to Kunandar (48: 2012) the first and foremost subsystem in improving the quality of education is coming from the teacher. It is written in constitution no 14 year 2005 about teacher and lecturer



article (1) section (1) stating "teacher is a professional educator whose the main tasks are educating, teaching, guiding, directing, training, assessing, and evaluating students in formal education, primary education, and secondary education. From the opinion above, it can be concluded that the good or bad quality of education is strongly influenced by the teacher. Therefore, teachers are required to be professional, creative and innovative in improving the quality of education. Teachers in this era of globalization are required to master technology. Mastery of technology is expected that educators can apply it in education. Mastering technology will develop the quality of teaching and learning processes that later will produce better learning outcomes.

The use of information technology in education is very important to help achieve a learning activity. According to Dendi Tri Suarno and Sukirno (2015: 118) The scope of social science learning and the themes taught are mostly theoretical, so that students need a long time to understand these materials. Students' difficulties in understanding the material can be helped by media visualization. The material is composed of themes developed in various aspects of geography, history, economics, and sociology. However, thematic learning in the explanation is not enough just verbally. The solution is the use of information technology in education can improve the quality of learning because this information technology can be used to make it easier for students to do lessons, find information and teachers for learning media and expand the reach of access to educational services. In addition, it can also be used to improve the quality of education through national training of educators. It also can facilitate cooperation between educators and students who are physically far away. In addition, the existence of Information Technology is able to develop students' abilities to be more creative and think critically. It will also be produced by the teacher to create the learning process becomes more interesting and fun while at the same time fostering student interest in learning so that student achievement increased.

Teachers are required to develop 21st Century skills in carrying out learning activities in the classroom, namely being able to utilize and understand information and communication technology by applying the principles of "The 4Cs" (Communication, Collaborative, Critical Thinking, and Creativity). According to the National Education Association (2011: 7) states that there are 21st Century Skills that need to be provided to every individual where one of them is 21st century skills namely Learning and Innovation Skills which consists of 4 aspects, namely Communication, Collaborative, Critical Thinking, and Creativity. Rotherdam & Willingham (2009) noted that the success of a student depends on 21st century skills, so students must master the skills. Applying the 21st Century Principle, namely "The 4Cs" (Communication, Collaborative, Critical Thinking, and Creativity) during learning activities, teachers must communicate as an activity to transfer information both orally and in writing. Teachers must also implement a collaboration skill or collaboration system that involves students with this activity, it is hoped that students will be able to get used to doing collaborative activities, collaborated with friends, adapt in various roles and responsibilities. Collaboration skills are very important in classroom activities because they can increase students' knowledge in achieving learning goals.

The education system needs to pay attention to good communication skills, both oral and in writing. The 21st century demands a comprehensive portfolio of individuals in communicating and collaborating to enhance the ability to learn and work together. Communication and collaboration skills can be learned through several methods, but the best way is to collaborate and communicate directly with others, either physically, face-to-face, or virtually through technology. Learning will be interesting and comprehensive, as it can apply blended learning to improve.

Blended learning is face-to-face and virtual/virtual or online teaching combined with the use of information and communication technology. According to Garrison and Vaughan in (Husama, 2013: 17) The basic principle of blended learning is face-to-face direct communication and online written communication. The main assumptions of blended learning design are (1) Thinking of combining face-to-face and online learning, (2) Fundamental rethinking of subject design to optimize learner engagement, and (3) Structuring and rearranging traditional lesson hours.

Regarding to Husama (2013: 231) blended learning learning model has the advantage of increasing accessibility in learning so that later it will have an impact on the ease of students to access subject matter and enrichment. This learning facilitates students during the learning process. Applying blended learning will produce changes in which the learning process does not only listen to material descriptions from the teacher but students can use e-learning based facilities (Web, Yahoo, Blogs and others) which are accessible anywhere and anytime. The application of the blended learning model is expected to make students more interested in participating learning activities inside and outside the classroom.

## II. METHOD

This research was Classroom Action Research or commonly known as CAR (Classroom Action Research). Classroom Action Research is a research utilized to solve obstacles in the class by offering strategies during the learning process (Suharsimi, et al., 2017: 1). This study used a classroom action research (CAR) design proposed by Kemmis & Taggart. This research consisted of planning, action, observation and reflection. The four components were seen as one cycle. The definition of a cycle in this case is a round of activities consisting of planning, action, observation and reflection (Wijaya Kusumah & Dedi Dwigatama, 2010: 20-21).

Regarding to the research action, the researcher collaborated with the teacher of the subject. This research had several cycle stages. The steps and elaboration of each action in the research design were as follows: Stage 1, preparing the action plan (planning); Stage 2, implementing the action (acting); Stage 3, handling observations (observing); and last doing reflection.

The research was conducted at State Junior High School 2 Pakem, Kaliurang street kilometers.20, Harjobinangun, Pakem, Sleman, Yogyakarta. The participants were social science teachers and students of class VIII B. The research procedure started from initial observations and results of social science learning for class VII B. From the initial data, problems were found that students were less interested in social science learning and unsatisfactory learning outcomes. Furthermore, the researchers designed the concept of problem solving through blended learning. This study consisted of two cycles, each cycle consisting of three face-to-face meetings with time allocation for about 2x40 minutes. It consisted planning, implementation, observation, and reflection. It was conducted in the even semester or academic year 2018/2019 and was carried out in two cycles.

## III. RESEARCH FINDING AND DISCUSSION

State Junior High School 2 Pakem was established in 1979. This school is located on Jalan Kaliurang kilometer 20, Hargobinangun, Pakem, Sleman Regency, Special Region of Yogyakarta. This school is located on the slopes of Mount Merapi. Some of the students come from the danger area of Merapi, because they are located around Gendol River and Opak River which head directly from the peak of Mount Merapi.

Currently, this school has 12 study groups consisting of 4 groups of class VII, 4 groups of class VIII, and 4 groups of class IX. In conducting the study, the researcher acted as an observer and collaborator while the teacher as a teacher in the research. Before carrying out CAR, researchers and teachers collaborated in

preparing CAR. The researchers conducted Pre-Cycle activities carried out in September 2018 and October 2018 aimed to identify any problems that occur in the class that will be used as research sites. After the Pre-Cycle activity, the observations obtained by the researcher were discussed with the social science teacher who teaches the class that will be used as a place of research. The researcher and the teacher discussed then designed what activities will be carried out in Cycle I. In cycle 1, pre-action Observation in pre-action research aimed to determine how to increase students' interest in learning by using blended learning. Before the research process was carried out, an interview was conducted with the teacher in the social science learning process and identified the problems faced by the teacher during the learning process. Based on the results of interviews, the teacher revealed that the interest and learning outcomes of class VII B students were less.

Before taking action, to find out the initial conditions, researchers made observations by participating in learning during class and having conversations with teachers about the social science learning process and identifying problems faced by teachers during the learning process. During the learning process, the teacher used lecture method to explain and gave assignments to test students' abilities, while the students taking notes on the explanation of the subject matter and did the assignments given by the teacher due to a lack of understanding of the subject matter. Some students were playing around by doodling on books, chatting with their classmates, even disturbing each other when the teacher explained the material.

Pre-action observations in the pre-action research revealed the aim to determine how to increase students' interest in learning by using blended learning. Based on the results of pre-action observations, the researchers found several findings, including the teacher delivering the subject matter using lectures and the absence of learning media used by the teacher to make it easier for students to understand the subject matter. Students only recorded explanations from the teacher in detail like what the teacher says. The learning that took place looks very passive because students were not enthusiastic about paying attention to the teacher's explanation and there was no question and answer. During discussion activities, students had not been able to collaborate in discussions during class learning to work together in class.

It was proven when the researcher observes the learning process the teacher was assigning students to make mind mappings about social interaction in groups, but only one or two people were working individually. Students were still unable to concentrate on their task. Teaching and learning activities with the delivery of subject matter using the lecture method led students to be very less enthusiastic in participating in learning. Due to the lack of enthusiasm of students, students had not gotten maximum learning outcomes, it was less than 7.5.

Based on the results of observations made by researchers, it was known that in the pre-cycle the average percentage of student interest observations was 63% belonging to the category of moderate interest. The percentage of each indicator of student interest in learning in the pre-cycle could be explained as follows: attention 61%, desire 66%, activity 64%, curiosity 63%, pleasure 64%, and confidence 64%. So, the results of observations of student interest in the pre-cycle are not in accordance with the indicators of success of interest that have been set, which was 75%.

Based on the results of observations, students' interest in learning social science increased in each cycle. The improvement in students' interest in learning social science in the first cycle and second cycle as follows based on the results of the pre-cycle, the average was 63%, the first cycle 62%, the second cycle 81%. There was an improvement from cycle I to cycle II that was about 19%. The results of observations of student interest in learning were included in the category of high interest and exceeds the predetermined criteria of 75%.

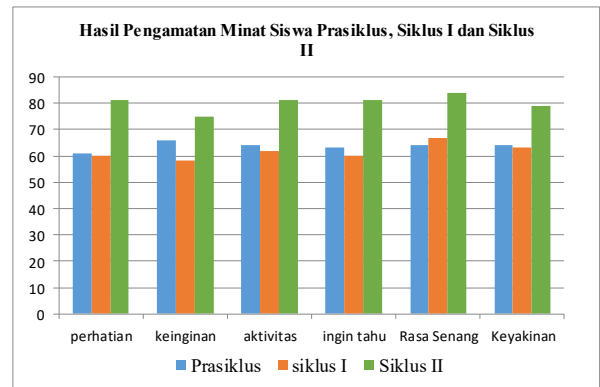


Figure 1. Diagram of observation result analysis in pre-cycle, cycle 1, and cycle 2

The results of observing the student's interest, in the first cycle the average aspect of student attention was still at number 60 because there were several obstacles, namely there were still students who were busy scribbling books, chatting, disturbing their seatmates. There were students who were going in and out of the class. This happens because the teacher did not put attention on the condition of the class when they were busy doodling on books, disturbing their classmates, and simply playing around the class. Students' attention had not been fully focused on learning.

In Slameto's book (2003: 57) number 1, students who have a good sense of attention in learning, there is a constant tendency to pay attention and remember something that is learned continuously. The next step is for teachers and researchers to find solutions to increase students' attention by telling students that there will be punishment for students who are busy themselves and did not pay attention to learning, and make the learning atmosphere much more interesting by providing examples of pictures and showing videos that can attract attention. Considering these changes, students' interests improved into 80.

In the first cycle, the average aspect of the student's desire to participate in learning activities was still at score 58 because in the first cycle there were students who did not understand the stages of learning activities, especially when learning in virtual/virtual classes. Many students did not understand the use of online networks (edmodo), so students were not active in group discussion activities and making noise. This happened because at the beginning, before the group discussion activities in the virtual/virtual class took place, the teacher did not explain the procedure or stages of its use. Students were still not used to doing learning activities using online networks (edmodo), therefore students were still confused about their learning activities, so that there were students who were not active in group discussion. As written in Slameto's book (2003: 57) number 2, students who had desire to take part in learning are students who have a sense of pleasure in these learning activities, because happy students will always have the desire to participate in learning activities.

The solution obtained by teachers and researchers to these problems was in cycle II before the learning activities took place the teacher explains in advance how to use the online network (edmodo), and explained the activities that students would do in participating in virtual learning activities in virtual. There were no longer students who were confused about participating in learning activities in virtual/virtual classes after the explanation. Considering these changes, the average desire of students in cycle II improved into 75.

Students' average obtained in the first cycle was 62. This occurred since it was only some students who took part in learning activities such as doing group assignments, and group discussions. This case happened since there was no control from

the teacher when students work on group assignments. In Slameto's book (2003: 57) number 2, it elaborates that students who are happy were participating in learning activities have a love for learning so that in the second cycle the solution was after the teacher explains in detail about the stages of learning activities, during group work activities and discussions. The teacher group freed students to look for references by using package books and opening online networks using the cellphones they carry. So that students did not get bored and become happy. In addition, the teacher did not forget to control the students by going around each group to find out which students did not understand or did not follow the ongoing group work activities and discussions. Regarding the changes, the average score was increased into 81.

The Curious Aspect in the first cycle the average obtained was 60, because there were students who did not pay attention to learning. There were some students who had low curiosity. As explained in Slameto's book (2003: 57) number 4, students who were curious about learning activities prefer what they are doing. Therefore, to increase students' curiosity about learning, students should love the learning process. Teachers and researchers revealed solutions by using an online network (edmodo) carried out using mobile phones. Initially, students were happy in the first cycle, but because there were students who did not understand how to use it, students did not pay attention to learning. After the teacher explained in detail about the use of online networks (Edmodo), students became excited and preferred learning through virtual/virtual classes using online networks (Edmodo). In addition, the teacher associated group discussion activities, whereas in the first cycle using Asturo while in the second cycle using a Laptop. In this activity students became much more enthusiastic because they used new, more interesting things in doing their group assignments. Regarding this action, in the second cycle, the average of curious aspect increased into 81

The pleasure aspect in the first cycle had an average of 67, in the first cycle many students said that the learning was boring and not fun. Because before learning began, the teacher forgot to tell the learning procedure, it was not clear and had not been explained about the stages of using the online network (Edmodo). Causing during the learning activities some students feel very boring learning because only students who understand can use the online network (edmodo). In Slameto's book (2003: 57) number 3 it was explained that students who had a sense of pleasure in learning would gain pride and satisfaction in something they are interested in. The solution taken by researchers and teachers in the second cycle is in addition to explaining in advance

about the stages of using the online network (Edmodo), students were free to comment with each other and are free to look for references, and can find answers by opening a library on Edmodo. In this context, students became active in commenting and giving the effects that students were much easier to master the teaching material and were not only motivated by one source. Because the sources used were many, the answers were also varied so that it could add insight to students. The average feeling of pleasure in participating in learning activities cycle II increased into 84.

The last aspect was about belief aspect, the average obtained in the first cycle was 63, because in the first cycle many students were doubtful about the results of their group discussions because most students still used textbook references only in the first cycle, not many were looking for references on the online network (Edmodo) or the internet, so that the students' discussion in the first cycle was monotonous, the answers had not varied. In Slameto's book (2003: 57) it was explained that students who had confidence, can be seen from their beliefs in having participation during learning. Solutions taken by teachers and researchers for the second cycle was the teacher urged students before the group discussion activities take place, students can use online networks (Edmodo) or the internet to find discussion materials so that discussion activities were wider not only using textbooks, and the teacher explained the students how to use online networks. As the result, the learning activities improved to be very active and students became excited and confident in their responses. In the second cycle, this aspect of belief increased into 79. Therefore, after the second cycle, the students' scores increased in all aspects and students became happy to learn social science.

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# A Study On Adoption of Mobile Wallets

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**Abstract** — The current world is full of innovations and computerized models, from daily life to business management, the activation of electronic devices from home to office has become an essential part of life. Cash issue management is full of cash with virtual money. All the basic premium exchanges in daily life can end with a tick and in general, it has changed the premium framework for mobile devices (for example, by providing a variety of computerized assistance from utility payments to the "mobile wallet" of the global premium framework developed in India, mobile and mobile Helped the mobile wallet industry in India Players, for example Paytm, Mobi Kwik, Free charge, Oxygen, Citrus etc. are charged in instalments under the business. There are about 25 mobile wallet instalment entries in India now, two of which are payment framework approved by the Reserve Bank of India as an instalment bank. The test shows less knowledge about the buyer's behaviour and inclination towards M-wallets. And the results show that luxury, need, time and fulfilment of the administration used are the components that affect consumers towards M-wallets and respondents M-Wallet saves time and promotes life. In addition, the investigation identified barriers faced by customers when they needed to adopt M Wallet as a method of instalments and the test concluded that the security issue was the primary concern of the respondents. M-wallets play an important role in daily existence with the expansion of mobile phone usage and web access.

**Keywords:** *Mobile wallets, adoption, Security, Services, Interface.*

## I. INTRODUCTION

E-wallets have become part of the anonymous consumer that can act as leather wallets. It offers various benefits such as convenient payments. A very important aspect of digital wallet expansion is the convenience of being able to buy products online without having to physically move from one place to another. Factors such as ease of use, expression and reliability affect the adoption of digital wallets as a payment method. These elements, called assistants, play an important role in popularizing digital payment solutions. The use of digital currency among young people has been found to be linked to the need to improve impact, social spending, management, security and performance. Attempts by the banking industry to migrate to digital media have stalled. However, due to financial pressures in this sector and

uncertainty about the global economy, there is a growing need and opportunity to adopt a comprehensive approach to digital processes and to integrate strategies across the banking ecosystem. Complete digitization requires a comprehensive overhaul of the old banking infrastructure.

Mobile payment has been around for many years and is now exploding. Consumers also use smart phones to make payments. "Digital wallets" have become a part of the consumer, they are nothing more than smartphones that act as leather wallets. The digital wallet offers people and convenience, security and affordable money transfer benefits. The rise of technology has opened up many payment methods as customers can make transactions easier, more accessible and more acceptable. Users want to use mobile payment apps. Various benefits such as branding of a convenient digital wallet for payment provide more convenience to customers. An important factor in introducing digital wallets is the convenience of purchasing products online without having to go from one place to another. In the past, there have been many studies on mobile payment apps to determine consumer interest and have found that consumers have a better tendency to do the same.

Factors such as ease of use, expression and trust affect the view of the digital wallet as a payment method. These factors are known as auxiliaries and play a key role in the use of the digital payment solution. The use of digital wallets among the youth has been found to be linked to the need for social impact, ease of use, ease of administration and security and performance improvement. First-class price, complexity, lack of critical volume and perceived losses are barriers to adopting digital payment systems.

There is an evolution among shoppers who are increasingly using the digital wallet to purchase items. Currently, public authority reports that all restrictions on ordinary money exchanges and electronic exchange writings are pushing buyers to accept and fulfil only credit exchanges to resolve their cases. In connection with the above, this study seeks to investigate and understand how customers relate to the behaviour and non-financial aspects of digital wallet exchanges, the reliance on electronic transmissions, and the buyer's issues when using digital wallet instalments. Arrangements are proposed at this stage in a highly effective way to support the reform of priority and consistency and to improve its segments to attract new clients. With this background, the study has the following objectives. Study the growth of M-wallet payment gateway services. Know the customer awareness and preferences of M-wallet service providers. Study the determinants of mobile wallet adoption

II. LITERATUR STUDY

Mombeuil, C. (2020) in his paper mentions that the major determinants that are affecting the adoption of mobile wallets are perceived relative convenience, perceived relative advantage, perceived relative security, and perceived relative privacy. All these variables have been taken as independent variables and renewed adoption has been considered as dependent variable. The study found that ‘relative convenience’, ‘relative advantages’, ‘perceived security’, and ‘perceived privacy’ influence positively renewed adoption of mobile wallets. The study also suggests that mobile wallet users attached more importance to the advantages and the level of security of these digital payments.

Kapoor, A., et al (2020) in their literature review article on mobile wallets, analyses m-wallet studies conducted over the period January 2008–January 2020. In this article, the authors come-up with 10 m-wallet service quality factors. Namely, Perceived ease of use/convenience, Reliability, Personalization, Facilitating conditions, Perceived security, Aesthetics/design, Trust/assurance, Hedonic value, Responsiveness, Perceived usefulness.

Sarmah, R (2021). The study aimed at probing into the determinants of mobile wallet adoption by millennials with the assistance of extended technology acceptance model. The data was collected from the students studying professional courses in leading private universities in the north region of India. The study used Partial Least Square Structural Equation Modelling (PLS -SEM) technique to test the proposed model.

The tested model of this study brings into notice the imperative observation, which clearly outlines that there are all significant relationships, which can be observed herein. To state: perceived ease of use (PEOU) has a significant positive relationship with the perceived usefulness followed by PEOU also shares a significant positive relationship with the behavioural intention, and lastly trust as a variable under study establishes a significant positive relationship with actual use (AU).

Mohiuddin, M., et al 2021, The authors in this research paper, titled as Cashless Transactions: A Study on Intention and Adoption of e-Wallets, make an attempt to study the determinants that influence the intention to use the mobile wallets, which will in-turn influence the adoption of mobile wallets. The independent variables, latent constructs, that are considered in this research are perceived usefulness, perceived ease of use, social influence, facilitating conditions, lifestyle compatibility, and perceived trust. The authors have considered as age, gender and education as the mediating variables and the entire model is being moderated by the variable intention to use. The results of this research indicate that, the age factor failed to moderate the relationships between perceived usefulness, perceived ease of use, social influence, facilitating condition, and perceived trust and the intention to use an e-wallet. Nonetheless, a moderating effect was noted on the relationship between lifestyle compatibility and intention to use an e-wallet.

III. METHOD

The study used a structured questionnaire to collect data from respondents. The study has adopted the questionnaire from Doan, N. (2014). Consumer adoption in mobile wallet:

a study of consumers in Finland. The variables that are considered for the current study are security, time saving, necessity, interface and services, which have considered as independent variables and mobile wallets has been considered as dependent variable.

Sample design adopted for the study is convenient sampling. An online questionnaire prepared using Google forms was distributed/shared with the respondents. The questionnaire was shared with total 150 respondents. Out of that, 116 respondents responded properly and are being considered for the further analysis. Analysing and Interpreting Data - Data is decomposed and decoded using the Google sheets and Microsoft Excel 2019. Regression matrix and ANOVA tests were also performed to dissect the information.

**Table 1. Profile of The Respondents**

Profile of the respondents			
Respondent	Category	N	%
Age	25 to 30	27	23.28
	30 to 35	28	24.14
	35 to 40	22	18.97
	40 to 45	17	14.66
	45 to 50	16	13.79
	Above 50	6	5.17
Occupation	Student	24	20.69
	Employee	29	25.00
	Professional	18	15.52
	Self-Employed	20	17.24
	Home maker	15	12.93
	Any other	10	8.62
Income	0 to 2.5 Lakhs	35	30.17
	2.5 Lakhs to 5 Lakhs	56	48.28
	5 lakhs to 10 Lakhs	15	12.93
	Above 10 lakhs	10	8.62

IV. RESULT

**Tabel 2. Descriptive Statistics**

Constructs	Item	Mean	S.D
Security	Sec1	3.72	0.519
	Sec2	3.73	0.507
	Sec3	3.71	0.529
	Sec4	3.71	0.508
Saves Time	ST1	3.7	0.505
	ST2	3.76	0.492
	ST3	3.77	0.509
	ST4	3.73	0.499
	ST5	3.77	0.482
	ST6	3.76	0.494
Necessity	Nest1	3.73	0.507
	Nest2	3.78	0.488
	Nest3	3.72	0.513
	Nest4	3.77	0.487
	Nest5	3.68	0.513
	Nest6	3.83	0.442
Interface	Intfc1	3.73	0.515
	Intfc2	3.83	0.424
	Intfc3	3.79	0.476
	Intfc4	3.75	0.482
Services	Serv1	3.81	0.441
	Serv2	3.77	0.482
	Serv3	3.83	0.424
	Serv4	3.82	0.47
	Serv5	3.78	0.46

Preference for M-wallet and the Influencing Factors:  
Correlation Matrix

**Tabel 3. Correlation Matrix**

	Security	Necessity	Saves time	Services	Interface
Security	1				
Necessity	0.46	1.00			
Saves time	0.42	0.47	1.00		
Services	0.44	0.41	0.41	1.00	
Interface	0.49	0.46	0.36	0.39	1

**Table 4. Regression Statistics**

Multiple R	0.72
R Square	0.51
Adjusted R Square	0.49
Standard Error	0.47

$$MW = 0.914 + 1.21 \text{ Sec} + 1.56 \text{ Nest} + 1.91 \text{ ST} + 1.39 \text{ Serv} + 1.92 \text{ Intfc}$$

**Table 5. ANOVA**

	df	SS	MS	F	Significance F
Regression	4	19.67	4.92	22.24	1.513E-12
Residual	84	18.57	0.22		
Total	88	38.25			

**Table 6. Coefficients and Test results**

	Coefficients	Standard Error	t Stat	P value	Lower 95%	Upper 95%
Security	1.05	0.46	2.27	0.03	0.13	1.97
Saves time	0.20	0.10	2.01	0.01	0.00	0.39
Necessity	0.24	0.10	2.33	0.02	0.04	0.45
Interface	-0.27	0.14	-1.87	0.04	-0.55	0.02
Services	0.63	0.10	6.24	0.00	0.43	0.83

Interpretation: In the above results, since the p value is less than or equal to 0.05, which indicates that the independent variables security, saves time, necessity, interface and services all have significant influence on mobile wallet adoption.

## V. DISCUSSION

Most of the respondents are using their mobile phones to complete the conversion process. Most of the respondents want to use the debit card after M wallet. More contact with the respondent regarding premium entry and mobile phone administrations on the mobile phone. The dominant part of the respondents wants to use Paytm after free charge. Defendants preferred to use M wallets for refreshment, then for online shopping, purchase of food / movie tickets. Among the primary factors influencing many respondents to use M-wallets are accessibility, convenience, maintenance, security and rewards. Most of the respondents feel that the M-wallet saves time and simplifies life. The majority of respondents feel that M-Wallet can be used as an optional instalment strategy that can replace the original instalment framework. Many respondents have reduced their regular payments due to mobile wallets. Most of the respondents use M-Wallet very respondents want to use Paytm to restore the minds of 18-30 and 31-50 year olds.

Most of our respondents would like to use Paytm to cover utility tabs that fall into the 18-30 and 31-50 age categories. Most of our respondents want to use Paytm for shipping between the ages of 18-30 and 31-50. Most of our respondents want to use Paytm for food and movie tickets coming in between the ages of 18-30 and 31-50. Most of our respondents prefer to use Paytm for online shopping, they are 18-30 years old, then there are free fees and people between the ages of 31 and 50 prefer to use Paytm.

Most of the respondents prefer to use Paytm to transfer money from the age of 18 to 30, then Mobikwik, the respondents aged 31 to 50 prefer to use only Paytm and the respondents aged 51 to 64 prefer to use different wallets. Most of our respondents want to use Paytm for different administrations after different wallets. Variables that affect security, need, time and administration respondents' preferences used.

## VI. CONCLUSIONS AND SUGGESTIONS

### A. Conclusions

The conclusion of this study is that Performance expectancy has a positive effect on the use of e-wallet on accounting students at YSU. Shown with a significance value of  $0.000 < 0.050$ . Thus, it can be concluded that the first hypothesis is accepted. This means that performance expectancy has a positive influence on the use of e-wallet. Social influence has a positive influence on the use of e-wallet in accounting students at YSU. It is indicated by a significance value of  $0.003 < 0.050$ . It can be concluded that the second hypothesis is accepted, which means that social influence has a positive influence on the use of e-wallet. Digital financial literacy has a positive effect on the use of e-wallet in YSU accounting students. The significance value of the digital financial literacy variable is 0.028, which is greater than 0.050. The calculation results show that the third

often. While a large number of respondents reported their loyalty to the assistance provided, two respondents expressed strong satisfaction with the assistance used. The lion's share of respondents have never encountered when using an M-wallet and the primary problem that some clients face is the network operator problem. Since most of the respondents are happy with the help provided, the lion's share of the respondents wants to continue using M Wallet. Most respondents do not use M wallets, the main reason being M wallet security issues. Since security is an important issue, many respondents fear that the M-wallet supplier may transfer private data to various companies, misuse the data when the phone is stolen, and incur a large number of cybercrime and phone entry injuries.

The attractive quality that benefits from the departments is high if the problems are solved. Depending on the age and gender of the respondents, most female and male respondents prefer to use Paytm between the ages of 18-30. M's wallet is affected by socio-economic factors, as the investigation found that more men are making payments on the web through oDepending on the gender, job and salary of the respondents, most of the respondents prefer to use Paytm for different professions and salary scale. Most of our hypothesis is accepted, which means that digital financial literacy has a positive influence on the use of e-wallet. Computer self-efficacy has a positive influence on the use of e-wallet in accounting students at YSU. From the results of computer self-efficacy calculations, it has a significant value of  $0.000 < 0.050$ . By looking at the results of the calculations, it can be concluded that the fourth hypothesis is accepted, which means that computer self-efficacy has a positive influence on the use of e-wallet.

### B. Suggestions

One of the major issues is security issues, which users are concerned about their confidential data being exposed. So M Wallet suppliers need to understand and satisfy customer confidence expectations, or it will focus on security-related security issues, as well as ensure the reinforcement system in case the phone is lost or seized. The test focuses primarily on what has been achieved with the areas of security, health, time, and usage, affecting consumer awareness of e-wallets, as the investigation points to an important relationship between their understanding and those previously mentioned. The current study attempts to understand consumer behavior and satisfaction with the use of digital wallets. This study explores how digital wallet transactions have changed consumer behavior, the level of awareness on cashless transactions, the reliability of electronic transmissions, and consumer issues when using digital wallet payments

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# Absorption And Job Relevance of Office Administration Vocational School (OAVS) Graduates In Sleman Regency, Special Region of Yogyakarta

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**Abstract**—This study aims to determine the absorption and job relevance of graduates of OAVS in Sleman Regency, Special Region of Yogyakarta. This research is a descriptive research with a quantitative approach. The data collected is in the form of secondary data sourced from the Special Job Fair (BKK) of Vocational School (VS) in Sleman Regency which consists of 2 State Vocational Schools and 3 Private Vocational Schools. Data collection uses documentation techniques in the form of tracking data for 2017 and 2018 graduates. Data analysis uses descriptive statistical analysis. Presentation of data in the form of tables and diagrams. The conclusions of this study are: 1) the absorption of OAVS graduates in the world of work in 2017 was 78.46% and in 2018 it was 76.92%; 2) the relevant jobs of OAVS graduates in 2017 are 35.78% and those that are not relevant are 64.22%; 3) the relevant jobs of OAVS graduates in 2018 were 36.37% and those that were not relevant were 63.63%.

**Keywords:** job relevance, graduate absorption, skill competency, vocational school, Sleman Regency.

## I. INTRODUCTION

Youth unemployment is a major social problem in Indonesia. In February 2021, the majority of open unemployment in Indonesia are vocational school graduates. Judging from data from the Badan Pusat Statistik (2020), the number of open unemployment at the high school and vocational level increased from 24.34% (2020) to 26.3% (2021). As a result, every country is required to have a strategy to carry out long-term planning in order to reduce the problem of unemployment (Kamin, Ahmad, & Cartledge, 2013).

One strategy that can be developed is through the education sector (Kamin et al., 2013; Sholikah & Muhyadi, 2021). The education sector is a major factor in producing a skilled workforce for the service industry and the economy (Heriansyah, 2014; Othman, Hamzah, Singh, Abdul Wahab, & Ismail, 2011). This is because humans are the core elements that make up the education sector. In line with Newhouse & Suryadarma (2011), expanding the education sector, especially vocational education can be the right and

attractive choice for developing countries that are trying to improve the labor market.

For example, Tanzania's success in providing a skilled workforce, through vocational education, is followed by South Korea (Newhouse & Suryadarma, 2011). In both cases, the expansion policy failed, as parents continued to choose general education over vocational education and thus refused to send their children to vocational schools. Thus, the role of vocational schools can improve the quality and quantity of human resources. In line with the Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System, vocational schools were established with the aim of preparing skilled human resources and having good soft skills competencies, so that they can compete in the labor market.

However, the facts on the ground actually show that the establishment of vocational schools increases public unrest and anxiety, because graduates of these vocational schools are unable to reduce the number of existing unemployed (Hidayati, 2015). This is evident from data from the Central Statistics Agency (2020), the number of open unemployment at the vocational high school level is in the first position compared to high school, diploma, university, junior high school, and elementary school and below, which is 8.63%; 6.77%; 6.76%; 5.73%; 5.02%; and 2.64% (Central Bureau of Statistics, 2020). In particular, the open unemployment rate in Sleman Regency in August 2018 showed that the unemployment rate for SMK graduates in Sleman Regency was 5.89% while high school graduates were 5.48% (Sakernas, 2018). This proves that vocational school graduates contribute the highest unemployment rate in Indonesia. The unemployment rate increased because as many as 52% of vocational school graduates were not absorbed in the labor market (Hidayati, 2015; Sutirno, 2013). Added by Alam (2017), limited job opportunities are also a factor in the non-absorption of vocational school graduates so that they inevitably apply and accept any job even though it is not in accordance with their educational qualifications.

For this reason, vocational school curricula need to be designed and implemented in accordance with national education standards and curriculum content standards (Elde Mølsted & Karseth, 2016; Wijngaards-de Meij & Merx, 2018). According to Noddings, a country's national education standards must be a reference for the development of

curriculum content, while curriculum content standards describe competencies that must be taught by teachers and possessed by students (Widiaty, 2019). Thus, national curriculum standards must pay attention to the needs of local schools, culture, and the identity of an area (Ditchburn, 2012; So, Kim, & Lee, 2012). The national standard curriculum must be evaluated periodically to find its relevance to the needs of the industry and workplace (IDUKA) which is reflected in the field (Kalef, Rubin, Malachowski, & Kirsh, 2016; Kunyk et al., 2016). The national curriculum standards in Indonesia are stated in the Indonesian National Work Competency Standards (SKKNI) which are the reference for determining competency standards. One example of the SKKNI implemented at OAVS is the second levels of Indonesian National Work Competency Certification Scheme (KKNI).

The scope of administrative work written in the second levels of SKKNI includes managing office documents, communicating at work, compiling work agendas & official travel agendas for leadership, providing excellent service, assisting petty cash management. Based on the competencies that have been determined, the relevance between the competencies taught and the work competencies needed by IDUKA need to be harmonized, because graduates of vocational schools will work in the world of work whose work competencies have been determined by the world of work. For this reason, further research on the relevance between work and curriculum is widely considered practical and conceptually useful in career research (Vinken-burg & Weber, 2012). Because this relevance is one of the processes of synchronizing the existing curriculum with various needs in society (Rizvi, Feroz, & Tanzil, 2018), industry (Thanikachalam, 2015; Thapa, 2018), and technological developments (Muktiarni, Widiaty, Abdullah, & Kuntadi, 2018). Conceptually, the relevance of graduates and curriculum must be based on principles that refer to "what", "how", and "when" (Doherty, 2015).

Thus, this study aims to identify the relevance of the work of OAVS graduates with the graduate profile. Empirically, the research results are expected to add insight and knowledge about the relevance and absorption of VS graduates in the world of work. Practically, this research is expected to provide information about the relevance and absorption of OAVS graduates so that it can be used as a reference material in curriculum development in schools and as a reflection and as a school evaluation chart in the process of distributing graduates to the world of work. In addition, the results of this study can also be used as a reference in determining policies on issues related to competency skills according to the type of work, and as a reflection of the success of vocational education in reducing the unemployment rate of the workforce.

**Method**

The method used is descriptive research method with a quantitative approach. This research was conducted in Sleman Regency, Yogyakarta Special Region. The data used in this study is secondary data obtained from the BKK at OAVS in Sleman DIY. A total of five OAVS are involved in the research as data sources. The data collected in this study is secondary data.

Data collection was carried out using documentation techniques, namely by collecting documents from the results of graduate searches that had been carried out by BKK in 5 OAVS in Sleman Regency in 2017 and 2018. The data collected was in the form of quantitative data. The data were analyzed using descriptive statistical analysis techniques, and presented in the form of tables.

**II. RESULT**

The research data were obtained from 5 BKK of OAVS in Sleman Regency, consisting of 2 State Vocational Schools and 3 Private Vocational Schools. All of these VS have A accreditation status.

**Tabel 1. Sumber Data Penelitian**

NAMA SMK	STATUS SEKOLAH		STATUS AKREDITAS		
	NEGERI	SWASTA	A	B	C
SMK A	V		V		
SMK B	V		V		
SMK C		V	V		
SMK D		V	V		
SMK E		V	V		

Data on the absorption of OAVS graduates in 2017 and 2018 are presented in table 2. The uptake of graduates is grouped into categories of working and self-employed, not working, continuing their studies, and not being traced.

**Tabel 2. Keterserapan Lulusan**

Kategori	Lulusan 2017		Lulusan 2018	
	Jumlah	%	Jumlah	%
Bekerja dan Wirausaha	204	78,46	220	76,92
Tidak Bekerja	6	2,31	0	0,00
Melanjutkan Studi	39	15,00	52	18,18
Belum Tertelusur	11	4,23	14	4,90
<b>Total</b>	<b>260</b>	<b>100,00</b>	<b>286</b>	<b>100,00</b>

Based on table 2, it is known that the number of OAVS graduates in 5 VS in Sleman Regency in 2017 was 260 and in 2018 as many as 286. Most of OAVS graduates in 2017 have been absorbed in the world of work, which is 78.46%. Likewise, the majority of graduates in 2018 have worked, which is 76.92%. There are only 6 graduates in 2017 who are not working, and there are no graduates in 2018 who are not working. There are still unknown graduates. 2017 graduates who are not yet known are 4.23% and 2018 graduates are 4.90%. Some of the OAVS graduates continue their studies to college. The number of graduates in 2017 who continued their studies was 15% and graduates in 2018 were 18.18%.

Based on secondary data obtained from BKK of VS in Sleman Regency, the types of work for OAVS graduates are grouped into 6 types of work, namely marketing staff, customer service, administrative staff, factory employees, financial staff, and entrepreneurs. The administrative staff work groups include jobs as secretaries and company administrative staff. The financial staff job group includes jobs as cashier and company finance staff. Of the 6 types of work, there are 2 types of jobs that match the profile of OAVS

graduates, namely jobs as customer service and administrative staff. While the other 4 types of work, namely marketing staff, factory employees, financial staff, and entrepreneurs do not match the profile of OAVS graduates. Furthermore, data on the type of work for graduates of OAVS in Sleman Regency in 2017 are presented in table 3.

**Tabel 3. Data Pekerjaan Lulusan SMK OTKP tahun 2017**

PEKERJAAN	SMK A	SMK B	SMK C	SMK D	SMK E	Total	%
Staf Marketing	25	20	13	5	2	65	31,86
Customer Service*	4	0	2	0	0	6	2,94
Staf Administrasi*	25	30	2	3	7	67	32,84
Pegawai Pabrik	10	9	6	0	2	27	13,24
Staf Keuangan	3	20	8	4	3	38	18,63
Wirausaha	0	0	0	1	0	1	0,49
Total	67	79	31	13	14	204	100

\*Relevan

Table 3 presents data on the number of graduates in 2017 from 5 OAVS in Sleman Regency based on the type of work obtained. Based on table 3, it can be seen that the number of OAVS graduates in 2017 from 5 VS in Sleman Regency who work and have entrepreneurship is 204 people. Of the 204 graduates, 73 of them got jobs relevant to the graduate profile or 35.78%. Meanwhile, another 131 graduates or 64.22% got jobs that did not match the graduate profile.

Data on the types of work for graduates of OAVS in Sleman Regency in 2018 are presented in table 4. Table 4 presents data on the number of graduates in 2018 from 5 VS in Sleman Regency based on the type of work obtained. Based on table 4, it can be seen that the number of OAVS graduates in 2018 from 5 VS in Sleman Regency was 220 people. Of the 220 graduates, 80 or 36.37% of those who got relevant jobs had a graduate profile. Meanwhile, 140 graduates or 63.63% got jobs that were not relevant.

**Tabel 4. Data Pekerjaan Lulusan SMK OTKP tahun 2018**

PEKERJAAN	SMK A	SMK B	SMK C	SMK D	SMK E	TOTAL	%
Staf Marketing	12	43	17	6	11	89	40,45
Customer Service*	7	0	1	0	0	8	3,64
Staf Administrasi*	27	25	5	3	12	72	32,73
Pegawai Pabrik	10	10	8	0	1	29	13,18
Staf Keuangan	3	1	4	2	3	13	5,91
Wirausaha	4	3	0	1	1	9	4,09
	63	82	35	12	28	220	100

\*Relevant

### III. DISCUSSION

#### Graduate Absorption

The performance indicator of vocational education is the number of graduates who are absorbed in the world of work. In accordance with the Strategic Plan of the Director General of Vocational Education for 2020-2024 (Sakarinto:2020), one of the strategic objectives of vocational education is to improve the quality of learning and the relevance of education at all levels. Number of vocational education graduates who find work within 1 year after graduation is an indicator of the performance of vocational education goals. The number of SMK graduates who are absorbed in the world of work ideally reaches 80%-85% (Susiani: 2009). Referring to the research data presented in table 2, the absorption of OAVS graduates in Sleman Regency in 2017 reached 78.46% and in 2018 it reached 76.92%. The data shows that the majority of OAVS graduates have been absorbed in the world of work. Although it is not yet in the ideal category, it is considered good enough, because more than 70% is absorbed by the world of work. However, the types of jobs obtained by OAVS graduates are not all in accordance with their competencies.

#### Job Relevance

In addition to the percentage of the number of graduates who work, the relevance of work to the competence is also an indicator of the success of vocational schools. OAVS graduates ideally work in the field of office administration. Based on table 3 and table 4 above, there are 6 types of work that have been the target of work for graduates of OAVS in Sleman Regency, namely marketing staff, customer service, office administration staff, financial staff, and factory employees, and becoming entrepreneurs. Of the 6 types of work, there are 2 types of jobs that are relevant for OAVS graduates, namely jobs as customer service and office administrative staff. The number of OAVS graduates in Sleman Regency who get jobs relevant to their competencies is still limited. Graduates in 2017 whose work is relevant to their competence are 35.78%. This percentage is still below the national average target of 42%, based on the strategic plan of the Director General of Vocational Education (Sakarinto:2020). Likewise, graduates in 2018, only reached 36.37% of graduates who obtained jobs that were relevant to their competencies. Thus, the work of OAVS graduates in Sleman Regency for graduates in 2017 and 2018 is still less relevant to the profile of OAVS graduates.

### IV. CONCLUSIONS AND SUGGESTIONS

#### A. Conclusions

The results of this study indicate that: 1) the absorption of OAVS graduates in the workplace in 2017 was 78.46% and in 2018 it was 76.92%; 2) employment of OAVS graduates in 2017 which is relevant 35.78% and irrelevant is 64.22%; 3) the relevant jobs of OAVS graduates in 2018 are 36.37% and those that are not relevant are 63.63%. Thus, it can be concluded that the absorption of OAVS graduates in Sleman Regency is quite high, although not all jobs obtained by graduates are in accordance with their competencies. Meanwhile, the work of OAVS graduates in Sleman Regency

is still less relevant to the competencies and profiles of graduates.

### B. Suggestions

To increase the relevance of graduate job, it is recommended that each school be able to establish intensive cooperation with the industry and the workplace (IDUKA)

according to the competence of students' skills. In order for school collaboration with IDUKA to work effectively, there needs to be government intervention by making policies that encourage the creation of an effective partnership between schools and IDUKA. In order for IDUKA to benefit from this collaboration, the government should provide incentives to IDUKA in the form of tax breaks or easy access to capital.

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# Computer Courses And Training Office Applications Based On Learning Management System (LMS) In Supporting Human Resources In Skilled Early Childhood Education Teachers

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**ABSTRACT** - At this time the world is faced with the phenomenon of digital disruption, namely a situation indicated by the movement of the industrial world or job competition that is no longer linear. In the field of courses and training, there are also online courses and training services that can be accessed via the web/page. The service provider is not an educational unit, but several experts in their fields are joined by several experts in the field of information and communication technology to create course and training services that can be accessed via electronic devices. One of the development of courses and training is training-based courses and training *Learning Management Systems*(LMS) that allows instructors and/or students to share material, submit and return assignments, and communicate online. Results of research and development of computer-based course and training models *Learning Management System*(LMS) which has been piloted shows that the level of practicality of this model is very good according to the instructors and organizers. learning outcomes of courses and training can improve the skills of early childhood education teachers in office application computer courses.

**Keywords:** *Courses and training, Learning Management System, early childhood education teacher*

## I. INTRODUCTION

Institute Courses and training as a non-formal education unit, it is held for people who need knowledge; skills, life skills, and attitudes to develop themselves, develop their professions, work, independent businesses, and/or continue their education to a higher level. Courses and training are teaching and learning activities as well as school. The difference is that courses and trainings are usually held for a short period of time and only to learn one Skills certain. Many courses and trainings are held by the community, institutions, and organizations independently in order to serve the community who for some reason are less fortunate in their lives so that they do not have skills, are unemployed or work in unfavorable positions. At this time the world is faced with the phenomenon of digital disruption, namely a situation indicated by the movement of the industrial world or job

competition that is no longer linear. Changes occur very quickly and fundamentally, in the field of education, the era of disruption has encouraged and even "forced" the digitalization of the education system. In the field of courses and training, the current era of disruption has also given rise to online courses and training services that can be accessed via the web/website of service providers. The service provider is not an educational unit, but several experts in their fields joined by several experts in the field of information and communication technology to create course and training services that can be accessed through electronic devices such as computers, laptops and communication devices.

The results of a preliminary study by researchers from February to March 2019 in South Sulawesi Province through a survey method using an online instrument/questionnaire based on google form, related to online learning organized by course and training institutions, data was obtained, only 15% of course and training institutions had implemented online learning and 85% still provide conventional course and training services, both in terms of services and in the learning process. Researchers also conducted direct observations and interviews related to the implementation of courses and training based on Learning Management System. Based on the results of observations and interviews, there is no course and training institution that organizes courses and training based on Learning Management System. This is due to several problems faced by course and training institutions, namely (1) an internet network that does not exist, (2) students do not yet have electronic devices to access online course learning, (3) the costs used to provide equipment and training. expensive internet network, and (4) educators (instructors) who do not understand learning in the main network-based *Learning Management System*.

## II. METHOD

The approach and type of research that will be used is research and development using the concept of product development from ADDIE According to Branch (2009:2) which consists of 5 stages, namely (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation.

The scope of this research is to determine the level of validation, the level of practicality and the level of

effectiveness of the learning model based on courses and training *Learning Management System*. The theories used are as follows; 1) Cognitive Constructivism based on Jean Piaget, (1965), and 2) Social Constructivism based on Lev Vygotsky, (1925a). 3) Progressivism which states that humans have the ability to develop and perfect their environment by applying their intelligence (Gerald Lee Gutek, 2010), 4) *Learning Management Systems* (LMS) is a web-based system that allows instructors and/or students to share materials, submit and return assignments, and communicate online. (Lonn and Teasley, 2009).

The instruments used in this study were 3 kinds as follows:

- a. Instrument validation by linguists, materials experts and media experts. This process is carried out to test the level of validity of the model script and the product model that is compiled.
- b. Instrument the practicality of the model by students and instructors. This process is carried out to test the level of practicality in the implementation of the learning model.
- c. The instrument effectiveness of the model by the results of the pretest learning assessment before applying the learning model and the posttest results after following the learning model.

The data collection technique was carried out according to the stages in the ADDIE model development procedure as described below.

- a. In the Analysis stage, the data collection technique used is using a Google form-based questionnaire, then unstructured interviews are carried out, and direct observations are made to course and training institutions.
- b. At the design stage, the data collection techniques used are discussion, focus group discussion.
- c. At the development stage (Development) The data collection technique used is a Questionnaire which will be filled by media expert validators, material expert validators, and linguist validators.
- d. At the implementation stage (Implementation) The data collection technique used is a Questionnaire which will be filled by the instructor and students.
- e. At the evaluation stage (Evaluation) The data collection technique used is a Questionnaire which will be filled by course and training students related to the evaluation of the implementation of learning by the instructor. And the pretest and posttest instruments to measure the effectiveness of the model learning that has been given to students.

The data analysis technique was carried out by means of qualitative data analysis and quantitative data analysis for each stage in the ADDIE procedure as described below.

- a. At the Analysis stage, the data analysis techniques used are: Qualitative and quantitative. preliminary study instrument that has been filled in by the respondent; 1) course and training providers, related to the implementation of courses and training that have been carried out, both online and offline. 2). Instructor regarding the use of the application *Learning Management System* in learning.
- b. At the design stage, the data analysis techniques used are qualitative. Model and product design which has been

written by the researcher is then assessed by the supervisor, based on input or suggestions then corrected, and produces data in the form of qualitative data.

- c. At the development stage (Development) The data analysis technique used is Qualitative and quantitative. the validation instrument that has been given and has been filled in by media expert validators, material expert validators and language validators is then analyzed using an excel application (quantitative data) and inputs or suggestions are analyzed and produce data in the form of qualitative data.
- d. At the implementation stage (Implementation) The data analysis technique used is Qualitative and quantitative. Data collection instruments filled out by the instructor on aspects of use model of courses and training based on the Google Classroom Learning Management System application, the results of data analysis in the form of quantitative data and qualitative data.
- e. At the evaluation stage (Evaluation) The data analysis technique used is Qualitative and quantitative. Data collection instruments filled out by students on aspects of use and utilization model of courses and training based on the Google Classroom Learning Management System application as a learning medium. And the results of the pretest and posttest of students after following the learning model. The results of data analysis in the form of quantitative data and qualitative data.

### III. RESULTS AND DISCUSSION

#### a. Expert Validation Results

Validation carried out by five (5) experts/experts/practitioners is an activity of assessing the experts on the learning model products that have been made. Experts were asked to validate all model products that had been made in the previous stage. Suggestions from experts/experts/practitioners are used as a reference in the revision of the model product. The categorization of the validity of the model is quoted from Sugiyono (2017:165) as follows:

Table 1. Validity Categorization

Very Invalid (STV) if the score	: 0	□	$\bar{x}$ 1
Invalid (TV) if score	: 1	□	$\bar{x}$ 2
Sufficiently Valid (CV) if the score	: 2	□	$\bar{x}$ 3
Valid (V) if the score	: 3	□	$\bar{x}$ 4
Very Valid (SV) if the score	: 4	□	$\bar{x}$ 5

Table 2. Average Results of Expert Validation of Model Books and Curriculum Materials

Assessment Aspect	(ai)	$\bar{x}$	Note:
1. Model Book Components	4.2	4.09	SV
2. Curriculum	4.1	4.09	SV
3. Contents	4.2	4.09	SV
4. Learning	4.3	4.09	SV
5. Interaction and Feedback	3.7	4.09	V
<b>Total Value</b>	20.5		
<b>Average</b>	4.09		SV

The average value of the total validity of the model book and curriculum according to the material expert validator for all aspects of the assessment is obtained = 4.09 based on the validity criteria mentioned above, this value is included in the Very Valid (SV) category, which is at 4 5. From all aspects of this format, the model book and curriculum model courses and computer training for LMS-based office applications in supporting skilled PAUD teacher human resources are declared to meet the validity criteria.  $\bar{x}\bar{x}$ .

Table 3. Average Results of Media Expert Validation on Model Books and Curriculum

Assessment Aspect	(ai)	$\bar{x}$	Note:
1. Graphical Eligibility Component	3.8	3.65	V
2. Book Cover Design	3.4	3.65	V
3. Book Cover Typography - The letters used are attractive and easy to read	3.9	3.65	V
4. Book Cover Illustration - Reflecting the contents of the book	3.3	3.65	V
5. Book Content Design - Book Content Layout	3.6	3.65	V
6. Book Content Design - Book Content Typography	3.9	3.65	V
<b>Total Value</b>	21.9		
<b>Average</b>	3.65		V

The average value of the total validity of the Google Classroom LMS Application according to media expert validators for all aspects of the assessment is obtained = 3.85 based on the validity criteria mentioned above, this value is included in the Valid (V) category, which is at 3 4. With all aspects of this format, the Google Classroom LMS Application on the model and curriculum model of courses and computer training for LMS-based office applications in supporting skilled PAUD teacher human resources is declared to meet the validity criteria.  $\bar{x}\bar{x}$ .

Table 4 Average Results of Material Expert Validation in Guidebooks for Instructors

No	Assessment Aspect	(ai)	$\bar{x}$	Note:
1	Learning Based Learning Management System (LMS)	4.00	4.00	SV
2	Use of LMS Applications in Courses and Training	4.00	4.00	SV
3	Interface (LMS Application View)	4.00	4.00	SV
4	Graphic Design and Audio Visual	4.00	4.00	SV
<b>Total Value</b>		16.00		
<b>Average</b>		4.00		SV

For the average value of the total validity of the Guidebook for Instructors according to material expert validators for all aspects of the assessment, it is obtained = 4.00 based on the validity criteria mentioned above, this value is included in the Very Valid (SV) category, which is at 4 5. If viewed from all aspects of this format, the Guidebook for Instructors is declared to meet the criteria for validity.  $\bar{x}\bar{x}$

Table 5. Average Validation Results of Linguists on Model Books, Curriculum and Manuals

No	Assessment Aspect	(ai)	Note:
1	Language on Model Book	4.90	SV
2	Language in the Model Curriculum	4.90	SV
3	Language in the Guidebook for LKP Managers	4.95	SV
4	Language in the Instructor's Guide	4.95	SV
5	Language in the Guide for Learners	5.0	SV
<b>Total Value</b>		24.70	
<b>Average</b>		4.94	SV

For the average value of the total validity for the aspect Language in Model Books, Curriculum and Guidebooks all aspects of the assessment obtained = 4.94 based on the validity criteria mentioned above, this value is included in the Very Valid (SV) category which is at 4 5. If viewed from all aspects of this format, then for the Language aspect of the Model Book, Curriculum and the Guidebook is declared to meet the criteria of validity.  $\bar{x}\bar{x}$ .



b. Model Practicality Test Results

The practicality test in this model trial uses two instruments, namely a questionnaire on the practicality of each material provided by the instructor filled out by students related to the practicality of the course learning model and computer training for office applications based on LMS (google classroom) taught by the instructor, and a questionnaire on the practicality of each material. which is filled by instructors related to the management of learning models for courses and computer training based on LMS (google classroom)-based office applications in supporting human resources for skilled Early Childhood Education teachers. CriteriaAssessment by students by

giving a value to the instrument with the following information: 4= Strongly Agree, 3 = Agree, 2 = Disagree, and 1 = Disagree. The results of filling out this practicality questionnaire are described as follows:

Table 5. The results of filling out this practicality questionnaire

P1	M1	%	M2	%	M3	%	M4	%	M5	%	M6	%	M7	%	M8	%	Average
Strongly agree	16	53.33	14	46.67	12	40.00	13	43.33	20	66.67	17	56.67	17	56.67	16	53.33	52.08
Agree	14	46.67	15	50.00	15	50.00	17	56.67	10	33.33	12	40.00	13	43.33	13	43.33	45.42
Disagree	0	0.00	1	3.33	2	6.67	0	0.00	0	0.00	1	3.33	0	0.00	1	3.33	2.08
Do not agree	0	0.00	0	0.00	1	3.33	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0.42
	30		30		30		30		30		30		30		30		

The results of filling out the student response questionnaire from the entire material for the first question, obtained an average data of 52.08% of students saying Strongly Agree, 45.42% of students saying Agree, 2.08% of students saying Disagree and 0.42 % of students said Disagree.

The results of filling out the student response questionnaire from the entire material for the second question, obtained an average data of 62.92% of students saying Strongly Agree, 34.58% of students saying Agree, 2.50% of students saying Disagree and 0% of participants students say Disagree.

The results of filling out the student response questionnaire from the entire material for the third question, obtained an average data of 49.17% of students saying Strongly Agree, 45.83% of students saying Agree, 4.58% of students saying Disagree and 0.42 % of students said Disagree.

The results of filling out the student response questionnaire from the entire material for the fourth question, obtained an average data of 54.17% of students saying Strongly Agree, 42.50% of students saying Agree, 2.08% of students saying Disagree and 1.25 % of students said Disagree.

The results of filling out the student response questionnaire from the entire material for the fifth question, obtained an average data of 60.00% of students saying Strongly Agree, 37.92% of students saying Agree, 1.67% of students saying Disagree and 0, 42 % of students said Disagree.

The results of filling out the student response questionnaires from the entire material for the sixth question, obtained an average data of 51.67% of students saying Strongly Agree, 44.17% of students saying Agree, 4.17% of

students saying Less Agree and 0% of participants students say Disagree.

The results of filling out the student response questionnaire from the entire material for the seventh question, obtained an average data of 52.08% of students saying Strongly Agree, 43.33% of students saying Agree, 4.58% of students saying Disagreeing and 0% of participants students say Disagree.

The results of filling out the student response questionnaire from the entire material for the eighth question, obtained an average data of 57.08% of students saying Strongly Agree, 40.42% of students saying Agree, 2.50% of students saying Less Agree and 0% of participants students say Disagree.

The results of filling out the student response questionnaires from the entire material for the ninth question, obtained an average data of 58.75% of students saying Strongly Agree, 39.58% of students saying Agree, 1.67% of students saying Disagreeing and 0% of participants students say Disagree.

The results of filling out the student response questionnaire from the entire material for the tenth question, obtained an average data of 50.42% of students saying Strongly Agree, 45.42% of students saying Agree, 3.33% of students saying Disagree and 0.83 % of students said Disagree.

c. Model Effectiveness Test Results

Effectiveness test In this study, taking data from the design *One-Group Pretest-Posttest Design*. Data collection on the results of this effectiveness was measured using the results of the pretest which was carried out before being given treatment and the posttest which was carried out after being given treatment for each learning series. Thus, the results of the treatment can be known more accurately. To eliminate bias from the research results, the pretest and posttest will be conducted for four sessions of learning materials. *One-Group Pretest-Posttest Design Schematic*.  
 Research Hypothesis:

Ho : There is no average difference between the Pretest and Posttest learning outcomes, which means that there is no effect of the LMS-based course and

training model in improving learning outcomes and office application computer skills for Teacher P.Early Childhood Education.

Ha : There is an average difference between the pretest and posttest learning outcomes, which means that there is an effect of the LMS-based course and training model in improving learning outcomes and office application computer skills for Early Childhood Education Teachers.

The basis for decision making in the Paired Sample T Test, namely:

1. If the significance value (2-tailed) < 0.05 then Ho is rejected and Ha is accepted.
2. If the significance value (2-tailed) > 0.05 then Ho is accepted and Ha is rejected

Table 6. The results of the Paired Sample T Test for this 1st session

		Paired Differences				t	df	Sig. (2-tailed)	
		mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pre_Test_Sesi_1 - Post_Test_Sesi_1	-34.66667	53.54555	9.77604	-54,66091	-14,67243	-3,546	29	.001

The results of the Paired Sample T Test for this 1st session, obtained a significance value (2-tailed) = 0.001. This indicates that the significance value (2-tailed) < 0.05, so Ho is rejected, and Ha is accepted. This means that there is an average difference between the learning outcomes of Pretest

and Posttest session 1, and this means that there is an effect of the LMS-based course and training model in improving learning outcomes and office application computer skills for Early Childhood Education Teachers session 1.

Table 7. The results of the Paired Sample T Test for this 2nd session

		Paired Differences				t	df	Sig. (2-tailed)	
		mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pre Test Session 2 - Post Test Session 2	-81.33333	86.61183	15,81308	-113.67472	-48,99194	-5,143	29	,000

The results of the Paired Sample T Test for this 2nd session, obtained a significance value (2-tailed) = 0.000. This indicates that the significance value (2-tailed) < 0.05, so Ho is rejected, and Ha is accepted. This means that there is an average difference between the Pretest and Posttest learning

outcomes in session 2, and this means that there is an influence of the LMS-based course and training model in improving learning outcomes and office application computer skills for Early Childhood Education Teachers in session 2.

Table 8. The results of the Paired Sample T Test for this 3 session

		Paired Differences					t	df	Sig. (2-tailed)
		mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre Test Session 3 - Post Test Session 3	-14.50000	19,75496	3.60675	-21.87662	-7.12338	-4,020	29	,000

The results of the Paired Sample T Test for this 3 session, obtained a significance value (2-tailed) = 0.000. This indicates that the significance value (2-tailed) <0.05, so Ho is rejected and Ha is accepted. This means that there is an average difference between the pretest and posttest learning

outcomes in session 3, and this means that there is an influence of the LMS-based course and training model in improving learning outcomes and office application computer skills for early childhood education teachers in session 3.

Table 9. The results of the Paired Sample T Test for this 4 session

		Paired Differences					t	df	Sig. (2-tailed)
		mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre Test Session 4 - Post Test Session 4	-11.33333	20.25413	3,69788	-18,89635	-3.77032	-3,065	29	,005

The results of the Paired Sample T Test for this 4th session, obtained a significance value (2-tailed) = 0.005. This indicates that the significance value (2-tailed) <0.05, so Ho is rejected and Ha is accepted. This means that there is an average difference between the Pretest and Posttest learning outcomes in session 4, and this means that there is an influence of the LMS-based course and training model in improving learning outcomes and office application computer skills for Early Childhood Education Teachers in session 4.

training model, (2) the design of the LMS-based office computer course and training model, (3) to determine the level of validity of the LMS-based office computer course and training model (4) to determine the practicality and effectiveness of the LMS-based office computer course and training model. The four parts are:

1. Description of Field Needs Development of LMS-Based Office Application Computer Course and Training Model.
2. Overview of Design Development Course model and computer training for LMS-based office applications.
3. Knowing the level of validity and practicality of the LMS-based computer course and training model for office applications.
4. Knowing the Effectiveness of the Model Development of practicality Model courses and computer training for LMS-based office applications in supporting human resources for skilled Early Childhood Education teachers.

IV. DISCUSSION

Based on the ADDIE model development procedure used in this study, in the discussion section of the results of this study, three issues related to the development of the LMS-Based Office Application Computer Course and Training Model will be presented in supporting the HR of Skilled Early Childhood Education Teachers, namely: (1 ) achievement of research objectives, (2) limitations of the study, and (3) specific findings.

a. Achievement of research objectives

The discussion of the results of this study will explore four things related to the development of an LMS-based office application computer course and training model in supporting skilled Early Childhood Education Teacher HR, namely: (1) an overview of the level of need for an LMS-based computer course and office application

b. Research limitations

Some of the limitations in this research start from the model product script, which consists of model books, curriculum, guides for managers, guides for instructors and guides for students which are still in the form of traditional texts and have not been equipped with many supporting pictures from the text. Of course, this limitation will be refined at a later stage.

Furthermore, the limitation of this research is that the courses and training programs made in the trial process only consist of one type of course and training, namely the office application computer program. Of course this model can not only be used by certain courses and training, but can be applied by all non-formal education units, ranging from course and training institutions (LKP), Community Learning Activity Centers (PKBM), learning activity studios (SKB) and organizers. non-formal education providers who are not institutionalized but have a commitment to contribute to the intellectual life of the nation in this beloved country of the Republic of Indonesia.

#### c. Special findings

A number of constraints and specific findings in the process of implementing the trials in this study, are as follows:

- 1) The implementation of this course and training learning model will run well, if it is supported by all parties, ranging from instructors, organizers, students. The support here starts from the learning preparation process, the learning implementation process, the evaluation process
- 2) Organizer activities start from managing classes, interacting with students, interacting with instructors in dire need of skills related to information and communication technology, ranging from using laptops, cellphones, and internet connections.

## V. CONCLUSIONS

The conclusions that can be drawn from this research and development are as follows:

#### a. Model Requirement Level

The current government prioritizes human resource development as a positive step that must be supported. Open unemployment in Makassar City in 2018 reached 12.19% of the total workforce of 1,067,923 people (70.81% of the total population of 1,508,154 people), so the number of open unemployment in Makassar City is 130,179 people. Of course, unemployment is very influential on the economy and social society of a country. One of the causes of the high unemployment rate in the city of Makassar is the lack of job opportunities and the low skills and education level of job seekers. The quality of human resources is influenced by the low level of public education (working age population) is also one of the factors that increase the unemployment rate. This unemployment alleviation can be overcome by increasing Human Resources, one of which is through learning. In addition, the rapid development of information and technology, on the use of Online learning (online) is currently very much needed by the community or education providers, both formal education and non-formal education. Based on the results of research on the use of LMS-based learning technology can significantly improve the skills of

students, especially in providing skills education amidst the limited facilities owned.

#### b. Model design overview

This model design consists of several products, namely model books, curriculum, guides for managers, guides for instructors and guides for students. The design of this model is based on the results of documentation studies and field studies. The design of this model has been validated by experts prior to the trial process. The results of the revision and input from the validator are then completed again so that they can be used as model products during model testing at the implementation stage.

#### c. Model overview

*Learning management system* or learning management system (hereinafter referred to as LMS) is a server-based software program that interacts with a database containing information about users, courses and content. In a sense, it resembles other systems designed for e-commerce, human resources, payroll, and student records. What makes an LMS unique is its instructional nature. LMS provides a place for learning and teaching activities that occur in a seamless environment, which is independent of time and space boundaries. These LMS-based courses and training allow educational institutions to administer large numbers of fully online or blended (online parts and face-to-face sections) using a common interface course and a set of resources.

#### d. The level of validity, practicality and effectiveness of the model.

The level of validity for all aspects, ranging from material aspects, media aspects and language aspects to model book products, curriculum, guidebooks for LKP managers, guidebooks for instructors, and guidebooks for students meet the validity criteria. The level of practicality of the model by the instructors is on average agree to strongly agree starting with the Aspects of Clarity of Instructions for Use of Learning Implementation Plans in the LMS-based Course and Training Model, Aspects of Competency Achievement and Learning Objectives of the LMS-based Course and Training Model, Aspects of Student Response during Learning in the Model LMS-based Courses and Training, Aspects Instructor's level of difficulty in Implementing LMS-based Course and Training Models. The level of effectiveness of the model from the four given learning sessions.

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# Developing Android-Based Accounting Quiz Game Learning Media "Milleaccounting" on Basic Accounting Equation Materials

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**Abstract**— This research aims to: (1) develop Android-based Accounting Quiz Game Learning Media "Milleaccounting" as vocational schools learning media for basic accounting equation materials; (2) determine the feasibility assessment by experts and learning practitioners on the developed learning media; (3) knowing the students' assessment of the developed learning media. This study belongs to the research and development (R&D) study by adopting the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model, but only through four stages until implementation with adjustment. Media validation is carried out by one media expert, one material expert, and one learning practitioner (teacher). The media implementation process was carried out through two stages of testing; small group trials (12 students) and field trials (32 students). The results showed that the feasibility assessment of Android-based Accounting Quiz Game Learning Media "Milleaccounting" based on the validation of the material expert, media expert, learning practitioners obtained a score of 4.66 (Very Feasible), 4.29 (Very Feasible), and 4.93 (Very Feasible). Then, the student's assessment based on responses during the small-group trial obtained a score of 4.27 (Very Good) and the score in field trial is 4.28 (Very Good).

**Keywords** — *learning media, quiz game, Android, Milleaccounting*

## I. INTRODUCTION

Industrial revolution 4.0 is also known as the digital revolution or technological disruption. The term digital revolution is used because at this stage there is a rapid growth in the use of computers and automation of records in all fields (Yahya: 2018). The digital revolution makes every sector experience changes and developments through the use of technology. Of course, the era of the industrial revolution 4.0 also poses challenges to the world of education. Education in the digital era must always innovate to create human resources that match the criteria needed in that era. Education is an effort to educate the nation's life in accordance with the goals of the state.

To realize educational goals, synergy is needed from several components of education itself. Students in the digital era must master skills according to their fields in order to be able to compete with the outside world. Their skills will be honed when they can follow the learning process well. In addition, they must also be able to use technology to support their abilities. Of course, here is also a challenge for teachers as education practitioners. Teachers are required to always

develop the skills they have in teaching by utilizing technological advances. The use of technology in the learning process will make the delivery of material more effective and efficient. One of the uses of technology in learning is as a learning media.

Learning media has a relationship with the learning process. By using media, learning can run more effectively. As explained in an article written by Suparlan (2020) that media and learning are inseparable because if the two are contradictory, the learning process becomes less good and the results are less than optimal. The teacher must be able to determine the learning media that will be used appropriately so that the learning objectives are achieved. One form of learning media that is relevant today is learning media that can be run on smartphones.

The use of smartphone technology as a learning media is often referred to as Mobile Learning (M-Learning). Mobile Learning (M-Learning) is learning that utilizes technology and mobile devices so that users can access learning content anywhere and anytime (Kurniawan: 2017). For now, the use of smartphones in the community is increasing day by day. Therefore, the use of M-Learning can be used as the right choice as a learning media. In addition, students will also feel that the learning is fun.

When the learning atmosphere is fun, their learning motivation will increase. Learning motivation according to Uno (2008: 23) is essentially an internal and external encouragement for students who are learning to make changes in behavior with several supporting indicators. Things that become indicators of learning motivation include the existence of interesting activities in learning and a conducive learning environment so that students can follow the learning process well. However, for now, the learning process is carried out online due to the Covid-19 pandemic.

Coronavirus Disease 2019 (Covid-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Covid-19 is a new type of coronavirus that has never been identified before (Ministry of Health of the Republic of Indonesia). Schools and other public facilities are temporarily closed or operational restrictions are placed during pandemic. The implementation of online learning requires the use of technology so that the teaching and learning process can still be carried out effectively and efficiently.

Vocational High School (SMK) is a school level that divides students into several majors or certain expertise competencies. One of the vocational schools in Yogyakarta,

especially in Sleman Regency, is SMK Negeri 1 Godean. SMK Negeri 1 Godean is a Business and Management Vocational School that provides four competency skills, namely Accounting and Financial Institution, Office Automation and Governance, Online Business and Marketing, and Multimedia.

In the competence of the Accounting and Financial Institution expertise, basic accounting subjects become mandatory subjects for students. The material taught in this subject is related to basic accounting materials, one of the materials is the Basic Accounting Equation. It was found that the majority of students felt that learning basic accounting during the Covid-19 pandemic was difficult for most students. In addition, they feel that learning is less fun and less interesting learning resources make it difficult for them to understand the material taught by the teacher.

Then, it was found that teachers were still not able to optimally utilize technology during online learning. This conditions will certainly affect the delivery of the material to students. Students feel that online learning is not fun because they are only often treated to softcopy of material text in addition to textbooks which are learning facilities from schools. Teachers also tend to use monotonous learning methods in each lesson. Teachers have not used smartphones optimally to be used as facilities in learning. In fact, all students already use smartphones. During online learning, the access used to deliver learning is Google Classroom. Teachers have not used the smartphone technology in the learning process in the classroom. Nowadays there are many application developments along with the high number of smartphone usage based on operating system (OS) for convenience and comfort in human life (Setiawan: 2017). The development of this application can also be done for educational or learning applications.

To overcome this, researchers will develop a learning media that can be run through an Android-based smartphone. The learning media is called "Milleaccounting". "Milleaccounting" is an Android-based accounting quiz game learning media that is devoted to the material of Basic Accounting Equations. The use of this accounting quiz game application is expected to make students feel that learning is more fun and can understand the material well. The question levels on the quiz are made so that students are challenged to understand each indicator of material competence well. Of course, this media can also be used anywhere and anytime via the smartphone of each student.

This Android-based accounting quiz game application "Milleaccounting" was developed to be an alternative media for teachers in delivering learning materials. It is hoped that by using this learning media, teachers will find it easier to convey material to students. The chosen subject is Basic Accounting with Basic Accounting Equation material because this material is important for students majoring in accounting and institutional finance. Students must be able to understand the material in this subject as a provision of subjects in other accounting majors. This material is the initial material that contains transactions within a company.

Based on the description above, this research aims to develop Android-based Accounting Quiz Game Learning Media "Milleaccounting" as vocational schools learning media for basic accounting equation materials, determine the feasibility assessment by experts and learning practitioners

on the developed learning media, and knowing the students' assessment of the developed learning media.

## II. RESEARCH METHOD

### A. Research Design

This study is a Research and Development (R&D) method. "Research and development methods are research methods used to produce certain products and test the effectiveness of these products" (Sugiyono, 2013: 297). In developing this learning media, researchers adopted the ADDIE development model with several modifications and adjustments. The ADDIE model was developed by Dick and Carry (1996) to design a learning system. The ADDIE model consists of five stages (Mulyatiningsih, 2014: 200-202), that is Analysis, Design, Develop, Implementation, and Evaluate. However, the research carried out was limited to the implementation stage.

### B. Place and Time of Research

This research took place at SMK Negeri 1 Godean, which is located in Kowanan Hamlet, Sidoagung, Godean District, Sleman Regency, Yogyakarta Special Region. This research was started in the odd semester of the 2020/2021 academic year from August - October 2020.

### C. Research Subjects and Objects

The subjects of this study were one media expert, one material expert, one learning practitioner, in this case, a basic accounting teacher, and students of grade X Accounting and Financial Institution 3 SMK Negeri 1 Godean. Then, the object of this research is the feasibility from expert validation and student assessment of the Android-based Accounting Quiz Game learning media "Milleaccounting".

### D. Development Procedures

The procedure for developing the Android-based Accounting Quiz Game Learning Media "Milleaccounting" refers to the adoption steps of the ADDIE development model in its application to the needs of the product and subject matter being developed, which are analysis, design, development, and implementation

### E. Data Collection Technique

#### 1. Types of Data

The types of data collected in this study are qualitative and quantitative.

#### 2. Research Instrument

The instrument used to collect data in this study was a questionnaire. This questionnaire is used to assess the media based on material experts, media experts, learning practitioners (teachers), and students.

### F. Data Analysis Technique

The data that has been obtained will be analyzed to determine the assessment and opinion of the products produced.

#### 1. Qualitative Data

Qualitative data is data in the form of suggestions, opinions, or feedback provided by material experts,



media experts, learning practitioners (teachers), and students. This data will be analyzed descriptively.

2. Quantitative Data

Quantitative data is data obtained from a validation questionnaire for the feasibility of learning media given to material experts, media experts, and teachers. Quantitative data were also obtained from student assessments during the learning media trials. The quantitative data that has been obtained is analyzed in the following steps.

- a. Changing qualitative assessment data to be quantitative with provisions:

Table 1. Score Criteria

Criteria	Score
Very Good	5
Good	4
Fair	3
Poor	2
Very Poor	1

Source: Sugiyono (2013: 93) with adjustments

- b. Calculate the average score obtained by the following formula.

$$\bar{X} = \frac{\sum X}{N}$$

Information:

- $\bar{X}$  = average score
- $\sum X$  = total score
- $N$  = the number of test subjects

(Widoyoko, 2017: 237)

- c. Interpret the average value of each aspect and all aspects

Data interpretation is done by converting the learning media assessment data. Referring to the research data analysis process conducted by Wulandari, et al (2019: 580) data conversion is divided into two, that is: (1) based on validation of the feasibility of material experts, media experts, and learning practitioners and (2) based on assessments/responses by students after using the learning media. These two criteria are used because the researcher wants to know the feasibility of the media being developed and to see the student's response after using this media so that later it can be seen that this media is feasible and good for use in basic accounting learning or not.

The data conversion can be presented as follows.

Table 2. Data Conversion of Media Feasibility Assessment by Experts and Practitioners

Score	Formula	Classification
5	$X > 4,20$	Very Feasible
4	$3,40 < X \leq 4,20$	Feasible
3	$2,60 < X \leq 3,40$	Fair
2	$1,80 < X \leq 2,60$	Not feasible
1	$1 < X \leq 1,80$	Very Not Feasible

Source: Widoyoko (2015: 112)

Furthermore, the interpretation of student data is carried out by making the conversion table as follows.

Table 3. Data Conversion of Media Assessment by Students

Score	Formula	Classification
5	$X > 4,20$	Very Good
4	$3,40 < X \leq 4,20$	Good
3	$2,60 < X \leq 3,40$	Fair
2	$1,80 < X \leq 2,60$	Poor
1	$1 < X \leq 1,80$	Very Poor

Source: Widoyoko (2015: 112)

### III. RESULT AND DISCUSSION

#### A. RESULT

The development of the Android-based accounting quiz game learning media "Milleaccounting" uses the stages of research and development of the ADDIE model with modifications and adjustments. Researchers limit this research only to the implementation stage.

##### 1. Analysis Stage

Activities carried out by researchers at this stage are analyzing problems, analyzing student needs, and analyzing the availability of infrastructure related to the development of learning media. This analysis is needed to determine the problems experienced by students in the learning process. In addition, in this analysis, the researcher also determines the basic competencies that will be included in the learning media being developed.

From these activities, it was found that in the learning process the instructional media that were often used by teachers were PDF files, PPT slides, and textbooks that were distributed through Google Classroom during online learning. This learning model also makes learning less fun. Then, the majority students of grade X AKL 3 SMK Negeri 1 Godean are users of Android smartphones, but their use is still limited to playing social media and playing games. Access to educational needs is still only when teachers provide assignments or materials through Google Classroom. Students also do not have an application that contains learning material.

In addition, many students felt that basic accounting learning was difficult to understand, especially through online learning as it is today. Then, students also feel bored if the learning media used by the teacher is less varied and less attractive. However, teachers have not tried to use educational applications that contain learning material. From these findings, it can be concluded that the supporting facilities are available, but their utilization is not yet optimal. Both of the teacher and students are Android-based smartphone users.

##### 2. Design Stage

At this stage, researchers collect various kinds of information related to the development of learning

media that will be made. The results of this information collection, among others:

- a. Preparation of Material, Practice Questions, Quiz Questions, and Glossary
- b. Making Learning Media Storyboard
- c. Making learning media logos, selecting backgrounds, images, and back sounds

3. Development Stage

The third stage in this research is the development stage. At this stage, the activities carried out are product manufacture, expert validation, and product revision. This the front page printscreen of the media.

a. Product manufacture

Researcher are assisted by developers to create and develop learning media. This learning media was developed using adobe flash CS6 software. Then the learning media made in the Android Package (.apk).



Fig. 1. Front page

- b. Making Learning Media Operational Manual  
The researcher also make the learning media operation manuals to make it easier for users to run this application media.

c. Validation I

Then, validation I by material experts and media experts.

1) Material Expert Validation

Table 4. Material Expert Validation

No	Assessment Aspects	Number of Statements	Total Score	Average	Category
1	Materials	9	41	4.56	Very Feasible
2	Questions	7	31	4.43	Very Feasible

3	Linguistic	2	10	5.00	Very Feasible
<b>Total</b>		<b>18</b>	<b>82</b>	<b>4.66</b>	<b>Very Feasible</b>

Based on the table above, the material expert's assessment, when viewed from the materials aspect, obtained an average score of 4.56 (very feasible), the question aspect obtained 4.43 (very feasible), and the linguistic aspect obtained 5.00 (very feasible). Overall, the results of the validation by material experts obtained an average score of 4.66. The results of this assessment indicate that the learning media is in the **very feasible** category.

2) Media Expert Validation

Table 5. Validation of Media Experts

No	Assessment Aspects	Number of Statement	Total Score	Average	Category
1	Software Engineering	14	60	4.29	Very Feasible
2	Visual Communication	14	60	4.29	Very Feasible
<b>Total</b>		<b>28</b>	<b>120</b>	<b>4.29</b>	<b>Very Feasible</b>

Based on the table above, the media expert's assessment when viewed from the software engineering aspect obtained an average score of 4.29 (very feasible), and for the visual communication aspect also obtained 4.29 (very feasible). Based on the results of the above assessment, it was obtained an average score for all aspects of 4.29. The results of this assessment indicate that the learning media is in the category of **very feasible**.

Based on the first validation process, the media revision I was carried out, which was based on feedback from material expert and media expert validators.

d. Validation II

Validation II is a validation stage by accounting learning practitioners (teachers).

Table 6. Validation of Learning Practitioners (Teachers)

No	Assessment Aspects	Number of Statements	Total Score	Average	Category
1	Software Engineering	5	24	4.80	Very Feasible
2	Learning Design	13	65	5.00	Very Feasible
3	Visual Communication	11	55	5.00	Very Feasible
<b>Total</b>		<b>29</b>	<b>144</b>	<b>4.93</b>	<b>Very Feasible</b>

Based on the table above, the assessment of accounting learning practitioners when viewed from

the software engineering aspect obtained an average score of 4.80 (very feasible), the learning design aspect is 5.00 (very feasible), and the visual communication aspect gets score of 5.00 (very feasible). Overall, the results of validation by practitioners of accounting learning obtained an average score of 4.93 which is included in the **very feasible** category.

Based on the second validation process, the media revision II was carried out based on feedback from teacher.

4. Implementation Stage

This stage is carried out in two stages, small-group trial by 12 students of grade X AKL 1 SMK Negeri 1 Godean and field trial by 32 students of grade X AKL 3 SMK Negeri 1 Godean.

a. Small-Group Trial

Table 7. Small-Group Trial Results

No	Assessment Aspects	Number of Statements	Total Score	Average	Category
1	Software Engineering	5	258	4.30	Very Good
2	Learning Design	6	317	4.40	Very Good
3	Visual Communication	11	544	4.12	Good
<b>Total</b>		<b>22</b>	<b>1.119</b>	<b>4.27</b>	<b>Very Good</b>

Based on the table above, it can be seen that the results of the small-group trial from student responses for each aspect. The software engineering aspect obtained an average score of 4.30 (very good), the learning design aspect obtained 4.40 (very good), and the visual communication aspect obtained 4.12 (good category). From all the results, the average score was 4.27. These results indicate that learning media is included in the **Very Good** category.

b. Field Trial

Table 8. Field Trial Results

No	Assessment Aspects	Number of Statements	Total Score	Average	Category
1	Software Engineering	5	684	4.28	Very Good
2	Learning Design	6	828	4.31	Very Good
3	Visual Communication	11	1.496	4.25	Very Good
<b>Total</b>		<b>22</b>	<b>3.008</b>	<b>4.28</b>	<b>Very Good</b>

Based on the table above, it can be seen that the results of the assessment or student responses to the media in field trial for each aspect. The software engineering aspect obtained an

average score of 4.28 (very good), the learning design aspect obtained 4.31 (very good), and the visual communication aspect obtained of 4.25 (very good). From the results of the overall assessment of aspects obtained an average score of 4.28. This shows that the learning media is **Very Good**.

B. DISCUSSION

1. Development of Android-based Accounting Quiz Game Learning Media for the "Milleaccounting"

The development of this learning media adapts the ADDIE model developed by Dick Carry (1996) in Mulyatiningsih (2014: 195-199), that through five stages consisting of Analysis, Design, Development, Implementation, and Evaluation. However, this research was only carried out until the implementation stage following the objectives of this study.

2. The Feasibility of Android-based Accounting Quiz Game Learning Media "Milleaccounting"

Assessment of the feasibility of learning media for the accounting quiz game "Milleaccounting" is divided into two stages of validation. The validation I was carried out by one material expert (Mrs. Dhyah Setyorini, S.E., M.Si., Ak.) and one media expert (Mr. Rizqi Ilyasa Aghni, M.Pd.). The score from material experts is 4.66 (Very Feasible). The score from media expert is 4.29 (Very Feasible). Then, validation II was carried out by one accounting teacher (Mrs. Ruliasih, S.Pd.). The score from the teacher was 4.93 (Very Feasible). Furthermore, the result of the average overall assessment obtained a score of 4.70 (Very Feasible).

3. Student Assessment of Android-based Accounting Quiz Game Learning Media "Milleaccounting"

The implementation stage was carried out through two trials, small-group trial and field trial. The research subjects in the small-group trial were students of grade X AKL 1, while the research subjects in the field trial were students of class X AKL 3. The results of student assessments in small-group based on the overall student assessment on the three aspects is 4.27 (Very Good) category. The results of student assessments on field trials obtained based on the overall student assessment on the three aspects is 4.28 (Very Good) category. So, it can be concluded that the Android-based accounting quiz game learning media "Milleaccounting" is **"Very Good"** to be used as a learning media for vocational high school students in the accounting department.

Then, this application has strengths and weaknesses as a learning media. The strengths of Android-based accounting quiz game learning media "Milleaccounting", among others:

- a. "Milleaccounting" is easy to carry because it can be installed/downloaded on the Jellybean version of the Android Smartphone or later so that it can be used anywhere and anytime.
- b. "Milleaccounting" is a learning media in the form of an application that can be used on an Android smartphone with easy operation, attractive appearance, and relatively small application size, so it doesn't take up memory.
- c. "Milleaccounting" presents an interesting flow of question processing so that students are challenged to solve each level of question.

- d. "Milleaccounting" is an innovation in the development of learning media using an Android smartphone and an opportunity to be developed by the development of science and technology.

The weaknesses of Android-based accounting quiz game learning media "Milleaccounting", among others:

- a. The material and questions contained in "Milleaccounting" are limited to basic accounting equations.
- b. This learning media can only be operated using an Android-based smartphone.
- c. There is no character animation on the material or question slides due to development limitations.
- d. "Milleaccounting" cannot use the back button on a smartphone and must use the back and exit buttons on the application.
- e. Cannot connect to the internet network so the questions cannot be updated regularly.
- f. No menu provides a back sound option, so it can't be changed according to the user's taste.

#### IV. CONCLUSION

Based on the results of the research and discussion described above, it can be concluded that:

1. The Development of Android-based Accounting Quiz Game Learning Media "Milleaccounting" adapted the ADDIE Development Model developed by Dick Carry (1996) which was carried out in five stages consisting of Analysis, Design, Development, Implementation, and Evaluation. However, this research was only carried out until the implementation stage with a few adjustments.
2. Feasibility Validation of Android-based Accounting Quiz Game Learning Media "Milleaccounting" based on the recapitulation of the overall assessment results of written experts (Material Expert, Media Expert, and Learning Practitioner) the average score obtained is 4.70. The score is in the range  $X > 4.20$  so it is included in the "Very Feasible" category.
3. Student Assessment of Android-based Accounting Quiz Game Learning Media "Milleaccounting" based on the results of small group trials conducted on 12 students of class X Accounting and Financial Institutions 1 SMK Negeri 1 Godean obtained 4.27 which is included in the "Very Good" category. Then, the results of student assessments in field trials obtained an average score of 4.28 which is

included in the "Very Good" category. Based on the students' responses, the learning media developed were very good to be used in accounting learning in vocational schools (SMK), especially in the subject of Basic Accounting Equations.

The researcher provides the following suggestions below:

1. The research and development stage should be able to arrive at the evaluation stage so that the effectiveness of using the media in the learning process can be known.
2. Learning media need to be developed more broadly for other accounting materials.
3. Development of learning media can then be carried out in terms of content, for example by adding instructional videos.
4. It is better to add animation in the developed learning media to make it more interesting.

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# Developing Flash-based Media for Learning of Office Technology in SMK

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**Abstract**—Learning today emphasizes independent learning among students that needs interactive media to meet the demands of learning. Developing flash-based media can help the learning process, especially information management material through a weblog (blog). Flash-based multimedia is a product of interactive multimedia that contains navigation keys, guides, and unlimited access times in using this media. The study aimed to develop appropriate and effective flash-based media for learning of office technology in SMK (Vocational School). The particular research was Research and Development (R&D). The developmental procedure adopted Luther's development research model. There were 6 stages; conception, designing, collecting material content, assembling, testing, and distributing. The subjects consisted of material and media experts. 5 material experts were teachers of office technology and 2 media experts were media expert lecturers. 200 students from 5 SMK in Yogyakarta were used for large subject tests. Data collection techniques were documentation, questionnaires, and observation sheets. Data analysis technique used SPSS 22 software. The research goals were 1) the process of developing flash-based learning media for the subject of office technology carried out using 6 stages following the developmental stage adopted the Luther developmental model consisting of 6 stages. They were conception, designing, collecting material content, assembling, testing, and distributing. And, 2) Flash-based learning media for the subject of office technology were feasible for use in the learning process, reviewing from material experts obtain a mean of 4.93 (Very Good), the assessment of media experts obtain a mean of 4.67 (Very Good), and feasibility test results obtain mean of 4.492 which include to the category of "A".

**Keywords**—Media Development, Learning Multimedia, Office Technology

## I. INTRODUCTION

The development of information technology brings many impacts on human life. Education is a field affected by the development of information technology. Information technology is much used in the world of education. The use of information technology can help students in the learning process, besides it uses to facilitate teachers to improve the competence of teaching (Budiman, 2017: 42). Using information technology in learning will greatly facilitate students in accessing various learning sources. Therefore, the use of information technology today has become a necessity in the learning process in the classroom. The examples of the application of information technology in learning are by using the internet, intranet, mobile phone, and CD Room / Flash Disk, that the main components consist of Learning Management System and Learning Content (Mukhsan, 2010: 10). Information technology is a form of learning media that teachers might use to facilitate the delivery of learning materials to students.

The government, through the Minister of Education and Culture, gives special attention to the use of information and communication technology into the teaching and learning process. The government issued the Regulation of the Minister of Education and Culture (Permendikbud) Number 65 of 2013 on Basic and Secondary Education Process Standards in chapter I, number 13, which states that the use of information and communication technology aims to increase the efficiency and effectiveness of learning. The regulation becomes the basis for educators to start using information and communication technology in the learning process in the classroom.

In the year of 2013 become the year of changing for the world of education in Indonesia. The 2013 Curriculum officially launched as a refinement of the KTSP curriculum by the Minister of Education and Culture. The curriculum emphasizes the importance of interaction between teachers and students, which makes the learning occur in two directions and active. The role of the teacher is getting complex, not only transferring knowledge to students but also should create interesting learning situations. And the teacher is also required to foster student activity. Using interesting learning media in the learning process can enhance student activity. Supported by Yuliansah (2018), stated that the use of animation powerpoint-based learning media is effective in increasing student learning motivation in archiving learning material at SMK Negeri 1 Yogyakarta. Moreover, there are many other studies concerning that learning media can increase learning motivation, learning activeness, and students' achievement. In short, a teacher must use information technology as a learning medium in the classroom. This ability demands them for the teaching profession.

SMK for Business Management is a form of secondary education in Indonesia. One of the Skills Competencies at SMK for Business Management is the competency of Office Administration Skills. Hartanti, Sutirman, and Yuliansah (2018) research on the teacher competency profile of the office administration expertise in using and developing learning media with the teacher as a subject who teach productive subjects in SMK for Business Management, particularly on the competence of Office Administration expertise. The results show 1) the level of media used for learning at the SMK office administration expertise program in the Special Region of Yogyakarta is 85.54 % or high level, 2) the level of planning for the development of learning media at SMK office administration expertise program in the Special Region of Yogyakarta is 54.21% or high level. Meanwhile, the implementation of developing learning media is 62.65% or low category. The results imply, most of the teachers have used learning media by using ready-use media or teaching aids such as filing

cabinets or other practical tools, meanwhile the teacher's ability to develop media independently is still low. The factors as the reason for this phenomenon are the lack of supporting facilities, including laboratory conditions, limited time, the ability to measure the success of the media using, the background of teachers who have not mastered technology and information, limited budget to develop learning media and inadequate support from school party in facilitating providing the learning media.

The selection of ready-used media through downloading from the internet or using PowerPoint text is not able to provide interaction to students because productive subjects emphasize practice or skill. Moreover, the tool was found only in the school laboratory and used during school hours so that students might not be able to use it after they have returned home. Here, it needs an accessible interactive media for students anywhere and anytime without any limited space and time. Office technology is one of the productive subjects in the Competency Competencies for Office Administration. Office technology subjects consist of theory and practice where students will acquire theories about various competencies, including virtual offices, keyboarding, management operations of word, numbers, and presentations, teleconferences, and information management through blogs. Most of the learning processes for office technology are only on text-based PowerPoint learning media that the learning process might not be able to foster the activeness of students. The use of instructional media should be able to improve the activeness of students. Therefore, they should give extra efforts in selecting learning media according to the characteristics of students aiming to increase the activeness of students in the learning process. Based on the background, this article aimed to develop the flash-based learning media of office technology at SMK in the Special Region of Yogyakarta.

Based on the problems, the problem formulation of the research was 1) How to develop flash-based learning media in office technology subjects, and 2) what is the feasibility of flash-based learning media in office technology subjects. And the objectives of the research are: produce flash-based learning media in office technology subjects and determine the feasibility of flash-based learning media in office technology subjects.

## II. LITERATURE STUDY

The word media are from the Latin word "medius" which means "middle", "intermediary" or "introduction". Robert A. Reiser in his book states that the term multimedia is a combination of two or more media that it can transmit messages and stimulate the thoughts, feelings, and willingness of students. In the end, it can encourage the learning process. Nowadays, multimedia usually refers to contemporary software that contains a combination of text, graphics, animation, video, or audio (Robert A Raiser, 2002: 308). The conclusion of Gerlach and Ely (Arsyad, 2009: 3) shows, media can be human, material, or all events that can build conditions and help students to

gain knowledge, skills, or attitudes. In short, media may be the form of graphic, photographic, or electronic tools that are used in the process of capturing and reconstructing received information visually or verbally.

The function of educational media is to enhance the learning process aiming to improve the learning outcomes. Nana Sudjana and Ahmad Rivai (Azhar Arsyad, 2009: 5) states benefits using educational media in the teaching and learning process, including 1) learning becomes more attractive to foster learning motivation, 2) Clarify the learning material to be more easily understood by students, 3) Has a high supporting factor in making varied learning methods, and 4) foster the activeness of students because they involved into the teaching and learning process. Arief S. Sadiman et, al (2002: 16-17) states, educational media has benefits: 1) clarify the content of the material using pictures or videos, 2) overcome the limitations of space, time, and human senses, 3) variation learning media increase the activeness and motivation of students, 4) be a means of independent learning based on students' interests, and 5) provide the same perception to various types of student characteristics.

The selection of learning media needs to consider several things. Padmaningrum (2013: 2) proposed the criteria in media selection; a. Learning objectives, media selection should follow the learning objectives as it supports the delivery of learning to students. b. Effectiveness, the criteria for effective media are following the student characteristics, low-cost, and efficiency. c. Students, the selection of media also considers the students, such: student characteristics, attract the students' interest, educational levels, the target of the study (individually, in small groups, or large groups/classes), and the number of students. d. Availability or much ready-use media should be the number one option, both in schools and the market. But, if the media is not much available, we can make and develop following the characteristics of students. e. The quality of the media must be good, used many times, and has long-term durability. f. Costs in media procurement should not over the expected benefits. Expensive media with few benefits for students, of course, will cause losses. g. Flexibility and convenience. The media selection must consider the flexibility, that is, it can be used in various situations and emphasizes the convenience, both educators and students. h. Educators must have the ability to use the media. i. The last factor is time allocation in learning. The media should be adjusted to time allocation. For example, if the time allocation of learning is short, avoid media that requires long preparation in operation.

Multimedia is an example of learning media. Multimedia is a combination of various media so that one media have functions to support learning activities. Towndrow & Vallance (2004: 17) states that multimedia is a combination of text, video images, and animation used in teaching and learning activities. Meanwhile, ivers & Barron (2002: 2), the learning process may use various combinations of media, including text, graphics, animation, images, video, and sound. Based on the previous definition, learning multimedia means a media consists of a combination of several media, such as text, images, animation, and video, then be in the form of audio-visual media. Multimedia may categorize into two groups, namely linear and interactive multimedia. Linear multimedia is not equipped with any controller in it, sequential and measurable in the duration. The examples of linear multimedia are film and television. Meanwhile, interactive multimedia is equipped with a controller operated by the user. In this multimedia, the user can choose the next process. The characteristics of interactive multimedia are equipped with multiple navigations. Interactive multimedia has no duration because the length of time depends on the time spent by the user when browsing the media.

There are many types of multimedia learning for the learning process. And, there are criteria in media selection aiming to meet the characteristics of students. Walker and Hess (Kustandi Cecep and Sutjipto Bambang, 2011: 143) provide criteria for reviewing the multimedia to determine the level of quality based on several aspects, namely: a. Content quality and purpose. The assessment of these criteria is accuracy, importance, completeness, balance, interest, fairness, and suitability to the student's situation. b. Quality of learning: providing learning opportunities, providing assistance to learn, motivating quality, learning flexibility, relation with other learning programs, social quality of learning interactions, quality of tests and assessments, and have an impact on students, teachers, and learning. c. Technical quality: readability, ease of use, and quality of the display, response handling, program management, and documentation.

Developing multimedia learning must pass several stages of development. The developing process may use the commonly used development model. Borg & Gall (1983: 772) state, in developmental research, there will be a process of development and validation of educational products. The steps usually refer to the R and D cycle, which contains study findings related to the product, developing products based on these findings, conducting trials, and revising the media product. Therefore, developing multimedia products must follow procedures. A model of multimedia learning development developed by Luther (2012: 18). Luther (2012: 16) proposed 6 stages; conception, designing, material collection, assembling, testing, and distribution.

Determine the goal of media development is the first stage of the development process of multimedia learning, which will use to determine the type of media. For example,

interactive media aims to create interest learning. The basic conception process is simply determining the type of media, media size, platform, themes, and other important things. This initial concept was used as the basis for the process of determining media design.

At the design stage, we have made the initial plan of media design. It starts from the user interface, themes, sequence of media pages, sequence of animation buttons, and others. Authoring features at this stage are outlining, storyboarding, flowcharting, and scripting. Also, this stage identifies the needs for media design, including audio, video, icons, images, text, questions, and other required contents.

The next stage is the collection of material that collects various contents. Then, the contents are grouped based on the needs. Audio content contains back sounds or sound recordings. Image content consists of background photos or images. And, the text contains learning material.

Then, all the content is combined into one complete unit based on the designed flowcharting. Also, it may check the error or function of the features of the media.

After that, the media application continued to the trial phase, which through two stages: the application and quality testing. The application test checks the program and the running of the application. Meanwhile, the media quality testing phase involves media experts and material experts.

After the testing phase, the product media continued to product revision based on the feedback. The last, media distribution is through any media, such as flash disk, CD, DVD, or cloud.

### III. RESEARCH METHOD

This research was Research and Development (R&D). The study aimed to develop flash-based media in the archiving subject to create effective and appropriate media and improving the student's learning outcome. The developmental procedure adopted Luther's development research model. There were 6 stages; conception, designing, collecting material content, assembling, testing, and distribution.

This research was conducted from 4 February to 28 June 2019 at 5 SMK Business Management in Yogyakarta Province. 5 vocational schools selected as the research site through considerations. The subject of the study also played a role as the subject for trial the learning media. The subjects of the trial consisted of class X students at 5 State Vocational Schools in the Special Region of Yogyakarta, material experts, and media experts. 5 teachers who teach at Competency Standards for Office Technology played as material experts. Meanwhile, 2 lecturers who have competence in multimedia learning played as media experts. And, there were 200 students of class X from 5 vocational schools played as the subject of the study. The data collection techniques were questionnaires, documentation, and objective tests. The instruments were documentation guidelines and questionnaires. Data consisted of qualitative and quantitative data. The data obtained from the trial phase. Qualitative data obtained from material experts, media experts, and limited trials provided by students. The data is criticism and suggestions for the revision of the multimedia. Based on the feedback, it continued to product revision. Statistics used to analyze quantitative data. The steps in data

analysis consisted of (a) collecting raw data, (b) scoring, (c) the score converted into a value on a scale of 5 using the conversion from Sukardjo (2008: 101). The minimum standard of media feasibility obtained a good value ("B"). In short, if the media has not obtained a score of B, then it should enter the product revision and trial phase to students.

IV. RESULT AND DISCUSSION

A. Product of Multimedia Learning

The product making stage is the core stage of the actual appearance. This stage is carried out after the conception stage, material collection, storyboard making, and the designing stage. The software used Adobe Flash CS6. The media used 720P HD resolution with a flat design display that adapts to the User Interface trend of the last decade.

Multimedia learning products consist of parts. 1. The intro page is the first page of this learning media. When opening the media product, it will show a typography-type motion graphic animation. The Intro page contains welcome greetings to the learning media, motivation, and introduction to institutions. The skip button at the bottom center used to go to the menu page. 2. The menu page contains the media title, button for media menu, media information, and motivational animation as a learning media background. 3. The Instructions page contains a brief explanation of the operation of the instructional media and information about the buttons found on the learning media. 4. The KI / KD page contains core competencies, basic competencies, and learning objectives following the current curriculum used in SMK. 5. The material page contains tutorials, theory, and questions that students may do the questions after learning. In the theory menu, there is a text explanation of the material. While the tutorial menu contains video tutorials on how to create a blog. On the right side, there is a question menu containing 10 multiple choices to enhance the students' knowledge skills. 6. The evaluation page contains the motivation and buttons for evaluation. The questions for evaluation are prepared based on the material and learning competencies applicable in the current KI / KD at SMK. 7. The media info page contains brief information on the identity of the media developer and references of books used in developing learning media. 8. The exit page will always appear when the user clicks the exit button at the upper right corner. Users can cancel to exit by clicking "cancel" and will immediately exit the application when clicking the "Exit" button.

B. Alpha Test

After the media making stage has completed, it continued to the testing phase. The developer carried out the overall controlling stage aiming to find out any error. Media testing consisted of Alpha and Beta tests. Alpha testing was conducted by material experts and media experts. This test involved several experts in each field. The introduction of media and testing carried out in the FGD (forum group discussion) to vocational teachers who are competent in the field of office technology. Meanwhile, media experts were competent lecturers in the field of instructional media and learning technology. Alpha testing provided data to determine the feasibility of learning materials and media based on the aspects of the material content quality, learning, media, and content. The data obtained from material and

media experts used to assess the learning media and as a reference in revising the learning media.

The process of material validation invited five material experts who were teachers of Office Technology subjects in the Office of Automation Administration at the Management Business Vocational School in Yogyakarta. The media aspect consisted of two aspects; learning and content/material that manifested into 23 questions. The result of the material expert validation is presented in table 1.

TABLE 1. RESULTS OF MATERIAL EXPERT VALIDATION

Value	Criteria	Term	F	%
A	Very Good	$4,2 < X$	23	100
B	Good	$3,4 < X \leq 4,2$	0	0
C	Enough	$2,6 < X \leq 3,4$	0	0
D	Bad	$1,8 < X \leq 2,6$	0	0
E	Very Bad	$X \leq 1,8$	0	0
Total			23	100
Mean			4,93	

Based on table 1, the results of material validation showed 23 items obtained Very Good criteria. And, the mean obtained Very Good Criteria and the value "A."

The media validation process invited two media experts. They were Arwan Nur Ramadhan, M.Pd, a lecturer who has competence in the field of learning media, and Rizqi Aghni Ilyasa, M.Pd, an expert in media development. The media aspect consisted of two aspects; concept and content that manifested into 24 questions. The results of the material expert validation are presented in table 2.

TABLE 2. RESULTS OF MEDIA EXPERTS VALIDATION

Value	Criteria	Term	F	%
A	Very Good	$4,2 < X$	24	100
B	Good	$3,4 < X \leq 4,2$	0	0
C	Enough	$2,6 < X \leq 3,4$	0	0
D	Bad	$1,8 < X \leq 2,6$	0	0
E	Very Bad	$X \leq 1,8$	0	0
Total			24	100
Mean			4,67	

Based on table 2, the results of material validation showed 24 items obtained Very Good criteria. And, the mean obtained Very Good Criteria and the value "A."

C. Beta Test

A beta test or large-scale test is used as a means of testing media directly to the user. Here, the users are students of class X Office Administration Automation at SMK Business management. The beta test involved 200 students of class X Office Management Automation at SMK Bisnis Manajemen. 48 items on media validation obtained Very Good criteria. The results of the feasibility test are presented in table 3.

TABLE 3. RESULTS OF THE LEARNING MEDIA FEASIBILITY TEST

Value	Criteria	Term	F	%
A	Very Good	$4,2 < X$	48	100
B	Good	$3,4 < X \leq 4,2$	0	0
C	Enough	$2,6 < X \leq 3,4$	0	0
D	Bad	$1,8 < X \leq 2,6$	0	0
E	Very Bad	$X \leq 1,8$	0	0
Total			48	100
Mean			4,492	



Based on table 3, the results of the feasibility test of learning media showed 48 items obtained Very Good criteria. And, the mean obtained Very Good Criteria and the value "A."

## V. DISCUSSION

In this discussion session, it discussed two main subjects about the process of developing and the feasibility of learning media being. In this discussion session, it discussed two main subjects about the process of developing and the feasibility of learning media.

### A. Process of Learning Media development

Office technology learning media developed based on an analysis of the needs of vocational school teachers in the Special Region of Yogyakarta. Media making used Adobe Flash CS6 software. This research and development used Luther's model with 6 stages, namely conception, designing, collecting material content, assembling, testing, and distributing.

#### 1) Conception

This stage is the first stage in developing multimedia learning. The initial stage is determining the type of media and the purpose of media making. The selected media type was interactive. In line with Ampera (2017: 1) states that interactive media is an effective interactive media to increase motivation and learning outcomes of students at SMK Negeri 3 Tebingtinggi. Also, digital-based interactive media is appropriate with the characteristics of millennial students. Early & Early (2015: 1) states that new students are always related to computers and new media. Moreover, the form of the media is determined by the software used to develop the media. Adobe Flash CS6 software was very appropriate for media making because it can create interesting digital content for the younger generation (Bishop & Hartman, 2013: 1). The selection of the appropriate material is also important. In the process of selecting a material is selected through a discussion to determine the material.

The process of discussion and determining the material also depends on the limited research schedule. Then, based on the results of a survey at several vocational schools and consider the stages of the media development process, selected the material on managing information through web log in the Office Technology subject. Based on the preliminary analysis, concluded that the media development process was carried out for three months and the trial stage was carried out in May 2019. After that, it continued to the design stage. The concept stage is the most basic as it is the first stage. This stage is the same as the development model proposed by Villamil-Molina (1997) that the initial stages of the

development process include the objectives, ideas for development, and the expected results. But, the term used in the Villamil-Molina development model is the Development stage.

#### 2) Designing

The next process was designing the media according to the concept in the first stage. Flowcharts and storyboards are prepared in this stage. A flowchart was used to create a program flow that contains the structure and work sequence. Meanwhile, the storyboard showed the complex details of the content. The storyboard is a storyline that plays as a guideline for the developing media. Therefore, the process of making storyboards is the main process before creating interactive learning media, and the storyboards are the basis of the media development process. Orr, Golas, and You (1994) argue that storyboards are the main design documentation for creating interactive media. The storyboard contains various programming instructions, audio scripts, and detailed descriptions of visual elements such as text, video, graphics, and animation. The process of media planning is one of the important things which determine the quality. Then, the media design process is one of the most vital things in the stage of the developmental process. This process is the same as the model proposed by Villamil-Molina (1997) that the design stages, including making storyboards, scripts, content analysis are part of the important stages in the developmental process. But, Villamil-Molina (1997) calls the stage as the Preproduction process. Meanwhile, the Sherwood-Rout model calls the stage as Design.

#### 3) Collecting material content

At this stage, it conducted the collection of the required materials based on the designs in stage 2. The materials consisted of material, video, audio, pictures, and questions. The process is based on predetermined competency standards, namely managing information through weblogs on Office Technology subjects. The process of collecting material was carried out by taking from several sources; 1. Rachmad Hakim, in a book entitled "Smart Ways to Manage a Blog" in 2010, 2. Solomon, Gween & Lynne Scrum, in a book entitled "Web 2.0 Guide for Educators" in 2011, 3. Agung Gregorius, in a book entitled "Creating an Interactive Homepage with CGI / Perl 2000, and 4. Oya Suryana and Matamaya Studio, in a book entitled "Building a WordPress Blog" in 2008. Video content was self-made in the form of an illustration of blog building. Meanwhile, audio and image are open-source taken from the Internet. Some contents of images are screenshots of making blogs to make video tutorials.

The questions are taken from the book. The content creation should be as attractive as possible to increase student attractiveness in learning. Tejo (2011: 22) states that the content creation process must be interesting to enhance the students' motivation to learn. The stages of collecting materials in the Vaughan developmental model calls as the Design and Production stage.

#### 4) *Assembling*

This stage is the core stage of developing instructional media. At this stage, all the compiled materials are then assembling into the learning media. The process of media making used Adobe flash CS 6 software with ActionScript 2.0 language learning. Functions from ActionScript 2.0. is to adjust navigation, animation, and audio settings on the media. The choice of Adobe flash CS 6 software is very suitable for media creation as it can create attractive digital content for young generations (Bishop & Hartman, 2013: 1). It aims, the media is interactive. The final result is a learning media file with the extension ".exe." The process of the assembling stage is a vital stage as following the trial time. If the assembling process is not done on time and passed the schedule of Basic Competency learning on managing information using the weblog will make the media might not able to proceed with the testing stage. The media creation process must be done in detail and follow the planning process. In the Sherwood-Rout developmental model is known as the production stage. The next stages are the testing phase and the feasibility analysis.

#### 5) *Testing*

The next stage is the stage of testing toward the developed media. The test aims to determine the weaknesses of the media. The testing phase was carried out in two stages; alpha and beta testing. The alpha testing process was carried out to validate products provided by material and media experts. Validation by material experts carried out by 5 vocational teachers who teach Office Technology which consists of aspects of learning and material content. In the learning aspect, 9 items obtained very good criteria, meanwhile, in the content/material aspect, 14 items obtained very good criteria. Based on the results of material validation, 23 items of material validation questionnaires obtained very good criteria. The next alpha testing process is the media validation process inviting 2 media experts. The process consists of 2 aspects; the concept of media and content. The results showed that the 11 items of media concept aspect obtained Very Good Criteria and 12 items of

content aspect obtained Very Good Criteria. Based on the results, concluded that 23 items of media validation obtained Very Good Criteria. After revisions based on the Alpha test, it continued to the next stage; beta testing. The aspects of the beta test consist of ease of navigation, information presentation, media integration, artistic and aesthetic, and overall functional aspects. Based on the results of the beta test, 48 items were in the Very Good Criteria. At the Beta stage, there were no suggestions provided by students so there was no revision process. Therefore, the media has been declared feasible for the distribution stage. The alpha and beta test process is one of the requirements to determine the feasibility of the media or for mass production. This process is the same as the Review and Evaluation stage in the Sherwood-Rout developmental model where an evaluation of the product is needed to determine the feasibility of the product to continue to the final stage. f. Media distribution after the alpha and beta test is then revised based on feedback. After the revision is complete, the media is exported to the .exe extension. Then, the media was burned on a DVD to be distributed to the teacher of office technology of Office Management Automation Skills Competency at 5 Vocational High Schools in the Special Region of Yogyakarta.

#### *B. Test for Media Feasibility*

The test for media feasibility is carried out to determine whether the media is feasible for use in the Basic Competencies of managing information through a weblog. Based on the calculation, it determined a minimum standard of media feasibility, namely, obtain a Good value ("B"). In short, if the media has not obtained a score of B, then it should enter the product revision and trial phase to students. The media validation showed that 48 items on the media feasibility test obtained Very Good criteria. The mean score of media validation obtained 4.492 or Very Good Criteria and value of "A." There were no suggestions provided by students at the beta trial stage so there was no revision process at this stage. Therefore, based on the calculation of the minimum standard of media feasibility, the value is Good (B), then, the developed media has met the requirements for distribution.

## VI. CONCLUSIONS AND SUGGESTIONS

### *A. Conclusions*

Based on the results and discussion, the conclusions were: 1. The process of developing flash-based learning media for office technology carried out through 6 stages according to the developmental stage adopted the Luther development model; conception, designing, collecting content material, assembling, testing, and distributing. 2. Flash-based learning media for office technology subjects have passed through tests, namely alpha and beta test stages. The alpha test consisted of two stages; validation of material and media experts. In the validation process of material

experts, the developed learning media obtained a mean of 4.93 or "A" value category. Meanwhile, the media validation process obtained a mean of 4.67 or "A" value category. Based on the test, concluded that the alpha test process obtains A value and continued to beta test. The beta test stage is the trial stage which is carried out directly to students. Based on the beta testing stage toward the developed learning media, the obtained mean of 4.492 or "A" value category. Based on the results, the developed learning media is feasible for use in the learning process of office technology in the Basic Competencies of implementing information management through weblogs (blogs) at the SMK Office of Office Automation.

### B. Suggestions

The suggestions for the next product development were 1) need to develop a media that able to automatically make corrections to essay questions so that students can find out the results of the answers, 2) need to conduct research related to the effectiveness of the media in learning activities, 3) need to develop basic competency to make effective media, and 4) need to transfer knowledge related to media development to vocational teachers aiming they can be more productive in creating learning media independently.

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# Effect of *Current Ratio* and *Return on Equity* on Stock Price

(Case study on *Property* and *Real Estate* companies listed on LQ 45)

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**Abstract**—The stock price is one of the references for investors in making investment decisions which is one indicator of the success of the company's management. This study was conducted to find out empirical evidence of the effect of the current ratio and return on equity on stock prices of case studies on property and real estate companies listed on LQ 45. The research method used is descriptive and associative methods with a quantitative approach. The population in this study were all property and real estate companies listed on LQ 45 and the samples used in this study were 3 companies using purposive sampling technique. The analysis technique used is product moment correlation analysis, multiple correlation, and coefficient of determination analysis. Based on the simultaneous test, it was found that the current ratio and return on equity variables simultaneously contributed strongly and positively to the stock prices of property and real estate companies listed in LQ 45. While partially the current ratio contributed strongly and positively to stock prices, return on equity contributed very low and positive on stock prices. From the results obtained, the current ratio and return on equity variables can affect the increase in stock prices, which means that the better the current ratio and return on equity, the stock price will increase. Therefore, the company must maintain the effectiveness and efficiency of the company's performance and value.

**Keywords**—*Current ratio, Return on equity, share price*

## I. INTRODUCTION

The economic condition of a developed country marked by the rapid development of the business world and the stock market industry. One of the growing businesses in Indonesia at this time is a company in the property and real estate sector which is one of the most dominant businesses in Indonesia. This sector is one of the most important indicators of economic growth in a country, because companies that engaged in property and real estate will continue to develop along with the increasing population in Indonesia. Based on data from the statistics center agency website ([www.bps.go.id](http://www.bps.go.id)) Indonesia has a potential population of 270.20 million people in 2020. In recent years, the percentage indicator of households according to their own home ownership status increased by 80.07% in 2019 and increased to 80.10% in 2020.

Investment in property and real estate is generally long-term and will develop in line with economic growth and it believed to be one of the investments that guarantees certainty of profits to investors. This is (caused by/ due to) the

increase in land and building prices which tend to rise. The supply of land is always constant while the demand will always increase in line with population growth and increasing human needs for residence, offices, shopping centers and other property and real estate products.

(Research on) This stock price fluctuation is interesting (to study) because property prices are increasing, it will increase profit opportunities for investors who invest their funds. In fact stock prices in the property and real estate sectors tend to increase, but soon also decline, this can be caused by internal and external factors of the company.

Basically, stock prices are a reference for investors in making investment decisions. Stock price is one indicator of the success of company management. Investors use two basic approaches in conducting analysis in choosing stocks, namely technical analysis and fundamental analysis. Researchers analyze the factors that affect stock prices, using fundamental factor analysis, where the company can be seen from the financial performance, the company must test the financial statements through financial ratio analysis. Financial ratios in the financial statements that reflect the company's performance that affects stock prices.

Stock prices can be seen based on the assets generated, whether they are liquidity or not through the current ratio, with profits generated through return on equity. Therefore, this study uses independent variables that affect stock prices, namely the current ratio and return on equity. This study examines how much influence these two variables have on stock prices in property and real estate companies listed on LQ 45 on the Indonesian stock exchange.

## II. LITERATURE RIVIEW

### Share Price

The stock price according to Kesuma in Thio Lie Sha (2015.281), is the closing nominal value of the participation or ownership of a person or entity in a company or limited liability company that applies regularly in the Indonesian capital market. Meanwhile, according to Musdalifah Aziz (2015.80), the stock price is the market price in the real market, and is the most easily determined price, because the stock price is the price of a stock in the ongoing market or if the market is closed, then the market price is the closing price. Furthermore, according to Jogiyanto in Dewi Urip Wahyuni (2019.03), the stock price

is the price of a stock determined by market participants and determined by the demand and supply of stock prices in the capital market or determined by the closing price, which is the last stock price at the time of delivery and change hands at the end of the trade.

#### A. Current ratio

The current ratio according to Brigham and Houston (2017:134) is a liquidity ratio that shows the extent to which current liabilities are covered by assets that are expected to be converted into cash in the near future. Meanwhile, according to Mamduh M. Hanafi (2016: 75), the current ratio is a current ratio that measures the company's ability to meet its short-term debt using its current assets (assets that will turn into cash within one year or one business cycle). Furthermore, according to Bambang Riyanto (2015: 28), the current ratio is the ratio between current assets and current liabilities, so every transaction that results in changes in the amount of current assets or current liabilities, either individually or both, will result in changes in the current ratio, which means it will result in a change in the level of liquidity. The formula for finding the current ratio is as follows :

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current debt}} \times 100$$

#### B. Return on equity

Return on equity according to Sudana in Nurlia (2018: 69), is a ratio that shows the company's ability to generate after-tax profits by using the company's own capital. Meanwhile, according to Hanafi and Halim in Ratiyah and Amelia Novita Prabowo (2018: 729), return on equity is measuring the company's ability to generate profits based on certain stock capital. This ratio is a measure of profitability from the perspective of stockholders. Furthermore, according to Kasmir (2017: 204), return on equity is the ratio used to measure net profit after tax with own capital. According to Mia Lasmi (2017:106) the formula for calculating Return On Equity is as follows :

$$\text{ROE} = \frac{\text{EAT}}{\text{Total Equity}} \times 100$$

#### C. Previous research

Asep Muhammad Lutfi and Nardi Sunardi. 2019. The Effect of Current Ratio (CR) Return On Equity (ROE), and Sales Growth on Stock Prices That Have an Impact on Company Financial Performance (In Food and Beverage Manufacturing Companies listed on the Indonesia Stock Exchange). Securities Journal. Vol. 2, No. 3, p. 83-100. The results of the study obtained simultaneously that the Current Ratio (CR), Return On Equity (ROE) and Sales Growth had a positive and significant effect on stock prices, while the Current Ratio (CR) had a negative and significant effect on stock prices. Return On Equity (ROE) has a positive and significant effect on stock prices, Sales Growth has a positive and insignificant effect on stock prices and its impact on financial performance in food and beverage

manufacturing industry companies in the period from 2012 to 2017.

Andy, Cindy Novana, Sartika, Marlinda Background Sihaloho, and Bayu Wulandari. 2020. The Effect of Current Ratio (CR), Return On Equity (ROE), Debt On Equity Ratio (DER), Earning Per Share (EPS), and Total Asset Turnover (TATO) on Share Prices in Property, Real Estate and Construction Companies Listed on the Indonesia Stock Exchange for the 2016-2018 period. MEA Scientific Journal (Management, Economics, and Accounting) Vol. 4 No. 3, 2020. The results of the study found that the independent variables, namely Current Ratio (CR), Earning Per Share (EPS), Total Asset Turnover (TATO), Return On Equity (ROE), and Debt on Equity Ratio (DER) had a simultaneous effect on prices. Company stock. Partially, Current Ratio (CR) and Total Asset Turnover (TATO) have no significant effect on stock prices, Earning Per Share (EPS) and Return On Equity (ROE) have a significant effect on stock prices, while Debt on Equity Ratio (DER) does not significant effect on the company's stock price.

Hade Chandra Batubara, Nadia Ika Purnama. 2018. Effect of Current Ratio, Return On Equity on stock prices in manufacturing companies listed on the Indonesia Stock Exchange. Journal of Business Financial Research. Vol. 2, No. 2 Pg. 61-70. The results of this study found that the current ratio (CR) has a positive and significant effect on stock prices. Return on Equity (ROE) also has a positive and significant effect on stock prices. Taken together, the current ratio and ROE have a significant effect on stock prices in manufacturing companies listed on the Indonesia Stock Exchange.

### III. RELATIONSHIP BETWEEN VARIABLES

#### A. Relationship of Current Ratio to Stock Price

According to Rahma Dewi and Abundanti in Adolf Jelly Glen Lombogia, Etc., (2020:159), stating that a low current ratio will cause the stock market price to decrease, on the other hand a high current ratio will increase stock prices but a current ratio that is too high does not guarantee profits in the company. Meanwhile, according to Setiyawan and Pardiman in Adolf Jelly Glen Lombogia, et al., (2020: 160), stating that the current ratio is getting better will affect the increase in stock prices, because the company is able to cover its current debt. This will attract investors to invest in stocks. Therefore, it can be concluded that the higher the company's current ratio, the higher the quality of stock prices. On the other hand, the lower the company's current ratio, the lower the stock price quality.

#### B. The Relationship of Return On Equity to Stock Prices

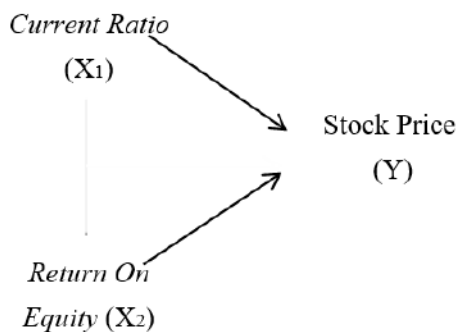
According to Syamsudin in Oggi Bagus Suyatna and Mohammad Rafky Nazar, (2015:1722) stated that return on equity is a measurement of the income (income) available to company owners (both common stockholders and preferred stock holders) on the capital they invest in the company. In general, of course, the higher the return or income earned, the better the position of the owner of the company. Meanwhile, according to Pande Widya Rahmadewi and Nyoman Abundanti (2018:2115), stated that return on equity

is one of the ratios used to measure the profitability of a company. This ratio measures the company's ability to generate profits to calculate the company's returns based on the stock capital owned by the company. If the return on equity is higher, the company can generate profits with its own capital which can benefit shareholders. The size of the return on equity value will also affect the company's stock price.

*C. The Relationship between Current Ratio and Return On Equity on Stock Prices*

According to Nur'aidawati in Adolf Jelly Glen Lombogia, Chirike Vista and Siti Dini (2020:160), stating the large value of the current ratio will affect investors to invest their capital, because a high current ratio can increase the increase in stock prices in a company. Meanwhile, according to Kasmir in Hade Chandra Batubara and Nadia Ika Purnama (2018: 63), stating that return on equity is one of the profitability ratios where this ratio assesses the company's ability to seek profits. return on equity or capital profitability itself is a ratio to measure the success of management in achieving profits for stockholders. So it can be concluded that the current ratio and return on equity can affect stock prices, the higher the value of these ratios, the stock price will increase.

Framework of thinking/Paradigm:



Research Hypothesis

H1: There is an effect of Current Ratio on Stock Price.

H2: There is an effect of Return on Equity on the Stock Price.

H3: There is a simultaneous influence of Current Ratio and Return on Equity on stock prices.

**IV. METHOD**

*A. Types of research*

Sugiyono (2016:11), descriptive research method is research conducted to determine the value of independent variables, either one or more (independent) variables without making comparisons or connecting with other variables. Meanwhile, according to Sugiyono (2019:65), the associative research method is a research problem

formulation that asks for the relationship between two or more variables. Based on the description above, it can be concluded that in general the method used in this research is quantitative research methods. This method aims to determine the effect of the current ratio and return on equity on stock prices in property and real estate companies listed on LQ 45 on the Indonesia Stock Exchange.

*B. Population and Sample*

The population that the researcher uses in this study is the property and real estate sector companies listed on LQ 45 on the Indonesia Stock Exchange for 6 periods from 2015 to 2020. The sample of this study used a purposive sampling method where the sample selected was in accordance with the researcher's criteria, which is as follows:

The company is a property and real estate sub-sector company listed on LQ 45 on the Indonesia Stock Exchange

The property and real estate sub-sector company and publishes annual financial reports for the period 2015 to 2020.

Property and real estate sub-sector companies that have complete financial data for the simultaneous calculation of the current ratio and return on equity with stock prices for the period 2015 to 2020.

*C. Method of collecting data*

The method of data collection that will be carried out in this research is by means of a literature study, this research data can be obtained by conducting theoretical research, namely by reading and studying the literature and expert opinions sourced from textbooks, journals and previous theses. related to this research and documentation study, conducted by collecting all secondary data in the form of financial reports on property and real estate companies listed on LQ 45 during the last six-year period, from 2015 to 2020 on the Indonesia Stock Exchange.

*D. Data analysis technique*

**Descriptive analysis**

1. Mean analysis, according to Sugiyono (2016:47-49), Mean is a group explanation technique based on the average value of the group. The average (mean) is obtained by adding up the data of all individuals in the group, then divided by the number of individuals in the group.
2. Standard deviation, according to Sugiyono (2016:56), standard deviation is one of the statistical techniques used to explain group homogeneity by means of variance. The variance is the sum of the squares of all the deviations of individual values with respect to the group mean. The root of the variance is called the standard deviation or standard balance.

**Associative Analysis**

1. Single Correlation Analysis, according to Sugiyono (2016: 228), single correlation (product moment correlation) is a correlation technique used to find relationships and prove the hypothesis of a relationship

between two variables if the data of the two variables are in the form of intervals or ratios, and the data source is from two or more variables those are the same.

2. Multiple Correlation Analysis, according to Sugiyono (2017:231), multiple correlation is a number that shows the direction and strength of the relationship between two independent variables together or more than one dependent variable.
3. Analysis of the Coefficient of Determination (R<sup>2</sup>) According to Nurriqli and Sofyan (2018:4), the coefficient of determination test (R<sup>2</sup>) is carried out to find out the large or small influence of the independent variable (X) on the dependent variable (Y).

## V. DISCUSSION

### 1. The effect of the current ratio on stock prices

Based on the calculations and analyzes that have been carried out above, it can be concluded that the results of the single correlation test current ratio (X1) to the stock price (Y) of which means the correlation coefficient is included in the strong and positive category which indicates a unidirectional relationship between the current ratio variable (X1) with the share price (Y). So the results of this study indicate that the current ratio variable (X1) partially has a positive contribution to stock prices (Y) with a coefficient of determination of 43.13%. This means that if the current ratio increases, it will affect the increase in stock prices, because the company is considered able to cover its current debt. This will attract investors to invest in stock in the company.

Henny Ratnaningtyas (2021: 96) states that a high current ratio means that the better the short-term debt is paid off by the company, the smaller the liquidation risk experienced by the company so that the risk borne by shareholders is also smaller. This is a positive decision for investors to buy company shares, so that the demand for company shares increases, so the share price increases.

Sari and Hakim (2017:124) examine the effect of the current ratio on the stock price of property and real estate companies. The current ratio indicates the company's ability to meet short-term debts using current assets. Companies that are able to pay off short-term debt are considered liquid companies. The higher the current ratio, the more liquid the company, thereby increasing the demand for company shares.

The current ratio has a contribution to stock prices because a good current ratio value in property and real estate companies shows that the company is able to pay off its short-term obligations, so the risk of loss will be minimized. This makes the high interest of investors to invest in company shares. Before investing, investors must know the health of the existing company, the current ratio will show how capable the company is in meeting its short-term obligations by using its short-term assets. The health of the company shows that the company is in good condition in carrying out its operational activities.

### 2. The effect of return on equity on stock prices

Based on the calculations and analyzes that have been carried out above, it can be concluded that the results of the single correlation test return on equity (X2) to stock prices (Y) of which are included in the category are very low and positive, this indicates that there is a unidirectional relationship between the return on equity variables. (X2) to the stock price (Y). So the results of this study indicate that the return on equity variable partially has a positive contribution to stock prices with a coefficient of determination of 0.96%. This means that the higher the return on equity of a company, the higher the stock price of property and real estate companies listed on LQ 45.

So it shows that the return on equity value can describe the ability of property and real estate companies to generate profits by using the company's own capital. This ratio is important for stockholders, to determine the effectiveness and efficiency of own capital management carried out by the company's management, the higher this ratio means the more efficient the use of own capital by the company's management, because a high return on equity value will increase stock prices. and will attract investors to invest in the company so that there will be a positive influence between profitability and stock prices, where high stock prices will increase the value of a company.

Based on the results of research that has been carried out by researchers with previous research journals that are used as references, the same results are obtained, namely partially return on equity has a positive effect on stock prices, because based on the results of these tests, there is a unidirectional relationship between the return on equity variable and stock prices. The higher the return on equity value, the higher the company's stock price, and vice versa.

### 3. The effect of current ratio and return on equity on stock prices

Based on the calculations and analyzes that have been carried out above, it can be concluded that the results of the double correlation test of current ratio (X1) and return on equity (X2) to stock prices (Y) are 0.6641 which are included in the strong and positive category, this shows the level of strong and unidirectional correlation between the variables current ratio (X1) and return on equity (X2) to stock prices (Y). So the results of this study indicate that the current ratio (X1) and return on equity (X2) variables simultaneously have a positive contribution to stock prices (Y). with a coefficient of determination of 44.10%.

So, from this it can be concluded that the higher the current ratio and return on equity, the stock prices of property and real estate companies listed on LQ 45 will increase. Likewise, vice versa, if the current ratio and return on equity values are lower, the stock prices of property companies and real estate listed on LQ 45 will be lower on the Indonesian stock exchange.

This is because investor's view that the current ratio can affect the increase in stock prices because the company is able to cover its current debt and return on equity is a measure of profitability in generating optimal profits for stockholders so that it will attract investors to invest and can increase share prices in property and property companies real estate listed on LQ 45 is increasing. Basically, investors expect more value (difference) from the funds invested.

When the effectiveness of the company's performance and value is judged to be good based on the analysis carried out, the demand will increase, and the stock price will increase. This only applies to the sample, namely the financial statements of property and real estate companies listed on LQ 45 for six years, from 2015 to 2020.

Based on the results of research that has been carried out by researchers with previous research journals that are used as references, the same results are obtained, namely the current ratio and return on equity have an effect on stock prices because based on the test results, there is a unidirectional relationship between the current ratio and return on equity variables. equity to stock prices, the higher the current ratio and return on equity, the higher the company's stock price. Likewise, if the current ratio and return on equity values are lower, the stock prices of property and real estate companies will decrease on the Indonesian stock exchange.

## VI. CONCLUSIONS AND SUGGESTION

### Conclusion

Based on the results of the study, the conclusions that can be obtained are as follows:

1. The current ratio (X1) partially contributes strongly and positively to stock prices (Y) in property and real estate companies listed on LQ 45 for six years from the 2015-2020 period.
2. Return on equity (X2) partially contributes very low and positive to stock prices (Y) in property and real estate companies listed on LQ 45 for six years from the 2015-2020 period.
3. The current ratio (X1) and return on equity (X2) simultaneously contribute strongly and positively to stock prices (Y) in property and real estate companies listed on LQ 45 for six years from the 2015-2020 period.

### Suggestions

Based on the results of the research and the conclusions above, the suggestions put forward by researchers for property and real estate companies listed on LQ 45 can be used as considerations in making decisions, as for the following:

1. Property and real estate companies listed in LQ 45 must maintain the current ratio value so that the company's liquidity level is stable and not too high. This affects the company's liquidity level, so that the company is able to utilize the company's current assets to finance the company's current debt.
2. Property and real estate companies listed on LQ 45 must improve the company's performance in generating profits so that it can encourage investors to invest because basically investors want profits from the funds invested. The better the company is at generating profits, the higher the stock price will be. So companies need to be more efficient in utilizing their own capital to continue to increase profit and can increase return on equity by increasing company profits through returns on equity or company capital,

by paying dividends to shareholders can increase return on equity, because by paying dividends which reduces the equity component, the company's return on equity will increase.

3. Property and real estate companies listed in LQ 45 should pay more attention to the company's financial condition which can be measured using a fundamental analysis of financial ratios, current ratio and return on equity. Apart from fundamental factors, investors can also use other fundamental analysis or can use technical analysis. When the effectiveness, performance and value of the company are assessed as good based on the analysis carried out, the demand will increase, and the share price will increase.

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# Effect of Working Capital Turnover and Receivable Return on Assets

(Case Study on Sub-Coal Mining Companies Listed in LQ 45)

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## ABSTRACT

This research aims to find out the effect of the Effect of Working Capital Turnover and Receivable Turnover on Return on Assets. The method used in this study is a descriptive and associative method that is to look and describe the situation systematically by collecting data based on the facts seen in the financial statements of sub-Coal Mining Companies listed in LQ45. Data used by skunder, in the form of income / loss statements and corporate balance sheets in the period 2015-2021. Based on the results of the correlation between Working Capital Turnover (X1) to Return On Assets (Y)  $r_{hitung} = 0.33 < r_{tabel} = 0.811$  with a significant level of 0.05 which means that the value of the correlation coefficient indicates the contribution between Working Capital Turnover (X1) to Return On Assets (Y) is positive and in the low category. And based on the results of the coefficient of determination of 10.89%. The contribution made by Working Capital Turnover (X1) to Return On Assets (Y) of 10.89% while the remaining 89.11% is controlled by other factors, then the result of a single correlation between Receivable Turnover (X2) to Return On Assets (Y)  $r_{hitung} = > r_{tabel} = 0.811$  with a significant level of 0.05 which means that the value of the correlation coefficient indicates the contribution between Receivable Turnover (X2) to Return On Assets (Y) is negative and in the sanga category t strong. And based on the results of the coefficient of determination of 67.24%. The contribution made by Receivable Turnover (X2) to Return On Assets (Y) amounted to 67.24% while the remaining 32.76% was influenced by other factors, then the results of the double correlation coefficient of  $r_{hitung} = 0.91 > r_{tabel} = 0.811$  with a significant level of 0.05 which means that the value of the double correlation coefficient indicates the turnover of Working Capital contribution (X1) and Receivable Turnover (X2) to Return On Assets (Y) has a positive direction and in a very strong category. And based on the results of the coefficient of determination of 82.81%. The contribution made by Working Capital Turnover (X1) and Receivable Turnover (X2) to Return on Assets (Y) amounted to 82.81% while the remaining 17.19% was influenced by other factors.

*Keywords: Return On Assets, Working Capital Turnover, and Receivables*

## 1. INTRODUCTION

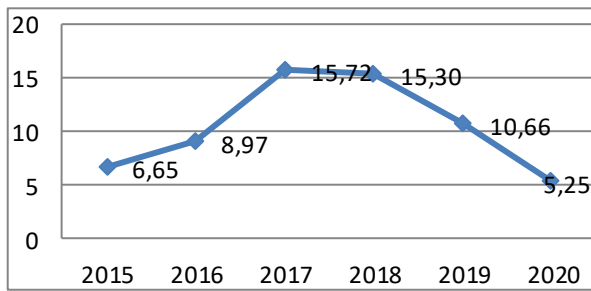
The company actually aims to get profits or profits. Profit can be calculated using profitability ratios. Profitability ratio is a ratio used to measure a company's ability to make a profit from the normal activities of its business. Profitability ratio aims to determine the company's ability to generate profits during a given period and to measure the level of effectiveness of management in running the company's operations. Profitability ratio also describes the company's ability to generate profits through all its capabilities and resources, namely derived from sales activities, asset use, and capital use. Profitability ratios can be used as a tool to measure the level of effectiveness of management performance. Good performance will be shown through the success of management that generates maximum profit for the company. There are several factors that affect the high profitability of the company such as net profit margin, total turnover of assets, net income, sales, and total assets.

In this study profitability was measured using return on assets (ROA). Return on Assets (ROA) is a measurement of a company's overall ability to make a profit with the total amount of assets available within the company. The greater the return on assets (ROA) the greater the profits obtained by the company and the better the company in terms of the use of assets. The high low Return On Assets (ROA) is influenced by several factors including Current Ratio, Total Assets Trunover, Debt To Equity Ratio, Debt Ratio, Net Profit Margin, Sales Growth, and Company Size, in addition to these factors there are several other factors that can affect ROA, namely working capital turnover, working capital turnover is a ratio used to measure the effectiveness of working capital owned by the company to generate sales. The higher the rate of capital turnover means the possibility of increasing profits is also greater. High profit affects the level of profitability (reconstruction on assets) of the company.

The next factor is the turnover of receivables. Receivable turnover is a way used in measuring how long the collection of receivables for one period. If the amount of investment embedded in receivables is too high, it will cause low working capital turnover so that the smaller the company's ability to increase sales volume. Reduced sales volume will affect the profit that will be earned by the company.

Graph 1.1

Average Return on Assets (ROA) on Sub-Coal Mining Companies Listed on LQ45 Indonesia Stock Exchange 2015-2020



Source: www.idx.co.id (processed by researchers)

Looking from the chart above, it can be concluded that the average return on assets (ROA) in sub-coal mining companies in the period 2015-2020 that occurred is not always balanced. It can be seen in 2015 ROA in sub-coal mining companies 6.65%, while in 2016 ROA experienced an increase again with a value of 8.97% and in 2017 roa increased 15.72% and in 2018 ROA decreased again until 2020, namely with a value of 2018 ROA 15.3% and 2019 ROA 10.66%, and 2020 ROA 5.25%. Because of the analysis it can be assessed that the standardization of industry calculations from ROA is 5.98% if the ratio reaches 5.98% means that the ROA value can be said to be good and if less in that category is not good measured using ROA because it is still less than the average standard of ROA industry calculations. The above data analysis is useful to measure the company's ability to generate profits using all assets owned by the company.

Based on the description in the background above, the formulation of the problems in this study is as follows:

1. Is there a contribution of working capital turnover to the return on assets to sub-coal mining companies listed in LQ45?
2. Is there a contribution of receivable turnover to return on assets to sub-coal mining companies listed in LQ45?
3. Is there a contribution of working capital turnover and receivable turnover to return on assets to sub-coal mining companies listed in LQ45?

Based on the formulation of the above problems, the purpose of this study is:

1. To find out how much the contribution of working capital turnover to the return on assets in sub-coal mining companies listed in LQ45.
2. To find out how much the turnover of work receivables to the return on assets to sub-coal mining companies listed in LQ45.
3. To find out how much contribution of working capital turnover and receivable turnover simultaneously to return on assets to sub-coal mining companies listed in LQ45.

## 2. LIBRARY REVIEW

### Return on Assets (ROA)

Return on Assets (ROA) is one of the profitability ratios used to measure the effectiveness of a company in making profits by utilizing all assets in its operations.

According to I Made Sudana (2015:25)"Return On Assets (ROA) is a ratio that shows a company's ability to use all assets held to generate profit after tax". According to Mamduh M. Hanafi (2016:42)[ "Return on Assets is a measure of a company's ability to generate net income based on a specific level of assets". According to Cashmere (2017:115) "Return On Assets (ROA) is a ratio that shows the yield (return) on the amount of assets used in the company". Based on the opinion of experts above can be concluded Return On Assets (ROA) is one of the profitability ratios used to show the company's ability to generate net profit after tax by using the total assets owned by the company.

According to Brigham and Houston in the journal Dona Elvia Desi, (2018: 96) [6], states that the factors that can affect a company's Return on Assets (ROA) are as follows:

that is:

1. Liquidity ratio, is a ratio used to measure a company's ability to meet its short-term obligations by comparing the company's current assets with current liabilities
2. Asset management ratio, is a ratio that measures how effectively a company manages its assets. such as cash turnover ratio, working capital turnover, inventory turnover, and receivable turnover.
3. Debt management ratio, is a ratio used to find out the extent of the company's ability to meet the company's long-term obligations (debt) used to finance all company activities.

According to Mamduh M. Hanafi (2016: 42) the formula for measuring ROA is as follows:

$$Return\ on\ Assets = \frac{Net\ Income}{Total\ Assets}$$

### Working Capital Turnover

Working capital according to Irham Fahmi (2015: 100), is a company's investment in short-term assets- cash, sequality, inventory and receivables. In a working capital company should always be in a rotating state.

According to Kasmir (2017: 314) "Working capital ratio is one of the ratios to measure or assess the effectiveness of a company's working capital over a given period." According to Hery (2016: 84) "Working capital turnover is a ratio used by companies to measure the effectiveness of working capital (current assets) owned by companies in generating sales, this ratio is calculated as a result of the difference between the amount of sales and the average working capital (current assets)". According to Dwi Prastowo Darminto (2019: 76) "Working capital turnover is the ratio that connects sales with average working capital". Based on the opinion of the experts above. Researchers found that "Working Capital Turnover is the ratio that companies use to measure sales with average working capital in a given period". Based on the opinion of the experts above it can be concluded that Working Capital

Turnover is a ratio used by companies to measure sales with average working capital in a given period.

According to Hery (2016:84) the formula for measuring working capital turnover, is as follows:

$$\text{working capital turnover ratio} = \frac{\text{net sales}}{\text{working capital}} = \frac{\text{current assets} - \text{current liabilities}}{\text{working capital}}$$

Receivable Turnover

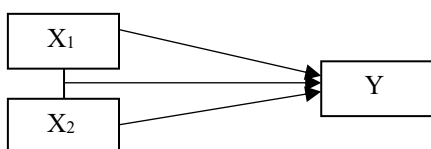
According to Cashmere, (2017: 334) [2], "Receivables are company bills to other parties who have a period of not more than one year. For the company the turnover of receivables is very important to know because the higher the turnover of receivables, the more receivables billed by the company"

According to Cashmere (2017:25) "Receivable turnover is the ratio used to measure how long receivable billing is for one period". According to Martono and Harjito in Piter Tiong (2017: 10) [3] "Receivable turnover is the period of bond receivables from the occurrence of receivables until the receivables can be billed in the form of money and cash and can finally be repurchased into inventory and sold on credit into receivables". According to I Made Sudana (2015:25) "Receivable turnover is the ratio used to measure receivable turnover in generating sales". Based on the opinion of the experts above can be concluded The Turnover of Receivables is a ratio that can be known by dividing the number of sales during a given period by the average amount of receivables.

According to I Made Sudana (2015:25)[1] the formula for measuring Receivable Turnover is as follows:

$$\text{ACCOUNTS RECEIVABLE TURNOVER RATIO} = \frac{\text{SALES}}{\text{AVERAGE ACCOUNTS RECEIVABLES}}$$

3. HYPOTHESIS



H1: There is a contribution of Working Capital Turnover affecting Return on Assets (ROA)

H2: There is a contribution of Receivable Turnover to The Return On Assets (ROA)

H3: There is a contribution of Working Capital Turnover and Receivable Turnover together affecting Return On Assets (ROA).

4. RESEARCH METHODS

According to Sugiyono (2017: 2)[5] Research methods are scientific ways to obtain data with specific purposes and uses. The methods used in this study are descriptive (Mean and Standard Deviation) and associative methods (Single Correlation, Multiple Correlation, Coefficient of Determination). The population in this study was the company's income statement and balance sheet from the time the company was established until the last period. The samples taken in this study are the company's income statement and balance sheet made during the last six periods from 2015-2020 consisting of Working Capital Turnover, Receivable Turnover, and Return On Assets (ROA).

5. RESULTS AND DISCUSSIONS RESULT

Return On Assets (ROA) (Y), Working Capital Turnover (X1), and Receivable Turnover (X2)

Sub Coal Mining Company Registered in LQ45 Period 2015-2020

Years	ROA	working capital turnover	receivable turnover
2015	6,61	2,35	10,20
2016	9,00	2,08	9,40
2017	14,49	1,99	8,62
2018	16,32	2,38	8,36
2019	10,24	2,18	9,21
2020	4,54	1,91	9,29
<b>SUM</b>	<b>61,10</b>	<b>12,89</b>	<b>55,08</b>
<b>MEAN</b>	<b>10,18</b>	<b>2,15</b>	<b>9,18</b>
<b>STANDAR DEVIASI</b>	<b>4,54</b>	<b>0,2</b>	<b>0,65</b>
<b>a single correlation X<sub>1</sub>--&gt;Y</b>		<b>0,33</b>	
<b>a single correlation X<sub>2</sub>--&gt;Y</b>		<b>-0,82</b>	
<b>multiple correlations X<sub>1</sub>, X<sub>2</sub> --&gt; Y</b>		<b>0,91</b>	
<b>COEFFICIENT OF DETERMINATION X<sub>1</sub>--&gt;Y</b>		<b>10,89%</b>	
<b>COEFFICIENT OF DETERMINATION X<sub>2</sub>--&gt;Y</b>		<b>67,24%</b>	
<b>COEFFICIENT OF DETERMINATION X<sub>1</sub>, X<sub>2</sub> --&gt; Y</b>		<b>82,81%</b>	

DISCUSSION

1. Based on the results of a single correlation between Working Capital Turnover (X1) to Return On Assets (Y) rhitung = 0.33 < r tabel = 0.811 with a significant level of 0.05 which means that the value of the correlation coefficient indicates the contribution between Working Capital Turnover (X1) to Return On Assets (Y) is positive and in the low category. And based on the results of the coefficient of determination of 10.89%. The contribution made by Working Capital Turnover (X1) to Return on Assets (Y) amounted to 10.89% while the remaining 89.11% was controlled by other factors. The results of this study are in line with the research of Amthy Suraya and Lilis Ratnasari (2019), in their journal entitled "The Effect of Working Capital Turnover and Inventory Turnover on Profitability (ROA) at PT Mayora Indah Tbk in 2010-2016".[9] University of Pamulang. Vol.2, No.2, March 2019. Scientific Journal of Forkamma Management. ISSN: 2598-9545. ". The Equation of Working Capital Turnover Variable (X1) to Return On Assets (Y) at PT Mayora Indah

Tbk, is that from the results of a simple linear regression test processed using SPSS version 20 obtained the test results found is the value of the significance of working capital turnover is 0.477 which means this figure is greater than the level of  $\alpha = 5\%$  or  $0.477 > 0.05$  and the value of  $t$  calculated by  $-0,768$  is smaller than the table's  $t$  value of 2,571 or  $(-0,768 < 2,571)$ , so  $H_0$  is accepted. Thus it is concluded that there is an influence between working capital turnover on profitability (ROA) but not significant on PT. Mayora Indah, Tbk period 2010 to 2016.

2. Based on the results of a single correlation between Receivable Turnover (X2) to Return On Assets (Y)  $r_{hitung} = > r_{tabel} = 0.811$  with a significant level of 0.05 which means that the value of the correlation coefficient indicates the contribution between Receivable Turnover (X2) to Return On Assets (Y) is negative and in a very strong category. And based on the results of the coefficient of determination of 67.24%. The contribution made by Receivable Turnover (X2) to Return On Assets (Y) amounted to 67.24% while the remaining 32.76% was influenced by other factors. The results of this study are in line with the research of Lucky Nugroho, Evi Aryani, and Akhmad Amien Mastur (2019), with the Research Title "Analysis of The Effect of Cash Turnover and Receivable Turnover on Return on Assets (ROA) in LQ45 Companies Listed on IDX in 2012-2017". The Equation of Capital Turnover Variable Receivable (X2) to Return On Assets (Y) in Company LQ 45 Listed in IDX Year 2012-2017, is that the regression coefficient value of receivable turnover variable of  $-0.001$  is negative. This means that the variable turnover of receivables has a negative influence on ROA. So if the turnover of receivables is getting bigger then the ROA will be smaller. The significance value of 0.078 is greater than 0.05 and the calculated  $t$  value of  $-1.777$  is smaller than the  $t$ -table of 1,980. The results showed that the turnover variable of receivables had a negative and insignificant effect on ROA. So that the variable per round of receivables is not able to generalize the total population of research on ROA in LQ45 companies listed on the Indonesia Stock Exchange in 2012-2017. No significant effect on the variable turnover of receivables can be caused by the least transaction of sales on credit from the company.

3. From the results of the  $r_{hitung}$  double correlation coefficient  $=0.91 > r_{tabel} = 0.811$  with a significant level of 0.05 which means that the value of the double correlation coefficient indicates the contribution of Working Capital Turnover (X1) and Receivable Turnover (X2) to Return On Assets (Y) has a positive direction and is in a very strong category. And based on the results of the coefficient of determination of 82.81%. The contribution made by Working Capital Turnover (X1) and Receivable Turnover (X2) to Return on Assets (Y) amounted to 82.81% while the remaining 17.19% was influenced by other factors. The results of this study are in line with the research of Mardiah and Nafisah Nurulrahmatiah (2020) [7], with the Research Title "The Effect of Working Capital Turnover and Receivable Turnover on Profitability (ROA) on PT. Hanjaya Mandala Sampoerna Tbk" Equation of Working Capital Turnover Variables (X1) and Receivable Capital Turnover (X2) to Return On Assets (Y) at PT. Hanjaya Mandala Sampoerna Tbk, is that the results of the study can

be known that simultaneously of the two free variables studied, namely working capital turnover and receivable turnover have an influence on profitability. It is evidenced that working capital turnover and receivable turnover had an effect on ROA by 70.6% while 29.4% was influenced by other variables not studied in the study. It also shows that the large turnover of working capital and the turnover of receivables have contributed to the profit gain in PT. Hanjaya Mandala Sampoerna Tbk.

## CONCLUSION

1. Based on the results of the correlation between Working Capital Turnover (X1) to Return On Assets (Y)  $r_{hitung} = 0.33 < r_{tabel} = 0.811$  with a significant level of 0.05 which means that the correlation coefficient value indicates the contribution between Working Capital Turnover (X1) to Return On Assets (Y) is positive and in the low category. And based on the results of the coefficient of determination of 10.89%. The contribution made by Working Capital Turnover (X1) to Return on Assets (Y) amounted to 10.89% while the remaining 89.11% was controlled by other factors. The results show that Working Capital Turnover (X1) contributes to Return On Assets (Y) but is not significant.
2. Based on the correlation between Receivable Turnover (X2) to Return On Assets (Y)  $r_{hitung} = > r_{tabel} = 0.811$  with a significant level of 0.05 which means that the value of the correlation coefficient indicates the contribution between Receivable Turnover (X2) to Return On Assets (Y) is negative and in a very strong category. And based on the results of the coefficient of determination of 67.24%. The contribution made by Receivable Turnover (X2) to Return On Assets (Y) amounted to 67.24% while the remaining 32.76% was influenced by other factors. These results show that Receivable Turnover (X2) affects Return On Assets (Y) significantly.
3. Based on the results of the  $r_{hitung}$  double correlation coefficient  $=0.91 > r_{tabel} = 0.811$  with a significant level of 0.05 which means that the value of the double correlation coefficient indicates the contribution of Working Capital Turnover (X1) and Receivable Turnover (X2) to Return On Assets (Y) has a positive direction and is in a very strong category. And based on the results of the coefficient of determination of 82.81%. The contribution made by Working Capital Turnover (X1) and Receivable Turnover (X2) to Return on Assets (Y) amounted to 82.81% while the remaining 17.19% was influenced by other factors. The results show that Working Capital Turnover (X1) and Receivable Turnover (X2) significantly affect Return On Assets (Y). And based on the results of the coefficient of determination of 82.81%. The contribution made by Working Capital Turnover (X1)

and Receivable Turnover (X2) to Return on Assets (Y) amounted to 82.81% while the remaining 17.19% was influenced by other factors. The results show that Working Capital Turnover (X1) and Receivable Turnover (X2) significantly affect Return On Assets (Y).

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# Impact Of Return On Assets (ROA) And Assets Structure Toward The Capital Structure

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**Abstract**— Capital structure is the main focus for companies because the poor capital structure can affect the company's financial condition. This study aims to analyze the effect of Return on Assets (ROA), Asset Structure, and Capital Structure at PT. Sat Nusapersada is listed on the Indonesia Stock Exchange (IDX) for the 2015-2020 period.

The sample of this study was determined by sampling method based on the criteria of companies listed on the Indonesia Stock Exchange (IDX) and the publication of reports and complete data including data from variables that have been studied during the 2015-2020 research period so that a sample of 18 samples was obtained. This research uses the associative descriptive method, correlation analysis, and determination coefficient analysis. The results showed that return on assets was in the medium category and had a positive effect on capital structure, asset structure was in the high category and had a positive effect on capital structure, and the relationship between return on assets and asset structure was in the high category and had a positive effect on capital structure.

**Keyword:** ROA, Sat Nusapersada

## I. INTRODUCTION (HEADING 1)

In the modern era like now in the company have very tight competition, certainly with this condition like this the company required to choose what kind of strategy will be used as a tool in facing the competition and deal with that competition with fast and right. One of the important decisions that a financial manager should face in relation to company operation is funding or capital structure, this financial decision has relation with debt composition, preferred stock, and regular stock that must use by the company. Electronic industry known as the most success in building supply chains in the world, other than that, 50% of electronic export come from developing country including Indonesia and other developing countries is the potential market target for promotion the electronic products.

This sector keeps soaring because the growth and human needs from year to year will growth start from young generation until adult in office fields, market places, and household or in other fields that will never let go of the need for electronics. This sector growth record increase in the III quarter/2019. After decrease at the second quarter. The

industry minister data show in the III quarter/2019, the computer industry, electronic industry, and optic growth as much 5,74%. In the second quarter before the sector performance decrease, that it 18,50% in the first quarter (2017) and as much as 4,14% in the second quarter (2018).

Based on the financial report the average modal structure at PT Sat Nusapersada Tbk from 2015-220 it shows that the average picture condition capital structure at PT Sat Nusapersada Tbk increase in the year 2019 in amount of 1,285% whereas the lowest score happen in the year 2015 in amount of 0,294%. In calculation theory capital structure claim that if debt-equity is no more than 1.00 then that capital structure is in the good condition because indicates that the company has less debt than the capital and otherwise. As seen from the graph in the year 2019 the capital structure increase because of PT. Sat Nusapersada Tbk get the contract from Pegatro Corporation, that is the Apple product assembler company, the form of the corporation that will be carried out between 2 participants that is PT. Sat Nusapersada Tbk needs a lot of capital and PT. Sat Nusapersada prefers to choose to get the capital from external (debt) that is from famous Bank in Indonesia than sell the stock or other. Because of that with this corporation that mentioned before the researchers are interesting to research this problem.

The decision that has relation with company financial should be resolved with the good consideration because that thing will impact big or small the cost that should company assure. The funding decision regarding the decision about the best determination, balance, and spending or known as funding from internal sources and external sources. Internal sources are funding that is formed or produced from its own internal company in the form of retained earnings and depreciation whereas the external sources are the capital sources from addition or inclusion owner capital or new stock issue, bond sale, and credit from the bank. Capital decision making in the company will be reflected in company capital structure that will impact the debt proportion and owner equity that the company used. In decision making should consider many factors that can impact the capital structure that is interest level, earning stability, assets structure, and assets risk, amount of capital needs, capital market conditions, management character, company size and profitability. The research only use two factors that is profitability (ROA) and



asset structure to research how much that variable impact toward capital structure in PT. Sat Nusapersada Tbk.

## LITERATURE REVIEW

### CAPITAL STRUCTURE

Capital structure by Dr. Strisno (2017:245) is balance between foreign capital or debt with owner's capital, whereas capital structure by Halim (2015:81) is the comparison between debt (foreign capital) or debt amount with owner equity and further the capital structure by Suad Husnan (2016:168) is balance or comparison between foreign capital and owner equity. Foreign capital can be interpreted as long-term debt or short term. Whereas owner equity can be classified as detained earning and can be company ownership participation.

### CAPITAL STRUCTURE FACTORS

#### Capital Structure Factors

According to Bambang Riyanto (2017:118), the following factors need to be considered in determining capital structure policies:

#### 1. Interest rate

The prevailing interest rate will determine the capital structure which will affect the type of capital to be used whether using stocks or bonds.

#### 2. Earning Stability

The stability and amount of earnings obtained by the company will determine whether the company is justified in using debt or not.

#### 3. Asset Arrangement

In general, industries or manufactures where most of their capital is embedded in fixed assets will tend to use their own capital compared to foreign capital or debt as a complement.

#### 4. Asset Risk

The risk attached to each asset is not necessarily the same. The longer the time of use, the greater the risk.

#### 5. Amount of capital required

The amount of capital needed or needed is large, it is felt necessary for companies to use securities simultaneously.

#### 6. Capital Market Condition

The condition of the capital market changes frequently due to various factors. Therefore, companies must pay attention to capital market conditions.

#### 7. Management Nature

Management who are optimistic about the company's future will dare to take big risks so that they will use debt more to meet the company's needs.

#### 8. Company Size

In companies whose shares are very widely distributed, the addition of shares to meet funding needs does not greatly affect the power or control of the majority shareholder. Large companies generally prefer the issuance of new shares to meet their funding needs.

#### 9. Profitability

If listed companies with high profitability tend to have a low level of debt.

Based on the components in the capital structure, in measuring the ratio for the capital structure according to Fahmi (2018: 219) are:

Debt to Equity Ratio (DER)

$$DER = (\text{Total Debt}) / (\text{Total Capital})$$

### Return on Assets

Return on assets according to Dr. Sutrisno (2017:213) is a measure of the company's ability in generating profits with all assets owned by the company, while Return on assets according to Prastowo (2019:265) is a ratio to measure the company's ability to utilize its assets to earn profits and furthermore Return on assets according to Syamsuddin (2018:708) is a capacity assessment a company as a whole in generating profits with the total wealth contained in the company.

Ratio measurements for Return On Assets (ROA), according to Syamsuddin (2019:265) are:

$$\text{Asset Structure} = (\text{Current Assets}) / (\text{Fixed Assets})$$

### Previous Study

1. Iflahatul Maidah and Siti Rokhmi Fuadati with a journal entitled Profitability, Asset Structure, Firm Size Affects the Capital Structure of Trading Firms in Bei. It can be seen that ROA has a value of 5.561 with a significance value of 0.000. it can be said that the significance value of ROA is smaller than the value of the test level ( $0.000 < 0.05$ ), so that the profitability variable has a significant effect on capital structure and asset structure has a value of 2.273 with a significance value of 0.044. it can be said that the significance value of the asset structure is smaller than the value of the test level ( $0.044 < 0.05$ ), so that the asset structure variable has a significant effect on the capital structure. The equation in this study with the journal has three variables in common, namely profitability (ROA), asset structure and capital structure. The difference from this study is that researchers researched PT. Sat Nusapersada Tbk is currently in a research journal at a trading company listed on the IDX.

2. Octavian Erwin Mulya Hidayat, Siti Nurlaela and Yuli Chomsatu Samrotun with a journal entitled The effect of current ratio, asset structure and return on assets on capital structure. The results of the F test obtained that the calculated F value was  $6.980 > F$  table 2.77 with p value  $0.000 < 0, 05$  so that the current ratio, asset structure and return on assets simultaneously affect the capital structure of pharmaceutical companies listed on the Indonesia Stock Exchange in 2013-2019. The equation in this study with the journal has the same three variables, namely return on assets, asset structure, and capital structure. The difference from this study is that researchers conducted research at PT. Sat Nusapersada Tbk is currently in a research journal at a pharmaceutical company listed on the IDX.

3. Retno Indah Sari and Lilis Ardini in a journal entitled Effect of Asset Structure, Business Risk, Sales Growth and Profitability on Capital Structure. This value is smaller than  $= 0.05$  ( $0.000 < 0.05$ ) so that  $H_0$  is rejected or  $H_a$  is accepted, meaning that the asset structure has a significant positive

effect on the capital structure. And the profitability variable has a count of -2.800 with a significance value of 0.006. This value is smaller than  $\alpha = 0.05$  ( $0.006 < 0.05$ ) so that  $H_0$  is accepted or  $H_a$  is rejected, meaning that profitability has a negative but significant effect on capital structure. The equation in this study with the journal has the same three variables, namely return on assets, asset structure and capital structure. The difference from this study is that researchers conducted research at PT. Sat Nusapersada Tbk is currently in a research journal on consumption companies listed on the IDX.

**Relationship of Return On Assets (ROA) to Capital Structure**

The greater the return on assets (ROA) means the more efficient the use of company assets or in other words with the same number of assets, greater profits can be generated, and vice versa (Sudana, 2018: 22).

Most companies where most of their capital is embedded in fixed assets so that they will prioritize the fulfillment of their capital from permanent capital, namely own capital, while debt is complementary (Riyanto, 2016: 7).

**Relationship between Asset Structure and Capital Structure**

Companies with adequate assets that can be used as collateral tend to use debt. The higher the asset structure, the higher the capital structure means the greater the fixed assets that can be used as debt collateral by the company, conversely, the lower the asset structure of a company, the lower the ability of the company to be able to guarantee its long-term debt (Andika and Sedana, 2021). :218)

Companies that have a larger composition of tangible fixed assets, of course, will have many opportunities to obtain additional capital with debt because these fixed assets can be used as collateral (Sitanggang, 2018: 708)

**Relationship of Return On Assets (ROA) and Asset Structure to Capital Structure**

Capital structure can be interpreted as a balance between the use of capital loans consisting of short-term debt, long-term debt, and own capital.

Capital structure describes the proportion of the relationship between debt and equity, one of which is important decisions related to maximizing return and having a crucial impact to the value of the company (Budiarso, 2018:477)

Companies that have a stable return on assets can fulfill obligations for the use of foreign capital, on the other hand companies that have unstable profits will bear financial risks due to the use of more debt (Riyanto, 2018: 293)

The higher the profit generated by the company, it will further reduce the company's capital structure originating from debt. Companies with high levels of profit generally use relatively little debt because with these high profits they can be used as a source of funds (Udayani, Suaryana, Handojo, Nanda and Retnani, Yushinta and Suryandari, 2018:480)

The greater the structure of assets owned by the company, the greater the opportunity for the company to use debt. Companies that have a larger composition of tangible fixed

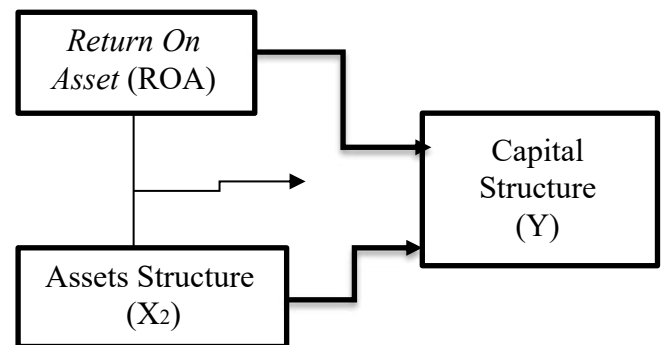
assets, of course, will have the opportunity to obtain additional capital with debt because these fixed assets can be used as collateral (Sitanggang, 2018: 709)

Asset structure is an important variable in the company's funding decisions because fixed assets are related to the company's production process to obtain or increase company profits. The higher the fixed assets owned by the company will optimize the company's production process which in the end can generate maximum profit (Hadianto, 2015: 3)

So it can be concluded that the return on assets and asset structure has an influence on the capital structure, because the higher these ratios, the capital structure also increases. In essence, the company needs a high asset structure both to finance the company's obligations and as capital in the company so that the company continues to operate and can generate maximum profits on the overall wealth in the company.

Good management should pay attention to the capital structure in determining the company's funding decisions, whether good or bad the capital structure will have an effect on directly to the company's financial position. Capital structure is funding permanent assets consisting of long-term debt, preferred stock, and shareholder capital share. The capital structure decisions taken by the manager not only affect the company's profits, but also affect the financial risks faced by the company. These financial risks include the possibility of being unable to company to pay its obligations and may not achieve the company's target profit.

**Thinking Framework**



**Research Hypothesis**

- H1: It is suspected that there is an effect of Return On Assets (ROA) on the Capital Structure.
- H2: It is suspected that there is an influence of Asset Structure on Capital Structure.
- H3: It is suspected that there is an influence of Return On Assets (ROA) and Asset Structure to Capital Structure.

**Research methods**

**1. Type of research**

This type of research is descriptive associative research that aims to determine the relationship of two or more variables, in this study to see the relationship between Return On Assets (ROA), Asset Structure and Capital Structure.

**2. Place and time of research**

This study takes data through the official website of the Indonesian stock exchange at www.idx.co.id. This research was conducted from November 2020 to September 2021.

**3. Population and sample**

The population in this study is the distribution of data consisting of Return On Assets (ROA), Asset Structure and Capital Structure obtained from financial statements in the form of balance sheets and profit/loss since the establishment of PT. Sat Nusapersada Tbk until 2021 with the research object of PT. Sat Nusapersada Tbk.

The sample taken in this study is a distribution of data consisting of Return On Assets (ROA), Asset Structure and Capital Structure for six periods, namely from 2015 to 2020. The samples obtained in this study were 18 samples.

**4. Data collection method**

• Descriptive method

Descriptive Analysis is a statistic used to analyze data by describing or describing the data that has been collected as it is without intending to make conclusions that apply to the public (Sugiyono, 2019:206),

• Associative Method

The Associative Method is a research that aims to determine the relationship between two or more variables (Sugiyono, 2019:65)

**5. Data collection techniques**

• Library Research (Library Research)

In this research, data can be obtained by conducting theoretical research, namely by reading and understanding as well as studying the form of books, journal articles and expert opinions sourced from books related to this research.

• Online Research (Online Research)

This research was conducted by looking for data related to what will be discussed in the study, the data in the study came from trusted websites to obtain additional literature and other related data.

**ANALYSIS RESULT AND REVIEW**

**1. Ratio of the Company's Variable Conditions PT. Sat Nusapersada 2015-2020.**

YEAR	Capital Structure	Return On Asset	Assets Structure
2015	29,44	0,17	89,70
2016	31,26	1,82	97,75
2017	32,99	0,73	61,58
2018	312,87	4,17	320,49
2019	128,55	0,55	86,45
2020	56,76	3,72	48.61

	N	MAXIMUM	MINIMUM	MEAN	STANDARD DEVIATION
ROA	6	4,17	0,55	1,86	35,40
SA	6	320,49	86,45	117,43	113,94
SM	6	312,87	128,55	98,64	120,56

**1. Descriptive Analysis**

**2. Associative Analysis**

CORRELATION ANALYSIS		DETERMINATION COEFFICIENT ANALYSIS	
Single Correlation Analysis X <sub>1</sub> To Y	0,59	The coefficient of determination of X <sub>1</sub> against Y	34%
Single Correlation Analysis X <sub>2</sub> To Y	928,1	The coefficient of determination X <sub>2</sub> against Y	86%
Multiple Correlation Analysis X <sub>1</sub> And X <sub>2</sub> To Y	0,51	The coefficient of determination X <sub>1</sub> and X <sub>2</sub> to Y	26%

**RESULT DESCRIPTION:**

1. Based on the calculation of the standard deviation of the return on assets (ROA) analysis of 2.66%. The results of the single correlation analysis of return on assets (ROA) on the capital structure of 0.59%. The results of the analysis of the coefficient of determination of return on assets on capital structure obtained by 34%, then return on assets has a moderate relationship and contributes positively to capital structure caused by an increase in debt and accounts receivable to third parties at PT. Nusapersada Sat.

2. Based on the calculation of the standard deviation of the asset structure analysis of 163.672%. The results of the analysis of the single correlation between the asset structure and the capital structure are 928.1%. The results of the analysis of the coefficient of determination of the asset structure to the capital structure are 86%, so the asset structure has a high correlation direction and contributes positively to the capital structure caused by the increase in current assets in PT. Nusapersada Sat.

3. Based on the calculation of the standard deviation of the capital structure analysis of 155.284%. The results of the single correlation analysis of return on assets to the asset structure of 5.68%, the results of the analysis of the coefficient of determination of return on assets and the structure of assets to the capital structure obtained by 26%, the return on assets and the asset structure have a high direction of relationship and contribute positively to the capital structure caused by an increase in current assets, accounts payable and accounts receivable at PT. Nusapersada Sat.

**DISCUSSION**

### 1. Effect of Return On Assets (X1) on Capital Structure (Y)

On the basis of the calculations and analyzes that have been carried out above, it can be concluded that the result of calculating the standard deviation of return on assets (X1) is 2.66, the result of the single correlation test of return on assets (X1) to capital structure (Y) is  $r_{x2y} = 0.59$  included in the medium category and has a positive direction, the results of the analysis of the coefficient of determination of return on assets (X1) on the capital structure (Y) are 34%.

It can be concluded that the higher the return on assets, the capital structure at PT. Sat Nusapersada Tbk will be higher, and vice versa, the lower the value of the return on assets ratio, the capital structure of PT. Sat Nusapersada Tbk will be even lower. This is true because the correlation of the X1 variable to Y is positive so that it has a unidirectional effect. When the value of return on assets is higher, it indicates the company's performance is in good condition and vice versa if the condition of the return on assets is low, indirectly the company's performance is in a bad condition.

The above description is related to the results of previous research conducted by Abraham Kelli Sion Watung, Ivonne S. Saerang and Hizkia HD Tasik (2016) with the title of research on the effect of liquidity ratios, activity, profitability and asset structure on capital structure on the Indonesian Stock Exchange (IDX). the period 2011-2014 that the research results simultaneously liquidity (current ratio), activity (total asset turn over), profitability (return on assets), and asset structure have a significant effect on capital structure. Partially, liquidity (current ratio), profitability (return on assets), and asset structure have a significant effect on capital structure, while activity (total asset turnover) has no significant effect. The population in this study were 38 consumer goods industry companies that went public and the sample used in this study was 24 companies using judgment sampling technique with associative research methods.

### 2. Effect of Asset Structure (X2) on Capital Structure (Y)

On the basis of the calculations and analyzes that have been carried out above, it can be concluded that the result of calculating the standard deviation of the asset structure (X2) is 163.672, the result of the single correlation test of the asset structure (X2) to the capital structure (Y) of  $r_{x2y} = 928.1$  is included in the very category. strong and has a positive direction, the result of the analysis of the coefficient of determination of the asset structure (X2) on the capital structure (Y) is 86%.

It can be concluded that the higher the value of the asset structure, the better the effect on the capital structure because it can be used as collateral for debt or can be used as capital for the company's operations so that the company continues to grow, on the contrary if the value of the asset structure is low, the capital structure of PT. Sat Nusapersada Tbk .

The above description is related to the results of previous research conducted by Retno Indah Sari and Lilis Ardini (2017) with the title of research on the effect of asset structure, business risk, sales growth and profitability on the capital structure of consumer goods companies listed on the Indonesian stock exchange for a 4 year period. from 2012 to 2015. The results of the analysis show that based on the model's feasibility test, it can be concluded that asset structure,

business risk, sales growth and profitability have a significant effect on the capital structure of consumer goods companies listed on the Indonesian stock exchange. Partially, the results show that asset structure has a significant positive effect on capital structure, business risk has an insignificant negative effect on capital structure, sales growth has a significant positive effect on capital structure and profitability has a significant negative effect on capital structure. The sampling technique used in this research is purposive sampling, with the number of samples obtained as many as 28 consumer goods companies. The analysis technique used is multiple linear regression and hypothesis testing.

### 3. Effect of Return on Assets (X1) and Asset Structure (X2) on Capital Structure (Y)

On the basis of the calculations and analyzes that have been carried out above, it can be concluded that the results of the calculation of the standard deviation of the capital structure (Y) of 155,284, the results of the single correlation test of return on assets (X1) to the structure of assets (X2) of  $r_{x2y} = 5.68$  are included in the very category. strong and has a positive direction, the results of the analysis of the coefficient of determination of return on assets (X1) and asset structure (X2) on capital structure (Y) are 26%.

It can be concluded that the higher the return on assets and asset structure, the higher the capital structure at PT. Sat Nusapersada Tbk, and vice versa, the lower the return on assets and asset structure, the lower the capital structure of PT. Sat Nusapersada Tbk.

The description above is in accordance with the results of previous research conducted by Octavian Erwin mulya hidayat, siti nurlaela, yuli chomsatun samrotun with the title of research on the effect of current ratio, asset structure and return on assets on the capital structure of pharmaceutical companies listed on the Indonesia Stock Exchange for the period 2013-2019. The results show that the current ratio has a negative and significant effect on the capital structure. Asset structure has a negative and significant effect on capital structure. return on assets has no significant effect on capital structure. The population of this research are 12 companies. Determination of the sample using purposive sampling method and obtained 10 pharmaceutical companies. The data source uses secondary data with data collection through documentation. The data analysis technique used multiple linear regression.

### CONCLUSION

1. Return on assets has a moderate relationship and contributes positively to the capital structure caused by the increase in accounts payable and trade receivables to third parties at PT. Nusapersada Sat.

2. The asset structure has a high direction of relationship and contributes positively to the capital structure caused by the increase in current assets at PT. Nusapersada Sat.

3. Return on assets and the asset structure have a high direction of relationship and contribute positively to the capital structure caused by the increase in current assets, accounts payable and accounts receivable at PT. Nusapersada Sat.

## SUGGESTION

From these conclusions, the researchers put forward suggestions to the PT. Sat Nusapersada relating to return on assets and asset structure to capital structure are as follows:

1. With a moderate and positive direction in the single correlation analysis between return on assets and capital structure, PT. Sat Nusapersada can further improve the relationship of these variables so that PT. Sat Nusapersada can manage return on assets better and can improve the condition of return on assets in the company.

2. Companies must pay attention to the condition of return on assets so that there is no very high decline because return on assets has a large enough impact on the company, because if the return on assets is in good condition it will provide high profits and if the return on assets is in low condition then have an unfavorable effect on the sustainability of operations within the company

3. It is expected that the company will continue to be consistent and maintain the condition of its capital structure because the sustainability of the company is very dependent on the optimal capital structure so that a company can be able to continue to survive and develop much better.

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# Influence Of Business Capital, Enterprise Attitudes, Business Networks, And Utilization Of Information Technology Towards MSMEs Competitiveness

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**Abstract**—This study aimed to determine the effect of venture capital, entrepreneurial attitude, business network and utilization of information technology on the competitiveness of SMEs fish skin crackers in the Sindang District. This research is a causal associative research method. This research was conducted on the Fish Skin Crackers of Sindang SMEs. The subjects of this study were all 30 entrepreneurs of Sindang fish skin cracker (producers). The sampling technique used was purposive sampling technique. The data collection was done using questionnaires and interviews. The validity test of the instrument in this study used confirmatory factor analysis (CFA) and the instrument reliability testing used alpha Cronbach. The data analysis technique used was multiple linear regression analysis techniques. The results showed that: (1) venture capital did not have a significant effect on the competitiveness of SMEs in Krupuk Sindang fish skin; (2) entrepreneurial attitudes had a positive and significant influence on the competitiveness of MSME Sindang fish skin crackers, and had an influence; (3) business networks had a positive and significant influence on the competitiveness of the Sindang fish skin cracker and had an effect; (4) the use of information technology has positive and significant influence on the competitiveness of Sindang fish skin crackers and had an influence; (5) venture capital, entrepreneurial attitude, business networks and the use of information technology together had a positive and significant influence on the competitiveness of SMEs Sindang fish skin crackers and had an influence.

**Keywords**—venture capital, entrepreneurial attitude, business networking, information technology integration, the competitiveness of MSMEs

## I. INTRODUCTION

Micro, Small and Medium Enterprises (MSMEs) have a very strategic role in the Indonesian economy. MSMEs have proven to be a sector that is able to withstand the crisis storms that have hit Indonesia. But on the other hand, along with the development of increasingly modern times and the strong current of globalization, it makes MSMEs quite difficult in facing current competition. The flow of globalization requires companies that are at the microeconomic level to be able to increase their production efficiency in order to survive amid global competition that includes local scope, national and international. In addition, the ability to expand business internationally has become a determining element in competition in the globalization era (Lecerf, 2012). Modernization and globalization encourage MSMEs to have a capable competitive advantage to face international competition. Advantage Competitive allows companies survive amid market competition and have a

strong foundation to face the competition (Ciochina et al., 2011). Moreover, during the implementation of the Asian Economic Community (AEC) in which Indonesia as one of the countries that took part in the implementation of the Asian economic community as a free market program for countries in Asia. Apart from having a positive value in the form of easy export-import without having to think about the complicated procedures that must be followed in the destination country, MEA also has negative effects that make MSME players have to work harder to produce differentiated products. MSMEs must have the ability to produce high quality and innovative products in meeting market demand in order to increase their competitiveness (Matrutty et al., 2018).

For Indonesia, the formation of AEC 2015 presents several challenges that are not only internal in the country but more so competition with fellow ASEAN countries and other countries outside ASEAN such as China and India. This tight competition will also have an impact on competitive prices, not only for the superior commodities/products/services of big industry (UB), but also the MSME sector due to the similarity of product characteristics. Recognizing the role of MSMEs as a business group that has the largest number and is quite dominant in the economy, the achievement of the success of the AEC will also be influenced by the readiness of MSMEs. The data states that the number of micro and small businesses and Currently, there are around 60 million medium enterprises (MSMEs) in Indonesia, and are able to absorb 97% of the total workforce in Indonesia. Amount It is predicted that MSMEs will continue to increase to 65 million units in the 2017-2020 timeframe. Until now, Indonesian MSMEs are still facing various problems, either classical or intermediate or advanced. These problems can be different from one region to another, either between sectors or companies in the same sector. But in general, the problems faced by all MSMEs are the same.

The classic problem faced is related to the low productivity of MSMEs. This situation is caused by the existence of internal and external factors faced by MSMEs. The problem internally that are often faced by SMEs, such as low quality of human resources of SMEs in the management, organization, mastery of technology, and marketing, weak entrepreneurial attitude of the perpetrators of SMEs, and limited access to SMEs in terms of capital, information, technology and markets, as well as factors of production more. Meanwhile, external problems faced by MSMEs include the large amount of transaction costs due to a less supportive business climate and scarcity of raw

materials. The classic problems that are often faced ultimately affect the competitiveness of MSMEs. Products produced by MSME players are often unable to compete with products produced by foreign entrepreneurs due to low quality to higher prices. These classic problems require MSME players to be able to continue to improve the competitiveness of their business. On the other hand, the presence of these competitors has a positive impact on MSME players, including helping to increase their competitive advantage, improving industrial structure, increasing market share development and blocking the entry of new competitors.

Indramayu is an area that produces freshwater fish cultivation commodities in Indramayu. Various kinds of preparations are produced from basic fishery materials, this can encourage the economy of the community to be better by establishing MSMEs engaged in the field of food processing made from fishery and flour. One of the micro and small businesses that have products made from fishery products is the MSME fish skin crackers. MSME Fish skin crackers in Indramayu are based in Sindang, to be precise in Kenanga Village. The fish skin cracker industrial center is one of the MSMEs in Indramayu district, which is engaged in the fishery product processing industry. This industrial center is the only fish skin cracker industry in Indramayu Regency. But in terms of ability to compete among the SMEs with SMEs others are still comparatively low. The low level of competition at MSME fish skin crackers is influenced by several factors, namely internal and external. These factors include business capital, entrepreneurial attitudes, business networks to the level of information technology utilization that is used and accessible to MSME players of fish skin crackers in Indramayu Regency.

## II. LITERATURE REVIEW

### A. Competitiveness of MSMEs

Business capital is one of the important components that can support the running of a business. As stated by Colombo et al., (2019) that business capital is considered a source of business finance for entrepreneurs. Business capital is one of the fundamental factors when running a business and is a good source of finance for MSMEs (Memba et al., 2012), because the size or size of capital will affect the level of development of a business. As stated by Bambang in Purwanti (2012), the size of the capital will affect business development in achieving income. Meanwhile, according to the Big Indonesian Dictionary defines venture capital as principal money used for trading, releasing money and so on; property that can be used to produce something that can increase wealth. In other words, capital is defined as the amount of money used in running a business or business. Riyanto (2010) defines venture capital as an overview of the balance sheet of a company that uses concrete and abstract capital.

### B. Capital

Business capital is one of the important components that can support the running of a business. As stated by Colombo et al., (2019) that business capital is considered a source of business finance for entrepreneurs. Business capital is one of the fundamental factors when running a

business and is a good source of finance for MSMEs (Memba et al., 2012), because the size or size of capital will affect the level of development of a business. As stated by Bambang in Purwanti (2012), the size of the capital will affect business development in achieving income. Meanwhile, according to the Big Indonesian Dictionary defines venture capital as principal money used for trading, releasing money and so on; property that can be used to produce something that can increase wealth. In other words, capital is defined as the amount of money used in running a business or business. Riyanto (2010) defines venture capital as an overview of the balance sheet of a company that uses concrete and abstract capital.

### C. Entrepreneurial Attitude

An entrepreneurial attitude is a mindset or perspective from someone regarding something related to the business being carried out. Qiu in Schierjott et al. (2018) define entrepreneurial attitudes as a domain of specific attitudes toward practices and processes related to business opportunities and new ways of solving problems. Meanwhile, according to Gaddam (2008) entrepreneurial attitude is a tendency to react affectively in addressing the risks that will be faced in a business measured using an entrepreneurial attitude scale. Meanwhile, according to Hantoro in Furon (2017) states that an entrepreneurial attitude is an attitude possessed by an entrepreneur who is strong-willed and never gives up, has a strong belief in personal strength, is honest and responsible, has physical and mental endurance, is diligent and resilient, works hard and have constructive and creative thinking.

### D. Business Network

The business network is one of the factors supporting the success of MSMEs . According to Wijanarko & Susila (2016) a network is defined as an organization that regulates coordination and realizes cooperation between elements in the organization. Business networks can be in the form of business units as well as non-business units . The nature of this business network is formal and non-informal. The business network is expected to be a tool to solve problems related to limited business resources. The mutual involvement of other business units or what is called a network will greatly assist the business activities of producers, from production activities to marketing activities of products offered by these producers. Business networks provide access to resources and skills, expand economies of scale in operations, increase knowledge and capabilities and maintain market stability Eberhard & Craig (2013). Business networks are one of the factors in order to improve business competitiveness for the better. This is as stated by Lestari et al., (2015). Higher business competitiveness can be achieved through business networks because business actors can specialize so that business is more efficient, reduces transaction costs, and increases flexibility due to partners who are Trusted

### E. Utilization Technology Information

Technology information is part of that manage and use technology in activities of production of an organization to achieve productivity are high Onu et al., (2014). Technology information actually is not a term that is new. Technology information according Rahmana (2009) is defined as technology that is used to process and disseminate the data

by using the device hardware and software, computer, communications and electronic digital. Information Technology Association of America (ITAA) defines technology information as a study, design, development, implementation, support or management systems are based computers.

Increasing the competitiveness of MSMEs can be done with various strategies. Factors that influence of power competitiveness of SMEs assortment, including capital business, the attitude of entrepreneurship, networking efforts and the use of technology information. Capital venture which is a factor base in running a business, not infrequently capital into obstacles or problems that must be faced by the perpetrators of the business. Capital venture is not only able to increase the power competitiveness of enterprises from the aspect of income, but also play a role in improving the performance of innovation MSMEs. It mentioned accordance with the results of the study were carried out by (Sun, Zhao, & Sun, 2018).

The attitude of entrepreneurship of actors business or owner would affect the level of power the competitiveness of SMEs that exist. Because the entrepreneurial attitude of the owner shows the level of cognition of the owner in managing his business. The attitude of entrepreneurship of actors effort is positive then the effort that is undertaken will be in a condition well and will continue to experience an increase in both the of the quality and quantity that will have an impact on the increasing power of competitiveness of SMEs it themselves.

Network businesses participate as well as in developing a business that owned that had the power of competitiveness both anyway. As that expressed by Jarillo in Lestari (2015) that power the competitiveness of the business that is high can be achieved through a network of business because of the actors attempt to perform specialization so that businesses more efficiently, tapping the costs of transactions, and increase flexibility because of their partner that reliable.

The use of information technology will increase the exchange of information in a large amount so as to increase business transformation and the competitiveness of the business being undertaken. The use of information technology is one of the strategies that can be used in increasing the competitiveness of MSMEs. It the corresponding results of the research that has been conducted by Rahmana (2009) that one of the strategies to increase the power of competitiveness of SMEs is to utilize the technology of information.

Tambunan (2009) revealed the weakness of the power of competitiveness of SMEs for capital work the less, the difficulty of marketing, lack of access to sources of power finance, lack of skills and management technology, low productivity, limited sources of power productive, especially capital, technology, information and markets, institutions and organizations cooperatives were qualified low and the lack of network business. The businessman Krupuk Leather Fish feel the issues are. The problems mentioned above are several factors that affect the competitiveness of eel chips MSME amid market competition.

### III. RESEARCH METHODS

The research was conducted at MSME Krupuk fish skin Sindang in Indramayu Regency, Indramayu. The time

of the research was conducted in the period of March-April 2020. Research which conducted an associative causal research (causation). Associative causal research is a study with goal for know or whether or not influence or relationship between variables independent of the dependent variable and how strong and meaningful the influence or relationship is (Sugiyono, 2016). In particular this research analyzing the influence of business capital, entrepreneurial attitudes, business networks, and the use of information technology on the competitiveness of the Sindang fish skin crackers MSMEs in Indramayu Regency. The population in this study were all MSMEs entrepreneurs of Sindang fish skin crackers in Indramayu Regency. As for the sample in this study using a sampling technique, namely purposive sampling, namely determining the sample of data sources with certain considerations (Sugiyono, 2016). The use of purposive sampling technique because not all samples have criteria in accordance with the problem under study. Therefore, researchers used a purposive sampling technique by setting certain criteria as follows.

1. MSME actors as sellers as well as producers.
2. He has been active in production and sales to date.
3. Respondents do not have more than 1 unit.

Data collection techniques used questionnaires, interviews and documentation.

The data analysis technique used is the Parametric Statistical Requirements Test, Descriptive Analysis.

### IV. RESULTS AND DISCUSSION

#### 1. The effect of venture capital on the competitiveness of Sindang fish skin crackers

Business capital is one of the main components for running a business either on a small scale or even on a large scale. Even though it is one of the main factors in running a business, it seems that capital is not a factor influencing fish skin cracker businessmen in increasing their business competitiveness. This is evident from the results of the regression analysis proves that venture capital does not have a significant effect on the competitiveness of SMEs cracker fish skin Sindang. The result of regression analysis shows that the t count is -0.799 with a significance level of 0.432.

#### 2. The Influence of Entrepreneurial Attitudes on the Competitiveness of SMEs of Sindang fish skin crackers

An entrepreneurial attitude is a tendency that exists in an entrepreneur to do one thing in order to face the business world that he lives by still based on certain values. An entrepreneurial attitude is an important factor in running a business because it can show the level of a business actor's ability to answer challenges or predict the willingness of the market share of his business.

The results showed that entrepreneurial attitudes had a positive and significant effect on the business competitiveness of fish skin crackers in Sindang. This is evident from the results of the regression analysis showing that the value of the t count has a value greater than the t table, which is  $4.108 > 1.697$  with a significance level of 0.000. This result means that the level of competitiveness of an MSME is influenced by the level of entrepreneurial attitudes possessed by business actors. The higher the entrepreneurial attitude of the perpetrators of SMEs will give a high impact as



well in improving the competitiveness and success of the business that we run.

### 3. The Influence of Business Networks on the Competitiveness of SMEs of Sindang fish skin crackers

Business networks are another factor that supports the success of a business. Business networks can help business activities carried out by producers from production activities to marketing of the products they produce. Apart from being one of the factors supporting success, business networks are also a factor in increasing business competitiveness. This is as stated by Lestari (2015: 10) that business competitiveness can be achieved through business networks because business actors can specialize so that business is more efficient, reduces transaction costs and increases flexibility due to the presence of trusted partners. However, the research that has been done this, business networks have a positive influence and significant on the competitiveness of SMEs cracker fish skin Sindang. This is evidenced from the results of research data analysis which shows that the t count is 3,744, which means it is greater than the t table, namely 1.697 with a significance level of 0.001. The result meant, business networks provide a significant and positive influence to improve the competitiveness of SMEs cracker fish skin Sindang.

### 4. The Influence of Information Technology Utilization on the Competitiveness of SMEs of Sindang fish skin crackers

The use of information technology at this time is not only for processing data but also for providing quality information which can then be used as a strategic tool in business development and can increase the competitiveness of the business being run. The results showed that the use of technology information has a significant influence on the competitiveness of SMEs cracker fish skin Sindang namely with the number t arithmetic amounted to 1.777, which means greater than t table ie 1,697. These results reflect that more and better use of information technology will also participate in improving the competitiveness of MSMEs cracker fish skin Sindang.

### 5. The Simultaneous Influence of Business Capital, Entrepreneurship Attitudes, Business Networks and Utilization of Information Technology on the Competitiveness of MSMEs Krupuk Fish Skin Sindang

Regression analysis showed that simultaneous capital venture, entrepreneurial attitude, business networks, and the use of technology information has a significant influence on the competitiveness of SMEs cracker fish skin Sindang. This is evidenced by the results of calculations that show the results of F count is greater than F table, which is equal to  $21.789 > 2.99$  with a significance level of 0.000, which means that it is smaller than  $\alpha$  ( $0.000 < 0.05$ ).

The results of the analysis reflect that to improve the competitiveness of MSMEs Sindang fish skin crackers can be done by increasing or improving together the variables that have been used in the study, namely in the form of venture capital, entrepreneurial attitudes, business networks and the use of information technology.

## V. CONCLUSION

Based on the discussion that has been described, it can be concluded as follows.

1. Venture capital does not have a significant and positive effect on the competitiveness of MSMEs cracker fish skin Sindang, it is seen from the analysis that has been done that get results that figure amounted to 0.432 significance which means greater than  $\alpha = 0.05$ . This means that the variable does not affect the venture capital business competitiveness improvement of MSMEs cracker fish skin Sindang.
2. Entrepreneurial attitude has a positive and significant effect on the competitiveness of MSMEs cracker fish skin Sindang. This means, the better the entrepreneurial attitude of a business actor, the better it will contribute to increasing the competitiveness of fish skin crackers MSMEs.
3. Business network variable has a positive and significant effect on the competitiveness of SMEs cracker fish skin Sindang. Thus, the wider the business network owned by the MSMEs business actors, the fish skin crackers, will further increase the competitiveness of the business they are running.
4. Utilization of information technology have a positive influence and significant on the competitiveness of SMEs cracker fish skin Sindang. By thus getting better mastery and use of information technology of the perpetrators of SMEs cracker fish skin Sindang, it will improve the competitiveness of businesses run.
5. Simultaneously, the variable venture capital, entrepreneurial attitude, network operations and utilization of information technology gives the effect that a positive and significant impact on the competitiveness of SMEs cracker fish skin Sindang.

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# Influence Of Current Ratio And Debt To Equity Ratio On Dividend Payout Ratio

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**Abstract**—This study aims to determine the condition of food and beverage companies that are included in LQ45 and listed on the Indonesia Stock Exchange before the COVID-19 pandemic and during the COVID-19 pandemic using Current Ratio (CR) and Debt to Equity Ratio (DER) indicators to Dividends. Payout Ratio (DPR) The method used in this study is a descriptive method with a quantitative approach, and to obtain the accuracy of the analysis results, in this study the data analysis technique plan uses descriptive analysis with the calculation of the Mean (average), Standard Deviation. And associative analysis is used to answer the three associative hypotheses, which consist of two simple linear regression analyses and one multiple linear regression analysis. And Determinant Coefficient Analysis which shows the percentage of how much influence the independent variables used in this study are Current Ratio and Debt to Equity Ratio to the dependent variable, namely Dividend Payout Ratio (DPR). The object of research used as a sample in this study is data on the financial statements of food and beverage companies from 2019-2020. The population obtained is 12 companies engaged in food and beverage and the sample used in this study is 4 companies, as for the sample data as many as 8 data. The data used in this study is secondary data, the data comes from the Indonesian stock exchange which is accessed from the internet media with the [www.idx.co.id](http://www.idx.co.id). The results of this study indicate that (1) the Current Ratio before the Covid-19 pandemic had a negative and insignificant effect on the Dividend Payout Ratio, while the Current Ratio during the Covid-19 pandemic had a positive and insignificant effect on the Dividend Payout Ratio., (2) Debt to Equity Ratio during the Covid-19 pandemic had a negative and insignificant effect on the Dividend Payout Ratio, while the Debt to Equity Ratio during the Covid-19 pandemic had a positive and insignificant effect on the Dividend Payout Ratio, (3) Variable Current Ratio and Debt to Equity The ratio simultaneously has a positive effect on the Dividend Payout Ratio before the COVID-19 pandemic and during the COVID-19 pandemic.

**Keywords**—Current Ratio, Debt to Equity Ratio, Dividend Payout ratio

## I. INTRODUCTION

The world economy in 2020 was hit hard by the COVID-19 pandemic. 2020 was the worst year in modern history due to the economic downturn and the heavy loss of life caused by COVID-19. The level of consumption, especially in the

food and beverage retail industry around the world, including Indonesia, has experienced a drastic decline following the implementation of social restrictions and travel restrictions by the government to prevent the spread of the virus. The weakening purchasing power of the people caused the inflation rate to fall to an average of 1.68%, and the exchange rate of the rupiah against the US\$ weakened in the range of Rp14,639 in 2020. The consumer confidence index was under pressure in line with the decline in income amid a difficult and uncertain economic situation. The company in its business survival has the intent and purpose of which is to prosper the owner of the company, which is closely related to the company's ability to earn profits. The owner of the company is the party who invests his funds in the company (called investors). The purpose of owning shares of a company, among others, is to obtain dividends.

In distributing dividends, food and beverage companies must comply with the laws and regulations in Indonesia and the company's articles of association, the company's net profit can be distributed to shareholders as dividends after the provision of mandatory reserve funds required by law. every year, the distribution of dividends must be approved by the shareholders at the annual general meeting of shareholders (AGMS) based on the recommendation of the company's directors.

According to Bambang Riyanto (2015:266) states that:

"Dividend payout ratio is a percentage of income that will be paid to shareholders as a "cash dividend".

The dividend payout ratio must be beneficial for the interests of the company and shareholders. For the company, the information contained in the dividend payout ratio will be used as consideration in determining the amount of dividend distribution and the amount of retained earnings. Based on this, the company that will distribute dividends will be faced with various considerations, one of which can be seen from the company's liquidity conditions, this is by the theory presented by I Made Sudana (2015: 195), which states that:

"Dividends can be paid in cash or stock dividends. The company is only able to pay cash dividends if the level of

liquidity (current ratio) owned by the company is sufficient. The higher the level of company liquidity, the greater the cash dividends the company can pay to shareholders, and vice versa."

The current ratio can determine the position of the dividend payout ratio if the greater the amount of cash available and the company's liquidity, the greater the company's ability to pay dividends. Conversely, if the smaller the amount of cash available and the company's liquidity, the smaller the company's ability to pay dividends

According to Agus Harjito and Martono (2015:59) stated that:

"The ratio of total debt to equity is a comparison of the total debt owed by the company with its capital (equity)"

The debt to equity ratio is the ratio of the total debt to the company's total equity. The higher the level of debt to equity ratio, it means that the composition of debt is also higher so that it will result in the lower ability of the company to pay dividends to shareholders so that the dividend payout ratio will be lower.

The Dividend Payout Ratio (DPR) affects the growth of a company. If a company wants to hold most of its income in the form of retained earnings in the company, this causes the dividend payment to be smaller, thus it can be said that the higher the dividend payout ratio set by the company, the smaller the funds that will be reinvested in the company. means that it will hinder the growth of the company. Given the importance of the Dividend Payout Ratio (DPR) that must be decided by the company, the management must consider the factors that affect the Dividend Payout Ratio (DPR). According to Sutrisno (2017: 256) states that the factors that affect the dividend payout ratio are the company's solvency position, the company's liquidity position, the need to pay off debt needs, repayment plans, investment opportunities, income stability, and supervision of the company.

Based on this, in this study, the researcher uses the liquidity ratio as proxied by the current ratio, the solvency ratio as proxied by the debt to equity ratio in analyzing the variables that affect the dividend payout ratio in companies listed on the Indonesia Stock Exchange.

## II. RESEARCH METHODS

The research method that will be used in this study is a descriptive method with a quantitative approach that aims to provide a systematic, factual, and accurate description of the object under study. The subjects of this research are respondents. The type of data used is quantitative data, namely in the form of numbers or numeric. the researchers used data from the financial statements of food and beverage companies from 2019-2020.

The object of research used as a sample in this study is a food and beverage company that is included in LQ45 which

is listed on the Indonesia Stock Exchange (IDX) during the period 2019 - 2020. The total population obtained is 12 companies engaged in food and beverage and the sample is used in this study were 4 companies, while the sample data were 8 data. The data used in this study is secondary data, the data comes from the Indonesian stock exchange which is accessed from the internet media with the [www.idx.co.id](http://www.idx.co.id) site through the GIBEI stock exchange, Wiralodra University, Indramayu.

To obtain the analysis process by considering the accuracy of the analysis results, in this study the data analysis technique plan uses descriptive analysis, Descriptive Discussion is intended to answer the problem limits by calculating the Mean (average), Standard Deviation. And associative analysis is used to answer three associative hypotheses, which consist of two simple linear regression analyses (the relationship between one independent variable and one dependent), one multiple linear regression analysis (the relationship between two or more independent variables with one or more dependent variables). . And Determinant Coefficient Analysis which shows the percentage of how much influence the independent variables used in this study are Current Ratio and Debt to Equity Ratio to the dependent variable, namely Dividend Payout Ratio (DPR).

## III. RESEARCH DISCUSSION

The purpose of this study was to determine the effect of the Current Ratio (CR) on the Dividend Payout Ratio (DPR), the effect of Debt to Equity Ratio (DER) on Dividend Payout Ratio (DPR), the effect of the Current Ratio (CR) and the Debt to Equity Ratio (DER). ) together with the Dividend Payout Ratio (DPR), in food and beverage companies that are included in LQ45 and listed on the Indonesia Stock Exchange for the 2019-2020 period.

Based on the results of the study, the coefficient of the Current Ratio to the Dividend Payout Ratio before the covid 19 pandemic was -0.084 with a value of  $\text{sig} = 0.452 > \alpha = 0.050$ . It is shown that the Current Ratio variable has a negative and insignificant effect on the Dividend Payout Ratio in food and beverage that is included in LQ45 and is listed on the Indonesia Stock Exchange. The regression coefficient of the Current Ratio is negative, namely -0.084, indicating that the Current Ratio has the opposite direction of influence on the Dividend Payout Ratio. If the Current Ratio is increasing, the Dividend Payout Ratio will decrease. The Current Ratio has no effect which is significant to the Dividend Payout Ratio, it can be interpreted that the company's responsibility in paying dividends regularly is not influenced by the size of the company's short-term debt (current debt) even an increase in debt can increase the company's ability to pay dividends as long as the use of debt must always be accompanied by an increase in profit. company. The results of data processing show that the condition of the current ratio of food and beverage companies that enter LQ45 has an average value of 223.25% while the standard current ratio for the industry is 200%

because the current assets owned by the company are greater than current debt. The results of the research before the Covid-19 pandemic supported the research conducted by Muhammadiyah and Mahmud Alfian Jamil (2015), namely that the Current Ratio variable had no significant effect on the Dividend Payout Ratio variable, this was indicated by a significance value greater than 0.05.

While the results of the research during the Covid-19 pandemic also showed that the coefficient of the Current Ratio to the Dividend Payout Ratio was 0.167 with a value of  $\text{sig} = 0.164 > 0.050$ . It is shown that the Current Ratio variable has a positive and insignificant effect on the Dividend Payout Ratio in food and beverage that is included in LQ45 and is listed on the Indonesia Stock Exchange. The regression coefficient of the Current Ratio is positive, namely 0.167, indicating that the Current Ratio has a direct effect on the Dividend Payout Ratio if the Current Ratio is increasing, the Dividend Payout Ratio will increase. The Current Ratio does not have a significant effect on the Dividend Payout Ratio, where during the pandemic the increase in the current ratio will not change or affect the company's decision to pay dividends regularly, causing the ability to pay dividends not to be affected by the size of current liabilities. The results of data processing show that the condition of the current ratio of food and beverage companies that enter the LQ45 has an average value of 278.75% while the standard current ratio for the industry is 200% because the current assets owned by the company are greater than current debt. The results of this study support the research conducted by Melinda Ibrahim (2019), namely that the Current Ratio partially has a positive and insignificant effect on the Dividend Payout Ratio in pharmaceutical sub-sector companies that go public on the Indonesia Stock Exchange.

Based on the results of the study, the coefficient of the Debt to Equity Ratio to the Dividend Payout Ratio before the covid 19 pandemic was -0.289 with a value of  $\text{sig} = 0.356 > \alpha = 0.050$ . It is shown that the Debt to Equity Ratio variable has a negative and insignificant effect on the Dividend Payout Ratio in food and beverage companies that are included in LQ45 and listed on the Indonesia Stock Exchange. The regression coefficient of Debt to Equity Ratio is negative, namely -0.289 indicating that the Debt to Equity Ratio has the opposite direction of influence on the Dividend Payout Ratio if the Debt to Equity Ratio is increasing, the Dividend Payout Ratio will decrease. The Debt to Equity Ratio does not have a significant effect on the Dividend Payout Ratio, this shows that before the pandemic, most companies chose debt as alternative funding. The use of debt does not affect the size of the dividends available to shareholders. The results of this study support the research conducted by Muhammadiyah and Mahmud Alfian Jamil (2015), namely that the Debt to Equity Ratio variable has no significant effect on the Dividend Payout Ratio variable, this is indicated by a significance value greater than 0.05.

While the results of the research during the Covid-19 pandemic also showed that the coefficient of the Debt to Equity Ratio to the Dividend Payout Ratio was 0.166 with a value of  $\text{sig} = 0.404 > 0.050$ . It is shown that the Debt to Equity Ratio variable has a positive and insignificant effect on the Dividend Payout Ratio in food and beverage that is included in LQ45 and is listed on the Indonesia Stock Exchange. The regression coefficient of Debt to Equity Ratio is positive, namely 0.167 indicating that the Debt to Equity Ratio has a direct effect on the Dividend Payout Ratio if the Debt to Equity Ratio is increasing, the Dividend Payout Ratio will increase. As for Debt to Equity Ratio does not have a significant effect on the Dividend Payout Ratio, during the pandemic some companies experienced a fairly high increase in debt, this caused the company's ability to pay off its debts did not affect the size of the dividends available to shareholders, so it can be concluded that Debt to Equity Ratio does not have a significant effect during the pandemic.

The results of this study support the research conducted by Melinda Ibrahim (2019), namely that the current ratio debt to equity ratio partially has a positive and insignificant effect on the Dividend Payout Ratio (DPR) in pharmaceutical sub-sector companies that go public in Indonesia Stock Exchange.

The results of this study indicate that the Current Ratio and Debt to Equity Ratio, jointly have a positive effect on the Dividend Payout Ratio based on the results of testing the coefficient of determination before the COVID-19 pandemic, an R Square value of 0.763 is obtained. This means that 76% of the contribution of the influence given by the independent variable (X) together on the dependent variable (Y). While the remaining 34% can be explained by other variables outside this research model.

Meanwhile, during the COVID-19 pandemic, the Current Ratio and Debt to Equity Ratio together had a positive effect on the Dividend Payout Ratio. This can be seen from the results of testing the coefficient of determination obtained an R Square value of 0.985. This means 99% of the contribution of the influence given by the independent variable (X) together on the dependent variable (Y). While the remaining 1% can be explained by other variables outside this research model.

This study is in line with research conducted by Lia Andriani Pasaribu, Ester Paulina Siahaan, Putri Angela Sitanggang, Fuji Astute (2021) which states that the simultaneous test results show that the current ratio, debt to equity ratio, net profit margin have a significant effect on the dividend payout ratio in basic industrial and chemical sectors listed on the Indonesia Stock Exchange.

#### IV. CONCLUSION

Based on the results of the research conducted, the following conclusions can be drawn :

1. The Current Ratio variable before the Covid-19 pandemic had a negative and insignificant effect on the Dividend Payout Ratio. The significant value in the Regression Analysis of the Current Ratio variable is greater than the specified significant value ( $0.452 > = 0.050$ ) with a negative coefficient value of  $-0.084$ . While the Current Ratio Variable during the Covid-19 pandemic had a positive and insignificant effect on the Dividend Payout Ratio. The significant value in the Regression Analysis of the Current Ratio variable is greater than the specified significant value ( $0.164 > = 0.050$ ) with a positive coefficient value of  $0.167$ .
2. The Debt to Equity Ratio variable during the Covid-19 pandemic had a negative and insignificant effect on the Dividend Payout Ratio. The significant value in the Regression Analysis of the Debt to Equity Ratio variable is greater than the specified significant value ( $0.356 > = 0.050$ ) with a negative coefficient value of  $-0.289$ . While the Debt to Equity Ratio variable during the Covid-19 pandemic has a positive and insignificant effect to the Dividend Payout Ratio. The significant value in the Regression Analysis of the Debt to Equity Ratio variable is greater than the specified significant value ( $0.404 > = 0.050$ ) with a positive coefficient value of  $0.166$ .
3. Before the covid 19 pandemic, the Current Ratio and Debt to Equity Ratio variables simultaneously had a positive effect on the Dividend Payout Ratio. This result can be seen from the results of the regression analysis as a whole showing a value of  $0.763$ . This shows a very strong relationship, which can be interpreted as the Current Ratio and the Debt to Equity Ratio has a very large influence. Meanwhile, during the COVID-19 pandemic, the Current Ratio and Debt to Equity Ratio variables simultaneously had a positive effect on the Dividend Payout Ratio. This result can be seen from the results of the regression analysis as a whole showing a value of  $0.985$ . This shows a very strong relationship, which can be interpreted as the Current Ratio and Debt to Equity has a very large influence on the dividend payout ratio.

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# Influence of Product Completeness, Price, Quality of Service and Facilities on The Purchase Decision

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**Abstract**— This research was conducted to analyze the variables that influence purchasing decisions in modern markets and traditional markets in Yogyakarta. The independent variable consists of Product Completeness ( $X_1$ ), Price ( $X_2$ ), Service Quality ( $X_3$ ) and Facilities ( $X_4$ ) the dependent variable is Purchase Decision ( $Y$ ). Samples taken are consumers who have shopped in modern markets and traditional markets in Yogyakarta. The number of samples taken is 100 respondents using positive sampling technique.

Based on the results of the analysis and discussion using multiple regression analysis, it shows that product completeness, price, service quality and facilities have a significant positive effect on purchasing decisions. Partially product completeness has a significant positive effect on purchasing decisions, price partially has a significant negative effect on customer satisfaction, and service quality partially has a significant negative effect on purchasing decisions. Facilities partially have a significant negative effect on purchasing decisions. While simultaneously product completeness, price, service quality and facilities have a significant positive effect on purchasing decisions.

**Keywords**— *Product Completeness, Price, Service Quality, Failure, Purchase Decision.*

## I. INTRODUCTION

Modern retail first appeared in Indonesia when Sarinah Toserba was established in 1962. In the 1970s to 1980s, this business format continued to grow. The early 1990s was a milestone in the history of foreign retail entering Indonesia. This is marked by the operation of the largest Japanese retailer 'Sogo' in Indonesia. Modern retail then developed very rapidly, based on the Presidential Decree. 99 of 1998, issued a retail business from the negative list for foreign investment. Modern retail is basically a development of traditional retail. This retail format emerged and developed along with the development of the economy, technology, and people's lifestyles which made people demand more convenience in shopping. The retail industry continues to grow rapidly, not only in Indonesia, but also in Asia. The era of modern retail ahead of the 2015 Asean Economic Community (AEC) is predicted to grow faster. This is supported by many foreign companies that will invest in Indonesia (Apandi, 2017).

The problem of the impact of modern retail is quite reasonable because so far the competition between modern retail and traditional retail has attracted the most attention,

because it has always placed traditional retail in a weak position. The real evidence is the results of data recorded by Nielsen (2005), it appears that since the existence of the modern market in 2001, the contribution of modern market turnover which only started 24.8% increased to 34.4% in June 2006, which resulted in turnover traditional markets fell from 75.2% in 2001 to 65.6% in June 2006. Research conducted by Nielsen is in line with the data from the Association of Indonesian Market Traders (APPSI) which states that hypermarkets can cause the collapse of traditional markets and small traders' kiosks. medium. According to the results of data collected by APPSI in 2005, in Jakarta there are several traditional markets and kiosks that are closed, of which there are eight traditional markets and 400 kiosks that close every year because they cannot compete (Pramudyo, 2015).

## II. LITERATURE REVIEW

### A. Completeness of the product

(Lianardi, William. Chandra, 2019) completeness of the product is the completeness of the product regarding the depth, breadth and product offered as well as the availability of the product in each store. The provision of good product completeness will not only attract consumer interest but can influence purchasing decisions when shopping at a supermarket in particular.

### B. Price

Price is the amount of money that has been agreed upon by the prospective buyer and seller to be exchanged for goods or services in normal business transactions (Tandjung, 2004) in (Pramudyo, 2015).

### C. Service Quality Service

Quality is the overall characteristics and characteristics of a product or service that affect its ability to satisfy stated or implied needs (Kotler, 1997: 49) in (Setiawan, 2016)..

### D. Facilities

Facilities are a means to expedite the implementation to make it easier for interior and exterior layouts to be factors that can influence market image and choice (Krisdayanto et al., 2018).



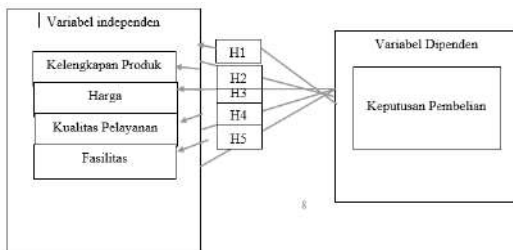
E. Purchasing Decision

Decision Consumer decision making is one of the important aspects in marketing because consumers will make a purchase or not make a purchase based on the decisions they make. Consumer decisions are closely related to the information held by consumers (Pulungan, 2017).

III. FRAME OF MIND RESEARCH

Based on the study of the theory and basic concepts of previous studies, the researchers Develop a framework of research related to the purchase decision as presented in Figure 2.1

Figure 2.1



A. Development Hypothesis

Based on the framework of the study, the researchers Develop framework for developing hypotheses as follows:

- The effect of Completeness of Product , Price, Quality of Service and Facilities on Purchase Decisions. (Pramudyo, 2015) in a study entitled Analysis of Factors Influencing Decisions on the choice of Traditional markets as a place to shop found that the Effect of Product Completeness, Price, Service Quality, Facilities and (Lianardi, William. Chandra, 2019) Analysis of service quality, product completeness , and price on purchasing decisions at supermarkets in June Pekanbaru simultaneously both stated that they had a significant positive effect on purchasing decisions. Based on the description above, the hypothesis that can be proposed is

H1: Product Completeness, Price, Quality of Service, Facilities simultaneously have a significant positive effect on purchasing decisions.

- The Influence of Product Completeness on Purchase Decisions. (Maheasy, 2018) in a study entitled The effect of product completeness, competitive prices, and service quality on consumer purchasing decisions at the Mulya Santosa supermarket, Sidomulyo village, Gondang sub-district, Tulungagung district found and (Lianardi, William. Chandra, 2019) a study entitled Analysis of service quality , product completeness, and price on purchasing decisions at supermarkets in June, Pekanbaru that both said that completeness of products had a significant positive effect on buyer decisions. Based on the description above, the hypotheses that can be proposed are;

H2: Completeness of the product has a significant positive effect on purchasing decisions.

- The Effect of Service Quality on Purchase Decisions. (Lianardi, William. Chandra, 2019) in a study entitled

Analysis of service quality, product completeness, and price on purchasing decisions at supermarkets in June Pekanbaru and (Krisdayanto et al., 2018) Analysis of the effect of price, service quality, facilities, and location on customer satisfaction at I Cafe Lina Putra Net Bandung. Both say that Service Quality has a significant positive effect on purchasing decisions. Based on the description above, the hypothesis that can be proposed is:

H4: Service Quality has a significant positive effect on purchasing decisions.

- The Influence of Facilities on Purchase Decision. (Krisdayanto et al., 2018) in a study entitled Analysis of the influence of price, service quality, facilities, and location on consumer satisfaction at cafe Lina Putra Net Bandung and (Pramudyo, 2015) Analysis of factors that influence the decision to choose traditional markets as places shop they both say that the amenities positive significant effect on the purchase decision. Based on the description above, the hypotheses that can be proposed are:

H5: Facilities have a significant positive effect on purchasing decisions.

IV. METHOD

This research is a quantitative research, where the researcher tries to find the effect of each independent variable on the dependent variable. The variables studied are the effect of product completeness, price, service quality and facilities on purchasing decisions. The population and sample in this study are consumers in the modern market and in the traditional market. This study uses the Yamane T formula to calculate the sample size from the population, namely:

$$n = \frac{N}{N + d^2} + 1$$

According to (Ikhprastyo, 2018) explaining if the subject is less than 100, it is better to take all of them so this research is called population research. However, if the number of subjects is large, it can be taken between 10-15% or 20-25% or more. Paying attention to the above statement because the population obtained by the researcher sets a significant level of 0.1 or 10%, so that the size of the sample taken in this study is:

$$n = \frac{500}{(500)(0,1)^2} + 1 = 100$$

Based on the calculations in determining the number of samples above, the minimum number of samples in this study is 100 respondents.

The technique used in this research is to use the No method Probability Sampling using accidental sampling method. technique Non Probability sampling is a sampling technique that does not provide opportunities or equal opportunity for each element or member of the population to be selected into the sample (Ikhprastyo, 2018). While the method accidental sampling, ie people who coincidentally meet with the researcher can be used as a sample, if it is seen that the person who happened to be met is suitable or

included in the research criteria. The criteria that can be used as samples in this study are consumers who have bought in modern markets and traditional markets, especially in the city of Yogyakarta, with a minimum age of 17 years.

## V. CONCLUSION AND SUGGESTION

### A. Conclusion

Based on research on the effect of product completeness, price, quality of service and facilities on purchasing decisions. What was done to 100 respondents who had bought in modern and traditional markets in Yogyakarta, the test results obtained were as follows:

- R2 test results Based on table 4.20 the results are Adjusted R Square 0.348. These results indicate that the ability of the independent variable in explaining the dependent variable in explaining is 34.8% while the rest is influenced or explained by other variables outside the study.
- Test the hypothesis based on the results of the F (simultaneous) test that Based on table 4.21 obtained a significant value of 0.000 therefore the significant value is less than 0.05 ( $0.000 < 0.005$ ) so it can be concluded that hypothesis 1 which states Product Completeness, Price, Quality of Service, Facilities simultaneously has a significant positive effect on the Purchase Decision Accepted. this is evidenced by the test results P value  $< 0.05$  or F count F table, obtained a significant value of 0.000, therefore the significant value is less than 0.05 ( $0.000 < 0.005$ ).
- Hypothesis test based on t test (partial) Hypothesis two (H2) which says product completeness has a significant positive effect on purchasing decisions, partially Accepted. This is evidenced by the test results that the value of t count is 7.413. Based on the calculation results, it is known that  $t \text{ arithmetic} > t \text{ table}$  is  $7.413 > 1.66023$  with Sig. of 0.000 ( $0.000 < 0.05$ ). Meanwhile (H3), which says that the price has a significant positive effect on the purchase decision, is rejected. This is evidenced by the test results that the value of t count  $< t \text{ table}$  is  $-0.338 > 1.66023$ . With a Sig of 0.669 ( $0.669 > 0.05$ ). Meanwhile (H4), which says that service quality has a significant positive effect on purchasing decisions is rejected. This is evidenced by the test results that the value of t count  $< t \text{ table}$  is  $0.487 > 1.66023$ . With a Sig of 0.627 ( $0.627 > 0.05$ ). Meanwhile (H5), which says that the facility has a significant positive effect on the purchase decision is rejected. This is evidenced by the test results that the value of t count  $< t \text{ table}$  is  $0.008 > 1.66023$ . With a Sig of  $0.994 (0.994 > 0.05)$ .

### B. Suggestion

Based on the conclusions above, in this study the suggestions that need to be considered for Modern and

Traditional Markets in the city of Yogyakarta and researchers who will conduct similar research in the future are as follows :

- Policy Implication  
In the purchasing decision variables proposed in this study, there are indicators that show consumers do not agree with the statements submitted, such as buying stability points, product variants. Prices do not meet standards, service quality is not friendly and facilities are inadequate in traditional markets. Respondents who chose to disagree tended to be the least towards this indicator, at least the traditional market should pay attention and further improve the indicator so that consumers are more interested in buying.

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# Reflection of Indi 4.0 and Covid 19 on SME

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**Abstract**— Research on the Covid 19 Pandemic and its relation to various disciplines has been carried out during the Pandemic period, including those related to economics. However, research that looks at the impact of the Covid 19 Pandemic on the omset of small and medium industries by involving the application of industry 4.0 has not done so. This study aims to reflect on the application of the Industrial Revolution 4.0 and the Covid 19 Pandemic on the omset of Small and Medium Enterprises (SME). The research was conducted on 272 small and medium industries. SME was asked to provide data on asset, capital, industrial application 4.0, and industrial company omset before and during the Covid 19 pandemic. Data were analyzed using SPSS version 23 software tools. Its has a significant effect on omset; there is a significant effect of asset on omset both before and during the pandemic; omset before and during the pandemic the difference is very significant. Conclusion: During the Covid 19 pandemic there was a significant decline in the omset of small and medium industrial companies. Asset no significant effect on omset both before and during the pandemic. The implication is to maintain the survival of small and medium industrial companies, interested parties (the government) make a policy so that the capital of small and medium industrial companies remains stable.

**Keywords**— *the Covid 19 Pandemic, small and medium industries, application of industry 4.0.*

## I. INTRODUCTION

The diffusion of coronavirus (COVID 19) invection disease began in China in December 2019, when the first case was identified in Wuhan province. Since then Covid 19 has spread rapidly around the world, which is why on March 11, 2020 who declared COVID 19 as a pandemic (Vincenzo Alfano & Salvatore Ercolano, 2020). As of October 19, 2020 there were more than 39.94 million people confirmed positive covid 19 and more than 11.11 million people died (covid19. WHO.int).

The COVID 19 pandemic is an outbreak that is now happening in the world as well as in Indonesia. COVID 19 can directly cause death or at least harm human health, including business people. As for the indirect consequences of reduced economic growth. This is due to a decrease in demand and policies issued by the Indonesian government regarding PSBB from February to the present. With the existence of PSBB, many SME were closed and some were not affected. This depends on the type of product marketing,

namely through offline or online. Online sales according to Indonesian policy with the INDI 4.0 strategy

The closure of shops, factories and other businesses was carried out due to lower demand and government policies (PSBB). The closure of these SMIs may be permanent due to inability to pay ongoing costs. The impact on SMIs around the world is likely to be more severe (Fairlie R. W., 2020).

The results showed that working business owners decreased 22% from February to April 2020. African / Americans suffered losses with 41% of business owners temporarily closed in April, followed by Latin business owners who suffered losses of 32% (Amankwah-Amoah, Khan, & Wood, 2020)

Much research has been done on the effect of COVID 19 on SMIs or small businesses, which are generally conducted from April to May. As the research results show, about the initial effect of the corona virus on SME. Employer business applications as measured by the US Census weekly business formation statistics (BFS) fell in 5 weeks from mid-March to April compared to the previous year (Wilmoth, 2020).

SMEs from across the sample of 43% of business owners were temporarily closed, largely pointing to a decrease in demand and employee health problems. In addition to this above COVID 19 has caused a major economic shock, this is reinforced by the results of research showing that the COVID 19 Pandemic has caused massive dislocation among small businesses in the United States by sampling 5800 small businesses (Bartik, Bertrandb, Cullen, Glaeser, & Luca, 2020).

Likewise this research was conducted to analyze the impact of the corona 19 pandemic on SME in Indramayu, West Java, what distinguishes it is that in this study the decrease in demand or closure of SME is not only analyzed from the impact of covid 19 but also analyzed from the implementation of INDI 4.0, especially in terms of IOT.

The purpose of this study was carried out with the assumption that Indonesian industrial policy 4.0 could be understood and had been implemented by SME players. So COVID 19 will not have much effect on the growth and development of SMIs.

The method used is an associative quantitative method using two way ANOVA with SPSS 23 software.

The term industry 4.0 is the 4th industrial revolution which is defined as a new level of organization and control over the entire value chain of the product life cycle; it is geared towards increasingly individualized customer needs (Vaida, Ambad, & Bhosle, 2018).

Based on the Indonesian industry 4.0, the main strategy is the Internet of Things (IOT) initiative. The IoT is defined as the infrastructure of the information society (IOT intel report). IoT allows objects to be sensed or controlled remotely across the existing network infrastructure, creating opportunities for more direct integration from the physical world into the internet system (Fairlie R., 2020)

Formulation of the problem Does the application of INDI 4.0 affect omset before the COVID 19 pandemic and during the COVID 19 pandemic?

## II. LITERATURE REVIEW AND HYPOTHESES

SME continues to grow rapidly, reflecting a very strong interest in understanding the choice of business locations and the implications for regional economic development (neugebauer, Hippmann, leis, & landherr, 2016). The development of SME has actually stopped with the presence of COVID 19

The current COVID 19 pandemic is causing economic disruptions that are adversely affecting global values (GVC), domestic production networks, trade, services and MSMEs, affecting overall growth and well-being (Sahoo & Ashwani, 2020). Indonesia is not unless it feels the economic impact especially on SMEs, due to its limited scale, scope and human resources (Amankwah-Amoah, Khan, & Wood, 2020). Therefore, the right strategy is needed in the handling of economic recovery.

The SMIs of the entire sample 43% of business owners closed temporarily, mostly pointing to falling demand and employee health problems. In addition to the above, COVID 19 has caused a major economic shock, this is confirmed by the results of research showing that the COVID 19 pandemic has caused massive dislocation among small businesses in the United States by taking a sample of 5800 small businesses (Bartik, Bertrandb, Cullen, Glaeser, & Luca, 2020).

Industrial Revolution 4.0 or in Indonesia is known as INDI 4.0 (Indonesia Industri 4.0 readiness Index), being one of the strategies that will be used in Indonesia to accelerate the pace of economic growth that is deteriorating due to COVID 19. Industry 4.0 provides technology that enables increased efficiency and increased production capacity that can help companies achieve greater opportunities (Büchi & Castagnoli, 2018).

The acceleration of SME growth can be accelerated by being introduced on the Internet of Things (IoT) also known as the Internet of Everything (IoE) consisting of the Internet of Service (IoS), Internet of Manufacturing Services (IoMs),

Internet of People (IoP), embedded systems and Integration of Information and Communication technology (IICT) (neugebauer, Hippmann, leis, & landherr, 2016).

One feature of economic growth is the growth of a "platform" economy that contributes to the expansion of the proportion of SMEs, especially younger workers. Platform and IKM jobs are characterized by a more flexible work format, different from the formal employer-employee relationships framed by employment law (Alve & Martins, 2020).

Based on these references, the restrictions in this study include net worth, working capital, SMI sales turnover before and during the COVID 19 pandemic based on the implementation of INDI 4.0.

The fourth industrial revolution, also known as industry 4.0, has provided various innovations that have never existed before in various fields. For entrepreneurs who are known as drivers of innovation and progress in various fields. With linkages, synergy and coordination between the physical and digital fields, INDI 4.0 places business people on changes that will ultimately change the foundations of how business people live through technology. This happens with the adoption of technology in every aspect of human life (Sean Kruger, 2020).

In other words, INDI 4.0 is characterized by increasing digitization and product networks, value chains and business models, topics such as IOT, BigData, digital form plates, AI (artificial intelligence) occupy the business world (Industrial revolution 4.0).

The INDI 4.0 revolution has resulted in various challenges that must be resolved by companies to face management innovation contacts. Management innovation is not only limited to product quality but must further improve the service system. In this study, we suspect asset, capital and the application of INDI 4.0 have an effect on omset before the Covid-19 pandemic which focuses more on the sales system, especially in the field of online services.

## III. RESEARCH METHOD

This research uses a quantitative approach. Five variables are involved, namely asset, omset capital, industry application 4.0, and pandemic period,; while the application of industry 4.0 and the period of pandemic on a nominal scale (implementing and not carrying out INDI 4.0 and before and during pandemi). The sample was randomly taken from 272 small and medium industry financial reports. Based on the characteristics of the data, the hypothesis was tested using a two-way ANOVA technique. asset, omset, and capital are grouped based on the implementation of INDI 4.0 and Pandemic Period. The analysis design is illustrated in Figure.

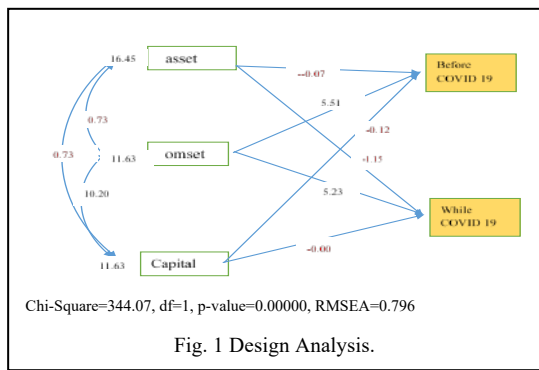


Fig. 1 Design Analysis.

Table I.

		Covid-19 Pandemic	
		Before Pandemic	Pandemic
INDI 4.0	Apply	Asset, Omset, Capital	Asset, Omset, Capital
	Not Apply	Asset, Omset, Capital	Asset, Omset, Capital

IV. DATA AND ANALYSIS

Table 2. Descriptive Statistics

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Capital	272	59,90	,10	60,00	9,2917	9,47085
Omset while Covid 19	272	419,80	,20	420,00	11,4660	31,38612
Omset before Covid 19	272	297,40	,20	297,60	12,4604	28,06373
Aset	272	97,30	,20	97,50	12,9707	12,61649
Valid N (listwise)	272					

Table 3. Homogeneity Test

Levene's Test of Equality of Error Variances<sup>a</sup>  
Dependent Variable: Omset

F	df1	df2	Sig.
,176	3	540	,913

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.<sup>a</sup>

a. Design: Covid19 + asset + Covid19 \* asset

The levene test result is 0.176 with significance / probability (sig) = 0.913. Because the sig value, 913 > 0.05, it can be concluded that the omset variants of the two groups being compared are the same or homogeneous. So, the assumptions to use hypothesis testing analysis using ANOVA have been fulfilled and can proceed to two way ANOVA analysis.

Hypothesis test results :

The first hypothesis: the output value is obtained sig 0.000 < 0.05, so the hypothesis for the effect of Covid 19 on omset is received.

The second hypothesis: the output value is obtained sig 0.747 > 0.05, so the hypothesis for the effect of asset on omset is rejected

The third hypothesis: the sig output value 0.486 > 0.05, so the hypothesis that there is an effect of Covid 19 with sales on omset is rejected.

Table 4. Test of Between Subject Effects

Variable	F	sig	conclusions
Covid 19	43,882	,000	received
Asset	,104	,747	rejected
Covid19 * asset	,487	,486	rejected

Dependent Variable: Omset

CONCLUSIONS, IMPLICATION/LIMITATION AND SUGGESTIONS

When conditioned to work approximately two days a week or four days a week, the losses were greater from February to March 2020 (19% and 21% respectively). Patterns across gender, race and immigrant status reveal a disproportionate impact of COVID 19. African-Americans continue to suffer the biggest losses, eliminating 26% of active business owners (despite an increase from 41% losses in April). Latinos also suffered heavy losses with 19% of business owners disappearing between February and April 2020. Immigrant business owners saw a large drop of 25%.

Of the 72 number of SME in the Indramayu area of West Java, during the COVID 19 pandemic, which experienced an increase omset of 16%, and 20% of the number of SMEs did not experience any change omset, while those that experienced a decrease omset of 64%. In addition, of the 272 number of SMIs that made sales with the online system, 79%, while the remaining 21% made sales using the offline system.

During the Covid 19 pandemic there was a significant decline in the omset of small and medium industrial companies. sales had no significant effect on omset both before and during the pandemic.

The implication is to maintain the survival of small and medium industrial companies, interested parties (the government) make a policy so that the capital of small and medium industrial companies remains stable.

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# Tanjungpinang City Government Strategy in Developing Malay Culture in 2018-2023

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**Abstract**— Tanjungpinang City is the center of Malay culture that must be maintained and preserved. Based on the findings of previous studies that there are many weaknesses and inequalities in the management of culture-based tourism. This has not been seen in the roadmap and strategy of the Tanjungpinang City government in developing Malay culture. The purpose of this study is to analyze the Tanjungpinang City government's strategy in developing Malay culture, design a strategy model for developing Malay culture that is able to play a role in innovation and business management to strengthen the cultural sector and have implications for national tourism. This research will also provide academic and policy benefits. Academically it will contribute to the concept of development strategies, strengthening innovation and social business in the fields of culture and tourism management. This research will also be useful as a development in the field of Government Management and Tourism Management. By policy, it will encourage policy engineering in strengthening and developing the direction of culture-based tourism that has a positive impact on the welfare of the community and the national tourism sector. So, this research is exploratory research and it is hoped that the results can be useful for the Tanjungpinang City Government, especially the Tanjungpinang City Culture and Tourism Office in order to realize Tanjungpinang as a City of Culture and Tourism as well as for the community in improving its economy. For the government's strategy in cultural development, this research includes the dimensions: strengthening cultural institutions, building architecture, the urgency of regional regulations, the process of instilling cultural values, and cultural practices in society. The sample in this study were 5 informants consisting of the Mayor of Tanjungpinang, Head of the Tanjungpinang City Culture and Tourism Office, Head of the Tanjungpinang City Planning, Research and Development Agency, Tanjungpinang City LAM Chair, and Cultural Observers. The sampling technique used by the author in this study is a purposive sampling technique. The data that has been collected through interviews and observations were analyzed by qualitative analysis. The results of the study indicate the need for increased supervision, security and development in the Tanjungpinang City Government's strategy in developing the island of stinging as an icon of cultural tourism. In addition, there are supporting factors and inhibiting factors in this study.

**Keywords**— *Strategy, Cultural Development, Tourism, and Malay.*

## I. INTRODUCTION

The study of culture is currently in the world's spotlight, especially the United Nations Institute which is abbreviated as UN. Through UNESCO, the United Nations gives an appeal to every country to pay attention to the cultural

aspects of its development. This is because culture is the identity or identity of an area. Indonesia has various ethnic groups and regions. This cultural diversity is appreciated and recognized by the state. In the state constitution, namely the 1945 Constitution of the Republic of Indonesia, the cultural vision is very broadly and firmly contained in Article 28I paragraph (3), Article 32 paragraph (1) and paragraph (2). Tanjungpinang City is the capital of the Riau Islands province which has Malay culture as its original culture. Historically, the city of Tanjungpinang was inseparable from the influence of the Malay kingdoms of the past, namely the Riau kingdoms of Johor Lingga and the Bentan Kingdom, at that time the city of Tanjungpinang became the center of the development of the Malay government during the reign of Sultan Badrul Alamsyah.

This historical background makes the Tanjungpinang city government want to maintain and make Malay culture a local culture and become a regional identity. Therefore, the Tanjungpinang city government includes the cultural vision in the Tanjungpinang City Regional Long and Medium Term Development Plan. Although the cultural vision has a strong legal umbrella, namely the Constitution, it has not been supported by the existence of regional regulations governing the development of Malay culture, especially regional regulations regarding the management and maintenance of cultural sites. This causes the implementation to run very slowly. Malay culture should be supported by various cultural development activities such as activities in arts institutions, making Malay crafts and the practice of Malay culture in people's daily lives. First, we will see from the number of registered art studios from 2016 to 2020 there is no growth in the number, which is only about 19 art studios, while the increase in the population cannot be stopped and in 2020 it will reach 219,395 people. This illustrates that the ratio of art studio institutions in the city of Tanjungpinang is relatively low. Second, the increase in the selling price of tajak cloth due to the lack of Malay craftsmen. Third, the rapid flow of modernization has made people's practice and understanding of Malay culture increasingly scratched by the times. Fourth, there is no roadmap and strategy for the Tanjungpinang City government in developing Malay culture. Fifth, the pandemic condition that makes some people no longer attach importance to and ignore the values that exist in Malay culture. A review of the Malay cultural strategy must be carried out periodically by the Tanjungpinang city government in order to achieve the vision as a center of Malay culture in 2023. Then restore trust to the public in the application of the values that exist in Malay culture, especially to overcome the spread of the corona virus as is the saying of people Malay "Kais in the

morning eats breakfast, Kais in the evening eats the evening".

The purpose of this study is to analyze the strategy of the Tanjungpinang City government in developing Malay culture, design a strategy model for developing Malay culture that is able to play a role in innovation and business management to strengthen the cultural sector and have implications for national tourism. This research will also provide academic and policy benefits. Academically it will contribute to the concept of development strategies, strengthening innovation and social business in the fields of culture and tourism. This research will also be useful as an enrichment of teaching materials for Government Management courses that researchers are capable of. Policy-wise, will encourage.

## II. LITERATURE REVIEW

### A. Strategy

According to Rangkuti (Ramadhan & Sofiyah, 2013), strategy is planning in the operation and allocation of important resources to obtain the long-term goals of a company. According to Allison (2013), strategy is the broad overall priority or direction taken by the organization, strategy is also the choices about how best to achieve the organization's mission. David and David (2016:11) say strategy is an activity on a large scale that requires decisions from top management and company resources (Prastiti et al., 2018). Of the three theories, strategy is a collection of plans or actions by management and company resources to achieve the company's long-term goals.

Strategy is also inseparable from strategy formulation, as stated by Mahmudi (2010), the strategy formulation stage is an important stage in the management control process, because mistakes in formulating strategies will result in wrong direction of the organization. For example, if a ship wants to sail from Jakarta to Surabaya, the captain of the ship must direct his ship to Surabaya. Strategies and efforts are focused on achieving the goal, namely to reach Surabaya. If the ship's direction of travel is wrong, the strategy used is not right, the resources are lacking, of course the ship will not arrive at its destination. As with organizations, the first thing to do is determine the direction and goals to be achieved. After the direction and goals are clear, then a strategy is drawn up to achieve those directions and goals.

Determining the basic direction and goals of the organization is a form of strategy formulation. In strategy formulation, the organization formulates the mission, vision, goals, and basic values of the organization. Strategy formulation is an activity to design or create the future. Strategy formulation activities require sharp vision and intuition. People who have sharp vision and intuition can see future realities that go beyond the present. The power of this vision is very influential in determining the greatness of the organization in the future. Osborne and Gaebler (Mahmudi, 2010) state that the power of government organizations that are driven by vision and mission are better than those driven by formal rules. Mahmudi (2010), strategy formulation is a stage of mental, moral, and spiritual development. The next stage deals with physical development, such as programming, budgeting and implementation. The physical development stage will be much easier if the moral, mental, and spiritual are already firmly established. Furthermore,

Burhan (abussamad & amala, 2016) details four characteristics of a strategic plan.

### B. Strategy Management

According to Wheelen and Hunger (2012) Strategic Management is a set of managerial decisions and long-term decision-making actions within the company. This includes environmental analysis (external and internal environment), strategy formulation, strategy implementation, and evaluation and control. According to Glueck and Jauch (Sedarmayanti, 2014), strategic management is a unified, broad and integrated plan that connects the company's strategic advantages with environmental challenges, designed to ensure the main objectives of the company can be achieved through proper implementation by the organization. According to Ketchen (Sedarmayanti, 2014) suggests strategic management as analysis, decisions, decisions, and actions taken by companies to create and maintain competitive advantage. Strategic management (strategic management) is the art and science of planning or formulating, implementing, and evaluating decisions from several functional aspects of the company to obtain long-term goals. The purpose of strategic management is to find and create different new opportunities for long-range planning, instead trying to maximize future trends that refer to current trends (David & David, 2017). In addition, according to Stephen P. Robbins-Mary Coulter (Seputro, 2019) strategic management is a form of action to develop organizational strategies carried out by managers by involving several functions including basic planning, organizing, leading, and controlling.

Strategic management in the company is related to the ongoing processes, namely analysis, decisions, and actions. Strategic management is concerned with how management analyzes strategic objectives (vision, mission, goals) as well as internal and external conditions faced which then results in strategic decisions. So it can be concluded that strategic management is a series of activities for basic and comprehensive decision-making, accompanied by the determination of how the application is made by the government and implemented by all communities in an area in achieving the expected goals. Strategic management is a future-oriented process that enables organizations to make decisions today to position themselves for future success.

In the implementation of local government management there are 5 public policy strategies, namely; (1) Core Strategy, (2) Consequences Strategy, (3) Customer Strategy, (4) Control Strategy, and (5) Culture Strategy . Strategic management has several stages. Every effort to achieve strategic objectives there are 5 important factors that can affect its success, namely:

1. Good coordination between related institutions,
2. Policy-making actors (Leadership),
3. Competence of human resources,
4. Financing, and
5. Facilities and infrastructure.



C. Government Strategy Model Theory

Suwarsono (2012) asserts that there are five major figures in government strategy, namely: John M. Bryson, Paul C. Nutt, Robert W. Backoff, Geoff Mulgan and Mark H. Moore. Where the five figures provide their respective views on government strategy. There are 4 models of government strategy described by the experts above, including:

- a. Bryson's Model of Governance: Conservative
- b. The Nutt and Backoff Model of Governance: Classic
- c. Mulgan's Model of Government Strategy: Progressive
- d. Moore's Model of Government Strategy: Proportional

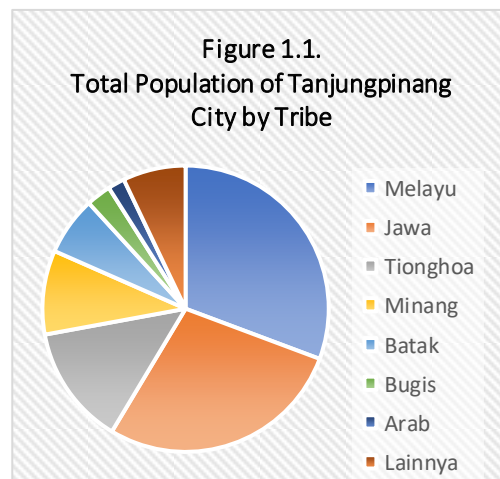
III. RESEARCH METHOD

This research uses exploratory research with a qualitative approach. According to Arikunto (2010) exploratory research is research that seeks to explore the causes or things that influence the occurrence of something. Exploratory research also seeks to explore new knowledge to find out a problem. This study seeks to describe, describe or find out strategies in tourism development in realizing the city of Tanjungpinang as a cultural city. The samples in this study were as many as 5 informants consisting of the Mayor of Tanjungpinang, the Head of the Tanjungpinang City Culture and Tourism Office, the Head of the Planning, Research and Development Agency. Tanjungpinang City Development, Head of LAM Tanjungpinang City, and Cultural Observer. The sampling technique used by the author in this study is non-probability sampling. One of the nonprobability sampling techniques taken by the authors of the purposive sampling technique. The research site is focused on Tanjungpinang..

IV. RESULT

A. Tanjungpinang City Government Strategy in the Development of Malay Culture in 2018-2023.

Becoming the center of Malay culture is one of the goals of the Tanjungpinang city government as stated in the Regional Long-Term Development Plan (RPJPD). Historically, the Tanjungpinang city government wants to maintain and develop Malay culture as a regional identity. The plurality of the people of Tanjungpinang city is increasingly visible from the percentage of ethnic groups consisting of Malay (30.7%), Javanese (27.9%), Chinese (13.5%), Minang (9.5%), Batak (6.6%) , Bugis (2.8%), Arabs (1.9%), and other ethnic groups (7.1%) with a population of 277,663 people in Tanjungpinang City. The percentage of the population by ethnicity is shown in the following figure 1.1.



With the increasing level of pluralism of the urban community, the process of cultural acculturation will be more visible even if there is no proper strategy, it is inevitable that the city of Tanjungpinang will increasingly lose its original regional identity, namely Malay culture. The vision of the city of Tanjungpinang is "Tanjungpinang as an Advanced, Cultured and Prosperous City in Harmony of Diversity of Civil Society". The strategy of developing Malay culture carried out by the Tanjungpinang city government is directed at 3 main elements of culture.

In the span of 2018-2023 there are 2 different leadership periods, namely in 2018-2020 during the leadership of H. Syahrul, S.Pd., while in 2020-now under the leadership of mayor Hj. Rahma, S.IP. In strategic management the planning and implementation processes are the focus of research. The mission of the Tanjungpinang city government related to culture is contained in the third mission, namely developing and preserving the repertoire of local and archipelago culture to create a harmonious, tolerant and diverse community life. The purpose of the development and preservation of local cultural treasures in order to strengthen the identity and identity of the Malay community, the government's target is to increase the preservation of Malay culture. Based on these goals and objectives, the Tanjungpinang city government plans the achievement by using a strategy of increasing love for local wisdom of Malay culture. Therefore, government policies are directed at:

- 1. Development of Malay cultural center
- 2. Organizing a national level Malay cultural arts event

In the implementation of the Malay culture development strategy, it can be seen from table 1.1 regarding the objectives, targets, and indicators of the Tanjungpinang City medium-term targets for 2018-2023, namely.

Table 1.1. Tanjungpinang City Medium Term Targets, Goals, and Indicators for 2018-2023

No	Mission	Goal	Goal Indicator	Target	Target Indicator
1	Develop and preserve local and archipelago cultural treasures to create a	Preserving Malay arts, traditional values and	Percentage of sustainable local arts and culture	Increasing the preservation of Malay	Percentage of sustainable objects,

	harmonious, tolerant and diverse community life	cultural traditions in people's lives		culture	sites and cultural heritage
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Source: RPJMD Kota Tanjungpinang Tahun 2018-2023

Based on these indicators, 5 aspects can be identified that must be analyzed, namely (1) Strengthening cultural institutions, (2) Tanjungpinang city building architecture, (3) Urgency of regional regulations regarding Malay culture, (4) The process of inculcating cultural values and, (5) Cultural practices Malays in society.

The following is an analysis of the discussion of these five aspects:

a. Strengthening Cultural Institutions.

Strengthening the performance of institutions is seen from 2 important things, namely; (1) A sustainable strategy with the government's vision, mission and strategy and (2) Financing for work programs. The continuity of this vision can be seen from the vision of the Tanjungpinang city government which is to Realize Tanjungpinang as a Developed, Cultured and Prosperous City in Harmony of Diversity of Civil Society. This vision is accompanied by a mission, among others.

1. Improving the quality of human resources who are religious, cultured, have a national perspective and are globally competitive;
2. Continuing equitable distribution of infrastructure development, and creating a conducive investment and business climate with an environmental perspective;
3. Develop and preserve local and archipelago cultural treasures to create a harmonious, tolerant and diverse community life in order to support sustainable development;
4. Realizing professional, authoritative, trustworthy, transparent and accountable governance supported by a bureaucratic structure with integrity and competence;
5. Continuing equitable distribution of infrastructure development, and creating a conducive investment and business climate with an environmental perspective.

Based on this vision and mission, we can see that efforts to develop and preserve Malay culture are through the development of tourism destinations with Malay nuances. For this reason, the Tanjungpinang city government synergizes this mission into a cultural development strategy. The Malay Culture Development Strategy by the Tanjungpinang city government is:

1. Formation of Cultural Conservation Awareness Group;
2. Formation of Cultural Conservation Experts;
3. Conducting socialization to the community and art and culture actors;
4. Carry out Malay arts and culture events in Tanjungpinang City;
5. Participate in tourism and cultural exhibitions both at home and abroad;

6. Strengthening knowledge of the apparatus and actors of the tourism industry as well as the community of tourist destinations in the field of culture.

The implementation of this cultural strategy is balanced with adequate funding through the APBD. The portion of the budget for cultural development is around 30% of the total budget given to the service. In addition to the Tanjungpinang city's culture and tourism department, the Tanjungpinang City Malay Customary Institution (LAM) must also be strengthened because this institution functions to foster, develop and implement as well as guard the traditional values of Malay culture. The dualization of traditional institutions in the city of Tanjungpinang, namely the LAM of the Riau Islands Province and the LAM of the city of Tanjungpinang, makes people compare the performance of these two institutions. The Riau Islands LAM is considered by the community to have a greater role in the maintenance and development of Malay culture. A good vision, mission and strategy of a good Tanjungpinang city LAM is not enough if the real manifestation of the existence of LAM's performance and secretariat is not known and even realized by the public. Until 2021, the Tanjungpinang City LAM secretariat building has not been completed. This is one of the reasons why the performance of the Tanjungpinang city LAM seems to be drowned by the existence of the Riau Islands LAM.

b. Tanjungpinang City Building Architecture.

The architecture of the Tanjungpinang city building has not yet been regulated in a regional regulation specifically regarding Malay-characterized buildings. The Mayor of Tanjungpinang has not determined certain buildings to display the architecture of the Tanjungpinang Malay culture. From the data obtained, it is known that there are still many buildings that use existing in Tanjungpinang City that do not yet have Malay architecture in their building designs. Based on the results of the analysis of the study illustrates that the level of concern for Malay architecture is still low and the majority among buildings that apply modern architecture.

c. The Urgency of Regional Regulations Regarding Malay Culture.

So far, the Tanjungpinang city regulation discusses cultural elements, including;

1. Tanjungpinang City Regional Regulation Number 4 of 2005 concerning Building Permits
2. Tanjungpinang City Regional Regulation Number 8 of 2010 concerning Management of Archaeological, Historical, Traditional Values, and Museums.
3. Tanjungpinang City Regional Regulation No. 6 of 2013 concerning Clothing for Civil Servants and Non-Civil Servants in Tanjungpinang City.
4. Tanjungpinang City Regional Regulation Number 8 of 2018 concerning the Management of Penyengat Island Cultural Tourism.
5. Tanjungpinang City Regional Regulation Number 1 of 2019 concerning the Regional Medium-Term Development Plan (RPJMD) of Pekanbaru City for 2018-2023.

6. Tanjungpinang City Regional Regulation Number 3 of 2017 concerning the Tanjungpinang City Long-Term Regional Development Plan (RPJPD) 2005 ± 2025.

The lack of Tanjungpinang city regulations which serve as a guiding instrument for the implementation of performance is assessed by the Tanjungpinang City Government as a form of still limited space for movement for related agencies in carrying out performance in the field of culture. This is because regional regulations are a legal umbrella that will strengthen efforts to implement strategies for the protection, preservation and development of Malay culture.

d. The Process of Implanting Cultural Values.

The progress of a nation can be seen from the growth and development of the education of its people. Law No. 20 of 2003, Article 36 paragraph 3 concerning the National Education System stipulates strategies, programs, and educational policies to be effective and efficient towards quality human education. This regulation provides an opportunity for regions to provide their students with cultural materials through local content curricula. For this reason, the Tanjungpinang city government, especially the Tanjungpinang city education office, has not made local content one of the subjects in formal schools from elementary to middle school levels. The application of these local content subjects in the city of Tanjungpinang is also considered not very effective in influencing the cultivation of Malay cultural values because the lesson hours for this material are only limited to 2 hours a week and the material presented is only in the form of general knowledge about Malay culture and cannot be included in the Dapodik system. So that this also limits the scope of the school's movement in implementing local content learning in addition to the limitations of the teachers themselves.

e. Malay Cultural Practices in Society.

In developing Malay culture, enthusiasm is not only needed from the government, but also the participation of the local community itself. Forms of community participation such as:

1. The use of the Malay language

The use of the Malay language in the city of Tanjungpinang, is increasingly difficult to find. This is evidenced by the use of slang which is more dominant when we are in the market, supermarket, or at the mall. The market is the center of community interaction so that if we want to see what language is used in people's lives, it can be reflected through the market.

2. The use of Malay clothes

In accordance with local regulations, every Friday the use of clothes brackets is used within the city government, civil servants and in the school environment. The use of this clothing is also carried out at every celebration of Tanjungpinang city holidays such as the city's anniversary celebrations and during traditional Malay wedding ceremonies.

3. Participation of Malay arts and crafts studios in Malay cultural events.

In 2021 there will be around 24 registered art studios and 1 regional art council that concentrates on preserving Malay crafts. The studios are involved by the

government in every implementation of cultural and tourism events. This community participation does not only participate in events sponsored by the government but also participates in initiating activities with cultural elements such as (1) Election of tourism ambassadors and language ambassadors and (2) holding folk art performances featuring Malay dances, Malay songs, Malay music, kompong, tambourines as well as reading poetry and gurindam.

B. *Analysis of Factors Affecting the Development of Malay Culture in Tanjungpinang City.*

In achieving a strategy, local governments must pay attention to several factors that can affect its achievement. These factors include: (1) Leadership, (2) Coordination of related institutions, (3) Competence of human resources, (4) Financing, (5) Facilities and infrastructure. The leadership of a regional head becomes a determining factor for the achievement of government goals. The focus of a mayor's leadership makes almost all aspects of development directed to achieving that focus. During the 2018-2023 period, there were 2 different mayoral leaderships in 1 term, with different government focuses.

During his tenure, the focus of the leadership of H. Syahrul, S.Pd. are the education and health sectors as well as local tourism. While the mayor Hj. Rahma, S.Pd focuses his government leadership on handling COVID-19. Although the focus of the leadership of the two mayors is not focused on achieving the center of Malay culture, the strategy to move towards achieving that goal still exists. Through strategic planning to achieve the leadership vision of the two mayors, they pay attention to cultural development through development strategies. To achieve this vision in the field of culture, the government appointed the Tanjungpinang City Culture and Tourism Office as the OPD which will be responsible for the implementation of government planning. The responsible OPD, namely the Pekanbaru City Culture and Tourism Office, coordinates efforts to carry out the city government's strategy to achieve its vision as a center of Malay culture. That form of coordination is like:

1. In order to synchronize the planning of the service with the planning of the local government, the service shall coordinate with the planning, research and development agency of the City of Tanjungpinang in formulating the strategic plan.
2. For the cultivation of Malay cultural values, the Department of Culture and Tourism cooperates with the Department of Education and the Department of Industry and Trade. This pattern of inculcating Malay values includes teaching Malay writing, knowledge about Malay culture, both Malay customs, Malay specialties, and Malay clothes. In addition, schools in Tanjungpinang also teach Malay dances, games and songs.
3. To organize Malay cultural events, the Department of Culture and Tourism cooperates with the Malay Traditional Institute of Tanjungpinang City and Malay art studios.
4. To maintain the preservation of Malay handicrafts and develop the potential of craftsmen, it is carried

out by the deskranasda of the city of Tanjungpinang and the province of the Riau Islands.

5. Meanwhile, to protect the studios and to collect data on Malay cultural sites, it is carried out by the cultural and tourism service itself.

In addition to leadership and coordination factors, government support for culture is very much needed. Support in terms of financing is a form of government's seriousness in participating in developing local culture. Without this financing factor, a work program that has been prepared by the OPD will not run optimally. Funding for these budget posts certainly has urgency in achieving goals optimally. To see the seriousness of this government, the researchers analyzed the existing financing for the Tanjungpinang city government. The following is the realization of the Tanjungpinang City government activity program in realizing its 3rd mission, which is illustrated through a list of program realizations and activities in 2020 listed in accordance with the Tanjungpinang City Government Performance Report 2020.

Table 1.2.

Realization of Programs and Activities Per Year 2020

No	Program Kegiatan	Keuangan		%
		Target	Realisasi	
1	Festival Pulau Penyangat	Rp2.265.173.050	Rp590.651.600,00	26,08%
2	Pelaksanaan Festival Moon Cake	Rp554.887.700	Rp141.093.500,00	25,43%
3	Festival Imlek	Rp786.353.600	Rp247.983.300,00	31,54%
4	Semarak Seni APEKSI	Rp165.996.500	Rp161.798.150,00	97,47%
5	Gebyar Budaya APEKSI	Rp250.540.500	Rp250.484.510,00	99,98%
6	Festival Budaya dan Etnis Nusantara	Rp430.824.300	Rp170.110.800,00	39,48%
7	Festival Permainan Tradisi	Rp310.000.000	Rp57.472.250,00	18,54%
8	Tanjungpinang International Dragon Boat	Rp3.413.892.800	Rp934.555.570,00	27,38%
9	Partisipasi Mengikuti Pameran Promosi Wisata di Dalam Daerah	Rp580.040.000	Rp260.540.309,00	44,92%
10	Pekan Aksi Kreatif Tanjungpinang	Rp1.291.504.150	Rp421.139.257,00	32,61%
11	Festival Karya Musik	Rp690.434.919	Rp152.473.950,00	22,08%
12	Coffe Shop Festival	Rp94.461.260	Rp88.193.600,00	93,36%
13	Festival Gerhana Matahari Cincin	Rp199.540.000	Rp229.876.620,00	115,20%
14	Pendukung pengelolaan museum dan taman budaya di daerah	Rp1.331.948.800,00	Rp382.849.918,00	28,74%
15	Pengamanan Situs Sejarah dan Cagar Budaya di Kota Tanjungpinang	Rp1.348.362.240,00	Rp532.610.890,00	39,50%
16	Pengembangan Fasilitas Sarana Pendukung dan Pengamanan Museum Kota TPI	Rp901.414.296,00	Rp197.780.000,00	21,94%
17	Pembentukan Tenaga Ahli Cagar Budaya (TACB) Kota Tanjungpinang	Rp115.622.800,00	Rp60.359.750,00	52,20%
18	Pembentukan Kelompok Sadar Lestari Cagar Budaya	Rp115.363.800,00	Rp112.986.250,00	97,94%

19	Bantuan Operasional Penyelenggaraan (BOP) Museum	Rp1.188.871.000,00	Rp479.472.851,00	40,33%
20	Pelaksanaan Acara Pendukung Museum	Rp873.150.000,00	Rp317.688.700,00	36,38%
21	Pengadaan Sarana dan Prasarana Pendukung Pengelolaan Cagar Budaya	Rp350.000.000,00	Rp199.316.000,00	56,95%
22	Revitalisasi gedung kantor museum Kota Tanjungpinang	Rp326.000.000,00	Rp215.143.000,00	65,99%
23	Rehab Gazebo dan Penataan Ruang Audio Visual di Museum Kota Tanjungpinang	Rp113.000.000,00	Rp107.131.000,00	94,81%
24	Penataan Taman dan Kids Corner di Museum Kota Tanjungpinang	Rp170.000.000,00	Rp168.852.000,00	99,32%
25	Rehab Gedung Store Museum Kota Tanjungpinang	Rp205.000.000,00	Rp203.517.000,00	99,28%
26	Pembuatan Video Profil Cagar Budaya Kota Tanjungpinang	Rp367.500.000,00	Rp256.850.000,00	69,89%

Source: LAKIP Pemerintah Kota Tanjungpinang Tahun 2020

The researcher identified several important financing posts, such as the post for improving the quality of OPD human resources and the post for developing work programs. The following is an analysis of the financing:

1. The budget post to improve the quality of human resources carried out by the Tanjungpinang city government does not reflect a quality improvement program because the existing work program only focuses on formation. However, there is no one training program in which at least it does not have to contain technical knowledge of implementing laws and regulations. Based on these data, the competence of human resources is the most worrying factor for the implementation of cultural development in the city of Tanjungpinang.

2. From the budget post, it can be seen that the government has not been able to fully realize 100% of the activities carried out by the district. This shows the lack of seriousness of the Tanjungpinang city government in developing Malay culture through various activities. Of the 26 budget posts for the program activities for the development of Malay culture, only 1 program was realized 100 percent and 7 programs were realized up to 90% of the budget, the rest were mostly under 50%. This is what causes the ineffective performance of the Tanjungpinang City government in realizing its 3rd mission related to the development of Malay culture.

In addition to financing, the availability of adequate facilities and infrastructure with good quality, is needed by every organization in carrying out its activities to achieve the expected goals. Facilities and infrastructure can be in the form of office facilities, capital facilities in the form of physical objects or secretarial buildings. In terms of financing, OPD infrastructure facilities have received a decent portion. However, the provision of infrastructure should not only focus on the related OPD but also other institutions such as LAM, art studios and creative economy actors engaged in culture because these institutions also play a role in achieving the strategy of developing Malay culture in the city of Tanjungpinang.

## V. DISCUSSION & CONCLUSION

Based on the description of the analysis and discussion that has been presented, it can be concluded that :

1. During the span of 2018-2023 the Tanjungpinang city government has experienced 2 periods of leadership changes and this has an effect on its Malay culture development strategy because the perspectives of each regional head in achieving the vision, mission and strategy are also different. In addition, the focus of the leadership of each regional head has not been much realized for the development of Malay culture as the main goal of government performance.
2. In the process of developing a strategy for Malay culture, it is carried out by the Department of Culture and Tourism of the City of Tanjungpinang. So far, the OPD has coordinated with several related institutions, both formal institutions such as the planning, research and development agency (Bappelitbang), and the education office or informal institutions such as the Malay Traditional Institute of Tanjungpinang city and the Deskransada of Tanjungpinang city as well as registered art studios. . However, the coordination carried out by the OPD is still not optimal because so far the larger part is still in the form of socialization for participation in cultural events organized by the Tanjungpinang city government.
3. Competence of human resources is the weakest factor to date, whether it is resources that come from the government or from the community. The competence of human resources who are still not competent is recognized by the Tanjungpinang City Culture and Tourism Office as the main factor that causes the Malay cultural heritage site to still be in Other Districts. Riau Islands Province.
4. In terms of financing, the researcher assesses that the amount of budget received and issued by the government has not reached a maximum of 100%.
5. In terms of facilities and infrastructure provided by the government to art studios and craftsmen, it is still not optimal. In addition, the facilities and infrastructure for inculcating Malay cultural values carried out by the school are still not sufficient to give the effect of love for Malay culture. Therefore, by looking at the achievements of the city government with its Malay cultural strategy so far, the researchers are pessimistic about the achievement of the Tanjungpinang city's vision, namely "Realizing Tanjungpinang as a Developed, Cultured and Prosperous City in Harmony of Diversity of Civil Society" if the government does not carry out a meaningful focus on this cultural field. .

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# THE ADVANTAGES OF VOCATIONAL EDUCATION IN THE INDUSTRIAL REVOLUTION ERA 4.0

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**Abstract**— The presence of communication technology and digitalization with the characteristics of all work being done quickly, precisely and accurately is the driving force for the industrial revolution 4.0 which has an impact on various sectors including in the field of higher vocational education. This paper aims to: (1) describe the characteristics of current Vocational Education; (2) describe the characteristics of the excellence of Vocational Education in the Industrial Revolution Era 4.0

This paper identifies the characteristics of the superiority of vocational education through literature study, documentation and various relevant studies. Analysis technique by analyzing various theories, documentation and previous research.

The results of the analysis show that (1) the characteristics of Vocational Education currently consist of activities: (a) equipping graduates with applied skills who are technologically literate, flexible and skilled in line with the world of work (b) equip graduates with non-technical skills, (c) the proportion of learning vocational 60% practice and 40% theory, (d) use equipment that is as close to reality as possible in the workplace, (e) 50% of teachers come from practitioners and 50% from academics, (f) teachers have experience in the field of work, (g) student final works are not only research papers, but real products, (h) produce graduates who can become strong independent entrepreneurs, (i) build cooperation in link and match, triple helical or pentahelic. (2) The characteristics of the excellence of vocational education in the 4.0 industrial revolution era equip students with: (a) soft skills and technical skills (b) high-level thinking/analyzing skills, and flexibility in the scientific field (c) Skilled in technology and social fields, (d) Skilled in complex problem solving, critical thinking, creativity, managing people, coordinating with others, having emotional intelligence, judgment and decision making, service orientation, negotiation, cognitive flexibility, (e) Expert in the fields of: programming, web designing, technical-network engineering, government digital services, and other future professions (f) possessing global citizenship skills, innovation and creativity skills, technology skills, interpersonal skills, personalized and self-paced learning, accessible and inclusive learning, problem-based and collaborative learning, lifelong and student-driven learning

**Keywords:** *Characteristics, Excellence in Vocational Education, Industrial Revolution 4.0*

## I. INTRODUCTION

The survey on Public Interest in Vocational Education with 500 respondents can be concluded that public interest in vocational education is quite high. As many as 78.6% of respondents are interested in continuing their education to vocational colleges. Some of the factors of interest in vocational higher education are: (1) good job prospects 68.7%, (2) short study 46.1%, and 41.7% are considered to be able to work immediately after graduation. (Kompas, April 12, 2021). Based on the results of the survey, it can be identified that people are interested in studying at vocational colleges with the main reason getting a good job, therefore these findings can be used as a guide in developing vocational education in producing graduates who are able to adjust the demands of work according to their times, including in the era of globalization. industrial revolution 4.0.

Herold, (2016) stated that we are currently in the midst of the Industry 4.0 revolution, which integrates technological advances in every aspect of life as well as smart system automation used for the entire production cycle from start to finish in the business value chain. This shows that smart system automation in all sectors encourages business actors to choose and determine the use of technology and a workforce that is able to adapt to the demands of technological developments.

Das, et.al (2019) stated that automation technology is changing the workplace, providing significant opportunities for countries and companies to increase productivity and growth efficiently. This means that with this automation technology workers can carry out their duties not at work but can do it at home or from anywhere connected to the company so as to increase company productivity. In addition, this automation will replace human / human labor with machines and even be able to change many jobs.

In adjusting to this very fast technological development, it is necessary to develop Human Resources (HR) through education as one of the strategies to increase productivity and competitiveness of the industrial sector. Through this development, it is hoped that it will be able to produce competent human resources, master technology as needed and be able to

increase the competitiveness of the national industry. One way to improve the competence of human resources can be taken through formal education in Vocational Education.

Vocational education is a higher education that prepares students to have jobs with certain applied skills, a maximum equivalent to a bachelor's program (Law No. 20 of 2003). In line with this understanding, the Director General of Vocational Education (2020) states that Vocational Education is a learning process that prepares students to enter the workforce after completing their studies. This shows that the main purpose of organizing this education is to prepare students so that their graduates have jobs either independently as entrepreneurs or as start-ups as well as to fill existing job opportunities according to their expertise at both Diploma Three and Diploma Four (Applied Bachelor) levels.

Germany has the advantage of the Vocational Education system, by directing students to practical learning in companies, as well as receiving lessons at school one or two days a week. After graduating from one program (eg two years) a similar vocational program can be continued to the next, longer stage. Knowledge, skills and abilities that have been obtained by students can be recognized as initial competencies. In addition to the regular program the provisions of Vocational Education can provide additional qualifications taught by the company specifically tested, and given a certificate. With this program, competent interns can continue their careers after completing vocational education. In addition, Vocational Education also applies continuous education which is supported by a dual system and applies nationally.

Brojonegoro, (2019) stated that the implementation of vocational education in Indonesia is considered not optimal. The quality of Polytechnic graduates is not always able to meet the qualifications of labor providers so that there are still many unemployed. This can happen because of several things including, (1) prospective workers who are not competent because the curriculum is not in sync with the industry. (2) lack of practice (3) limited opportunities for self-development during internships, (4) inadequate quality of teachers or trainers.

In addition, lecturers and/or trainers are required to master technology as stated by Makarim, (2019) the focus of this technology is to work and live a better life. Technology is to improve, enhance, increase capacity, not to replace, not to replace habits. In this case, the mastery of technology is very important to improve the competence of lecturers in vocational education.

Mulianti and Ambiyar (2018) state that several factors that directly affect the productivity of

Vocational Education include managerial (leadership) by 64% and learning process (learning process) by 36%. It was also found that factors that indirectly influence vocational education are academic atmosphere (academic atmosphere) by 17%, lecturer competence (lecturer competence) by 23%, learning system by 17%. This shows that the main determinant of the success of Vocational Education is the leadership factor, which is 64%. The leadership applied is able to bring the institution to achieve the goal of producing quality graduates and being absorbed in the job market or able to work independently as entrepreneurs/entrepreneurs. The Indonesian development 2020-2024 is aimed at forming quality and competitive human resources, namely human resources who healthy and intelligent, adaptive, innovative, skilled, and with character. (Presidential Regulation No. 18 of 2020). The strategies that will be carried out include digital-based training and counseling as well as strengthening Vocational Education.

From various exposures to problems regarding vocational education, this paper aims to: (1) describe the characteristics of Vocational Education, (2) describe the advantages of Vocational Education in the Industrial Revolution Era 4.0. The writing is expected to contribute ideas in enriching the concept of management of vocational education which can be further developed and can add to the characteristics of progress in Vocational Education in the era of the industrial revolution 4.0.

## II. DISSUSSION

### a. Definition of Industrial Revolution 4.0

Schwab, (2016) states that revolution shows a sudden and radical change. Revolutions have occurred throughout history when new technologies and new ways of triggering major changes in economic systems and social structures. The Industrial Revolution 1.0 occurred in 1780 marked by the invention of the steam engine, the use of hydropower and the use of mechanical equipment in production. The Industrial Revolution 2.0, which took place in 1870, was driven by the advent of electricity and automation of production. The industrial revolution 3.0 in the 1960s was called the computer revolution. Shocking and radical changes occur in the field of technology that have an impact on changes in the economic system and social structure. New technology gives birth to new ways of producing goods and services that occur in the industrial or manufacturing world which have a major impact on changes in the structure of the workforce in the industry.

In line with Schawb's opinion, Gleason, (2018) states that the Industrial Revolution began with the first Industrial Revolution (RI.1.0) which occurred in

the 1780s with the discovery of steam power making humans more productive. Then in the 1870s came the second Industrial Revolution (RI 2.0) with the development of mass production and electrical energy. Furthermore, the third Industrial Revolution (RI.3.0) was marked by the development of information technology and electronics, which enabled more efficient production. The issue of the fourth Industrial Revolution (RI 4.0) emerged from the German manufacturing industry in the early 2000s. Furthermore, it is explained that the industrial revolution 4.0 is a system that integrates the online world with production in the industrial world. The following is an overview of the developments in the industrial revolution.

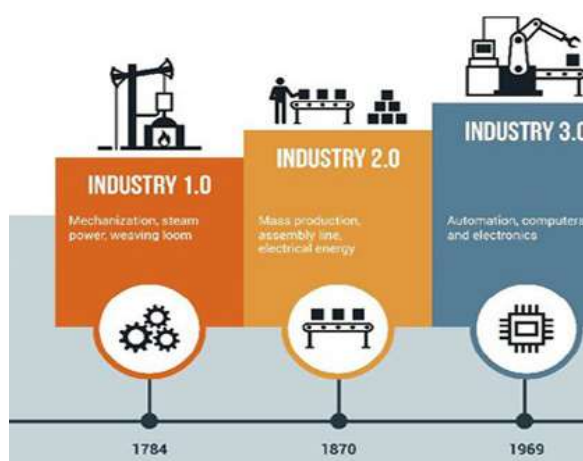


Figure 1: Development of the Industrial Revolution 4.0

Source :Gleason 2018

The Industrial Revolution 4.0 is a change in the mechanism for the production of goods and services marked by: the use of the Internet of Things (IoT), big data, industrial automation, Cloud Computing to artificial intelligence (Artificial Intelligence).

Internet of Things is a program where an object has the ability to transmit data over a network without using the help of computer and human devices such as light sensors to reduce the use of electrical energy, when there is a lot of light, the lights will turn off and when there is no light supply, the lights will turn off. turn on automatically.

Big Data is any data set (data set) in a very large, complex, and unstructured amount that makes it difficult to handle if only using ordinary database management tools or traditional data processing applications. Examples of Google

search index and Amazon.com product listings. and there are others.

Industrial Automation is a technology related to the application of mechanical, electronic and computer-based information systems to operate and control production. Industrial automation is implemented as an effort to provide superior and high quality products or services at low costs.

Cloud Computing is the process of processing computing power through the internet network which has a function to be able to run programs through computers that have been connected to each other at the same time. This system makes it easy to use in running programs without installing an application first and makes it easier for users to access data and information via the internet. For example Google Drive

Artificial Intelligence (AI) is an invention that can provide the ability for any technology or machine to think by collecting various data, installing networks, and developing algorithms from artificial intelligence. Adani (2020) gives an example of this AI, which is a robot waiter in a Japanese restaurant that is able to think like a real human.

Moerdijjat, (2020) stated that with the trend of digitization and automation, there will be changes in jobs/roles and shifts in skills, in 2022 at least 10 jobs can be automated and 10 new jobs emerge and are needed. With this automation work can be done faster, improving quality and flexibility in the manufacturing process/production process. Therefore there are jobs lost because they are replaced by machines. But there are new jobs that are emerging as challenges from the advent of automation.

This change has seen many benefits but can also cause public problems such as the polemic of online transportation issues, the threat of e-commerce to conventional stores and the large number of human workers being replaced by machines, all of which are challenges faced in the Industrial Revolution Era 4.0. Global workforce transition 2030, McKinsey in the Ministry of Research, Technology and Higher Education (2018) stated that due to the emergence of disruption and innovation that causes jobs to be replaced with automatic/Artificial Intelligence (AI). This statement is a challenge for workers or job hunters and business actors are required to be able to adapt to this automation so as not to lag behind progress in the industrial sector.

According to the opinion (Schwab, 2016; Gleason, 2018; Kemenristekdikti, 2018; Moerdijjat, 2020) it can be concluded that the Industrial Revolution 4.0 occurred because of technological



developments that occurred in the industrial world. In general, the world of goods and services industry has implemented new technologies marked by: the use of the Internet of Things (IoT), big data, automation, robotics, Cloud Computing to artificial intelligence (Artificial Intelligence) so that digitalization and automation trends emerge which have an impact on reducing the need for energy, human work, even the loss of work because it is replaced by machines that have a capacity that is unmatched by human labor.

## **b. Industrial Revolution 4.0 in Higher Education**

The Industrial Revolution 4.0 emerged along with technological developments that occurred in the industrial world from the previous revolution that had an impact on the economic and social fields, marked by increased connectivity, interaction and boundaries between humans, machines and other resources which were increasingly narrowing through information and communication technology and occurred a big leap in technology for the industrial sector by optimally utilizing information and communication technology. In addition, it also occurs throughout the industrial value chain, giving birth to a new digital-based business model in order to achieve high efficiency and better product quality.

Technological developments that occur in the industrial world today are starting to have an impact on the world of education in general and especially in higher education. In the Law on Higher Education it is stated that Higher Education is a level of education after secondary education which includes diploma programs, undergraduate programs, master programs, doctoral programs, and professional programs, as well as specialist programs, organized by universities based on Indonesian culture. (Law of the Republic of Indonesia Number 2, 2012). Through this higher education, preparation of the workforce needed in the industrial world is carried out, therefore higher education is required to be able to adapt to technological advances in the Industrial Revolution Era 4.0.

Higher education institutions as labor providers are required to prepare students to be accepted in a rapidly changing and technology-based industrial world. Therefore, digitization occurs in the world of education including the concept of digital learning, digital libraries, online courses, e-books, e-questionnaires and even student academic services from the manual system are now replaced by applications. Higher education strives to meet the needs of students by providing

provisions in accordance with the demands of the industrial world.

Nizam, (2021) stated that McKinsey predicts that in the next 10 years there will be 23 million jobs in Indonesia that will be replaced by automation, most of which come from college graduates. While the work to be entered, disappears in time the longer the faster. In responding to information and the current situation, higher education is immediately prepared to equip its students with the skills needed and smart to adapt to the demands of technological advances.

## **2. Vocational Education**

### **a. Definition of Vocational Education**

In the Law on the National Education System, it is stated that educational programs in higher education include academic education at the undergraduate, master, and doctoral levels, professional or specialist education and vocational education at the diploma, applied bachelor, applied master and applied doctoral levels (Law No. 20 of 2003). Academic education is a higher education system that is directed at mastering and developing certain disciplines of science, technology, and art which includes undergraduate (S1), master or master (S2) and doctoral (S3) education programs.

In Article 16 Paragraph 1 of Law Number 12 of 2012 concerning Higher Education it is stated that Vocational Education is a diploma program Higher Education that prepares students for jobs with certain applied skills up to applied undergraduate programs. The diploma program includes diploma I (D1), diploma II (D2), diploma III (D3) and Diploma IV (D4) when graduating to get a Vocational degree, such as; Primary Expert (A.P) Junior Expert (A.Ma) Associate Expert (A.Md) Applied Bachelor (S.Tr).

Vocational education is a higher education that prepares students to have jobs with certain applied skills up to the equivalent of a bachelor's program. Vocational Education is a formal education pathway held in higher education, such as: Academy, Polytechnic, College, Institute and University. Thus, Vocational Education is the implementation of educational programs that are closely related to employment at the higher education level. In Vocational Education, it is very important that students have special skills in the field they are involved in. Vocational Education emphasizes structured learning with expertise, the curriculum includes scientific learning content, skills and field work practices.

So many educational institutions open the same study program therefore there can be an imbalance between the supply and demand of the

labor market. In addition, prospective students who study in Vocational Education usually do not have a strong interest or are not the main choice, but enter Vocational Education because they are not accepted in the non-Vocational Academic Undergraduate Program. As stated by Sakarinto, (2021) that most of the D3 students in Indonesia choose to enter the D3 (vocational) Study Program because they are not accepted in the S1 (Academic) Study Program so that D3 studies are not with passion.

### **b. Characteristics of Vocational Education**

Vocational Education Institutions partner with companies and industry because learning is not only carried out on campus but also in companies, with the aim that students are able to work skillfully when needed by companies and the government. In the current development of the industrial world, graduates of vocational colleges are needed for their roles in various sectors, especially the economic and business sectors. The contribution of graduates who have expertise can accelerate economic and industrial growth.

If we look at the developed countries, it turns out that the ratio of education is higher for Vocational Education compared to academic education and its role is real in achieving progress. Germany for example. Vocational education in Germany has been proven to support industrial/enterprise progress and the resilience of the German economy. Until now, references are still used in the implementation of Vocational Education with the characteristic of link and match. Building cooperation between the world of Vocational Education and the industrial world which is currently developing cooperation in the triple helix to the penta helical cooperation.

Many companies tend to choose Vocational Education graduates who have mastered practical skills, because they are considered more work-ready, the higher the demand for graduates by industry. The hallmark of vocational universities is that they can produce graduates who are professional in their fields, able to compete in the world of work. According to Slamet, (2017) Vocational Education is important because Indonesia requires a skilled, technologically literate, flexible and skilled workforce that is in harmony with the highly turbulent world of work both as employees and entrepreneurs.

Vocational Education is closely related to entrepreneurship because Vocational Education is able to create a skilled, skilled and expert workforce and plays an important role in

determining the level of quality and production costs, marketing products and is needed to support the industrialization growth of a country. Workers who have technological advantages have a high chance to work and be productive, thereby strengthening the country's economy and reducing unemployment.

Vocational Education is required to learn quickly in collaboration with industry and recognize new competencies required by industry through the use of various data. In addition, educators are able to develop their own skills including managing student data, career guidance through the use of big data, so that educators and students can quickly adapt to changes. Educators are immediately able to respond to changes that occur, their role is in conveying knowledge as well as acting as a companion to discover and develop student potential through independent study to provide quality Human Resources (HR).

Hartarto (2019) stated that human resources are important to achieve the successful implementation of Making Indonesia 4.0. plans to overhaul the education curriculum with more emphasis on Science, Technology, Engineering, the Arts, and Mathematics (STEAM), as well as improve the quality of vocational schools. This is further strengthened by the Director General of Vocational Education, (2021) that several aspects of non-technical skills needed by today's graduates such as communication, leadership, and collaboration skills, with the proportion of vocational learning 60% practical and 40% theory. Therefore, it is the leadership of the vocational campus to ensure that the output of the campus is not only research papers, but real products.

Gardiner et al (2017) state that the world of work requires workers who have practical knowledge and skills, so that they can immediately carry out their duties. Therefore, universities also need to produce personnel who have these qualifications. Vocational education needs to be developed and the teachers should be taken from those who have have experience in the workplace.

This shows that Vocational Education is required to prepare a workforce that is ready to work with qualifications in accordance with the industrial world. Therefore, lecturers in Vocational Education should come from practitioners who have had work experience, this is in accordance with the statement of the Ministry of Research, Technology and Higher Education (2020) that fifty percent of teachers in Vocational Education come from practitioners and fifty percent from academics.

Next for the proportion of teaching materials Gardiner et al. (2017) suggested that the portion of skills training in Vocational Education should be larger than the portion of academic lectures, using equipment that is as close as possible to the reality of the workplace (Teaching Vactory). This is in accordance with the first Prosser theory which states that Vocational

Vocational Education graduates are directed to master in certain fields of work so that they can be directly absorbed as workers by industry, or the private sector, government institutions, or self-employed. The core of teaching in the Vocational Education program prioritizes skills and expertise compared to theoretical lectures. Of course, teaching facilities and applied skills have been included with digitalization skills according to the digital trend that is currently taking place under the leadership he has implemented.

According to (Slamet, 2017; Gardiner et al. 2017; Hartarto, 2019; Kemenristekdikti, 2020; Director General of Vocational Education, 2021) Vocational education can produce graduates who are professional in their fields and can compete in the world of work both as employees and as business actors. Education requires a learning environment that resembles the world of work and equipment according to the needs of carrying out work in the world of work.

### c. The Advantages of Vocational Education in the Industrial Revolution 4.0

The journey of Vocational Education is currently entering an era marked by incessant technological innovation, therefore adjustments are needed that are in line with the demands of the world of work and society. Vocational education is able to explore all its potential into abilities that can be utilized in everyday life for the wider community.

In the industrial revolution 4.0, superior human resources are needed. According to Pangestu, (2019) the resources have ten skills, namely skilled in: complex problem solving, critical thinking, creativity, people management, coordination with others, emotional intelligence, judgment and decision making, service orientation, negotiation, cognitive flexibility. Therefore, the challenge for Vocational Education is to prepare its students to play an active role in the industrial revolution 4.0.

Akbari (2019) stated that by 2030, Indonesia needs 17 million “high tech millennials” or young people with super-sophisticated technological abilities. They are experts in programming, web designing, technical-network engineering,

government digital services, and other future professions. This condition is a challenge for Vocational Education to be able to prepare its graduates to be absorbed in the job market by equipping them with skills, competencies, work ethic, and good character (soft skills).

Harold, (2019) states that there are four main characteristics in the 4.0 industrial revolution, namely: vertical integration, horizontal integration, integration through engineering, and technology integration. This vertical integration results in increased connectivity in a sophisticated manufacturing network, which allows factory to factory to react quickly and appropriately to various things, such as high demand, stock levels, product defects and unexpected delays. Horizontal integration facilitates networks that create and add value, for example business partners and customers around the world. Integration through engineering is a unique aspect that focuses on the entire chain, in business no longer only looks at the aspect of the production process, but focuses more on the production process from start to finish and even delivery. The integration of this technology requires the industry to be able to collect and analyze consumer data to understand the consumer market, production of the number, quantity, and style of shoes that are suitable.

The presence of RI 4.0 also has an impact on the field of work, meaning that a person's success at work is not enough if he is only good at technical fields, but workers are also required to be skilled in non-technical fields (soft skills), including being able to handle the complexity of problems that arise in their work. Soft skills are very influential on a person's success, with textual skills (hard skills) of course not enough in the world of work. Research conducted by Harvard University, Carnegie Foundation and Stanford Research Center, United States states that “soft skills are responsible for 85% of a person's career success, while only 15% are pinned on hard skills. This is confirmed by a study conducted by the Indonesian Ministry of National Education in 2009, which stated that “a person's success in education is 85% determined by Soft Skills.

Neff and Citrin in Sailah, (2013) stated that the ratio of the need for soft skills and hard skills in the world of work/business is inversely proportional to their development in universities. The findings show that what brings or maintains people in success in the workplace, 80% is determined by the mind set/soft skills they have and 20% is determined by technical skills. It was further stated that in our current college/education system, soft skills are only given an average of

10% in the curriculum. Therefore, a way is sought so that the educational process can synergize between soft skills and hard skills well, while the number of student credit units is quite a lot.

Furthermore (Gardner, et al. 2017) states that students as users of Vocational Education services should be provided with optimal services that make students survive and excel, namely the ability to think at a higher level (analytical ability), the ability to solve complex problems, and the ability to be flexible in the scientific field. . This opinion also shows that Vocational Education in the Industrial Revolution Era 4.0 must equip students with soft skills with the aim of being able to survive and excel in the world of work and be adaptive in facing the development of community needs.

This fully automated Industrial Revolution 4.0 era requires new skills, not only skilled in technical fields but also skilled in non-technical aspects. Das, et.al. (2019) states that new skills will be needed for the era of automation including technological, social and emotional skills as well as higher cognitive skills such as creativity and problem solving skills.

In this era, Vocational Education is challenged to be able to meet the needs of the business world because there have been major changes driven by technological developments. In (World Economic Forum, 2020) it is stated that there are eight characteristics of high quality education/learning in the Industrial Revolution Era 4.0, namely; (1) Global citizenship skills. (2) Innovation and creativity skills, (3) Technology skills: (4) Interpersonal skills, (5) Personalized and self-paced learning, (6) Accessible and inclusive learning, (7) Problem-based and collaborative learning: (8 ) Lifelong and student-driven learning.

These eight characteristics can be described that Vocational Education includes educational content by: (1) focusing on building awareness about the wider world, sustainability, and playing an active role in the global community. (2) cultivate the skills necessary for innovation, including complex problem solving, analytical thinking, creativity, and systems analysis. (3) development of digital skills, including programming, digital responsibility, and use of technology. (4). focus on interpersonal emotional intelligence, including empathy, cooperation, negotiation, leadership, and social awareness. (5) Move from a system where learning is standardized, to a system that is based on the diverse individual needs of each learner, and is flexible enough to allow each learner to progress at their own pace. (6). everyone has access to learning and is therefore inclusive. (7). requires co-

worker collaboration and more closely reflects the future of work. (8) everyone continues to improve existing skills and acquire new ones based on their individual needs.

Based on the opinion of Sailah, (2013; Gardner et al, 2017; Akbari, 2019; Harold, 2019; Das, et.al., 2019; Pangestu, 2019, and World Economic Forum, 2020) it can be concluded that Vocational Education in the Era of the Industrial Revolution 4.0 able to prepare superior human resources, namely having technical skills (hard skills) as well as non-technical skills (soft skills). This means that Vocational Education is able to produce graduates who are able to: complex problem solving, critical thinking, creativity, people management, coordination with others, emotional intelligence, judgment and decision making, service orientation, negotiation and cognitive flexibility. Alignment of technical skills with non-technical skills needs to be developed and so that graduates from vocational education are able to work, as entrepreneurs or as reliable start-ups.

## CONCLUSIONS and SUGGESTIONS

### A. Conclusions

Based on the discussion presented above, it can be concluded that:

1. The characteristics of Vocational Education currently consist of activities: (a) equipping graduates with applied skills who are technologically literate, flexible and skilled in harmony with the world of work (b) equipping graduates in non-technical skills, (c) the proportion of vocational learning 60% practical and 40% theory, (d) using equipment that is as close as possible to the reality of the workplace, (e) 50% of the teachers are from practitioners and 50% from academics, (f) the teachers have experience in the field of work, (g) the students' final work is not only research papers, but real products, (h) produce graduates who can become strong independent entrepreneurs, (i) build partnerships in link and match, triple helical or pentahelic.

2. Characteristics of the advantages of vocational education in the industrial revolution 4.0 era equip students with: (a) soft skills and technical skills (b) high-level thinking/analyzing skills, and flexibility in the scientific field (c) Skilled in technology, and social, (d) Skilled in complex problem solving, critical thinking, creativity, managing people, coordinating with others, having emotional intelligence, judgment and decision making, service orientation, negotiation, cognitive flexibility, (e) Experts in the fields of: programming, web

designing, technical–network engineering, government digital services, and other future professions (f) possessing global citizenship skills, innovation and creativity skills, technology skills, interpersonal skills, personalized and self-paced learning, accessible and inclusive learning, problem-based and collaborative learning, lifelong and student-driven learning

## B. Suggestions

Based on these conclusions, it can be suggested that:

1. Vocational Education should make institutional changes to meet the demands determined by stakeholders and the demands of the community.
2. The advantages of Vocational Education should be adaptive by carrying out transformations to meet the demands of change in the era of the industrial revolution 4.0 with the characteristics of having work done quickly, precisely and accurately

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## THE EFFECT OF PERFORMANCE EXPECTANCY, SOCIAL INFLUENCE, DIGITAL FINANCIAL LITERACY, AND COMPUTER SELF EFFICACY TOWARDS E-WALLET USE ON YSU ACCOUNTING STUDENTS

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**Abstract - The new normal era makes the use of e-wallet increase. One thing that affects the use of e-wallet is because the prolonged pandemic has made e-wallet a popular payment alternative. Therefore made for study aims to determine the effect of (1) performance expectancy toward the use of e-wallets on YSU accounting students, (2) social influence toward the use of e-wallets on YSU accounting students, (3) digital financial literacy toward the use of e-wallets on accounting students. YSU, (4) computer self-efficacy toward the use of e-wallets on YSU accounting students. This research used quantitative methods. The population of this research are the accounting students of YSU. Sample of this research was determined by purposive sampling method. A total of 191 students met the criteria for this study sample. This study used multiple linear regression analysis techniques. The results of this study indicates that (1) performance expectancy has a positive effect toward the use of e-wallets in YSU accounting students, (2) social influence has a positive effect toward the use of e-wallets on YSU accounting students, (3) digital financial literacy has a positive effect toward the use of e-wallets on YSU accounting students, (4) computer self-efficacy has a positive effect toward the use of e-wallets on accounting students YSU.**

**Keywords:** *Performance Expectancy; Social Influence; Digital Financial Literacy; Computer Self-Efficacy; Use E-wallet*

### I. INTRODUCTION

During this new normal era, people are required to make changes in behavior and habits in carrying out daily activities by always implementing health protocols (Alodokter, 2020). Reporting from *kompas.com*, Bank Indonesia (BI) noted that the use of non-cash transactions was increasing in Indonesia during the pandemic. Bank Indonesia as the central bank noted that digital payment activities throughout January 2020 had reached more than 457 million transactions with a valuation of around Rp. 15.87 trillion (Indonesia.go.id, 2020). Quoted from *Kontan.co.id* news (2020) it is said that the highest usage is ShopeePay (50%) compared to other competitors, namely OVO (23%), GoPay (12%), Dana (12%), and Link Aja (3%). The reason behind a large number of ShopeePay users was because ShopeePay provides many promos and discounts that make customers interested in using it. As explained in the research of Nabila Salsa Bila and Saino (2020)

which stated that cashback is a consideration in using an e-wallet, in its use, students tend to get cashback and also discounts. It is shown from previous research that cashback has a significant influence in determining decisions in the use of e-wallet. As a result of technological advances and current conditions, individuals' behavior in financial transactions is indirectly changed. The challenge facing now is how individuals' access and use digital financial services. For individuals in using digital financial services, the challenges are low general literacy and numeracy levels, limited general financial literacy competencies, unawareness or lack of knowledge about financial services and relevant regulations, no awareness or specific knowledge about digital financial services, level of skills and competencies inadequate general digital, less familiar with financial technology (OECD, 2017:34).

According to the *Kamus Besar Bahasa Indonesia*, to use means to wear; take advantage of it or do something with. In the context of actual use, it is a form of measuring the frequency and duration of using technology or it can be interpreted as a measurement by taking into account the amount of time and the amount of frequency used (Muntianah, Astuti, & Azizah, 2012). The actual use according to Davis (1989) is the actual and real state of using a system. The method used to measure actual usage is by the amount of time used and the frequency of use. Usage is the process, method, act of using something, usage (KBBI in the network). It can be concluded that the use of e-wallet is used by taking into account the measurement of time and frequency used in the process of utilizing e-wallet. According to Laudon & Traver (2011) e-wallet is a digital wallet that can store other important information in various forms. The most important function of e-wallet is consumer authentication through the use of digital certificates or other encryption methods, storing and sending money. A digital wallet is a type of prepaid account that is protected with a password where users can save money for each online transaction (the economic times). E-wallet users can do online transaction through their mobile phone which connected to internet. Another thing that distinguished e-wallet and e-money is its security. In an article from *katadata.co.id*, it is stated that the security of e-wallet is better than e-money. Even though it is better, you still have to be careful, especially from the fraudulent mode under the guise of asking for an OTP (one-time password). In this new normal period, the emergence of payment instruments such as e-wallet is very helpful in financial transactions. E-wallet is a form of financial technology development. Changes that

occur due to the emergence of financial technology is Financial transaction with cash are now switching to cashless which use e-wallet. Accounting student learn various things in finances, such as ability to manage their finances and help them to solve their financial problem, which can lead to improving their financial literacy.

UTAUT is a model to explain user behavior towards information technology. The goal is to help users understand the emergence of new technologies (Venkatesh, 2003). UTAUT is an acceptance model that combines several acceptance theories including Theory of Action (TRA), Theory of Planned Behavior (TPB), Technology Acceptance Model (TPM), Motivation Model (MM), a combination of TAM and TPB, Model Of PC Utilization (MPCU), Innovation Diffusion Theory (IDT) and Social Cognitive Theory (SCT) (Venkatesh, 2003). This study adopts two variables, namely performance expectancy and social influence. Performance Expectancy is the level of individual confidence in using a new system of technology with more benefits and helps in improving the individual's performance (Venkatesh et al, 2003). In a study conducted by Venkatesh et al (2003) performance expectancy has a significant influence on the use of information technology. Performance expectations is one of the factors that influences the use of new technology, by having performance expectations of a technology someone will use it in the hope that it can help them to complete their tasks better. Using e-wallet is expected to provide more benefits in the carried out financial transaction. Performance expectations for the use of e-wallet have the effect that using e-wallet will simplify, speed up and provide convenience in terms of transactions. Social influence is the degree to which someone who is considered important convinces others to use the system (Venkatesh et al, 2003). In research conducted by Aljabbaru & Sari (2020) in the use of mobile payment LinkAja with the UTAUT method, it is stated that social influence has a significant influence in terms of using the e-wallet. Thompson et al (1991) argue that someone using new technology is influenced by the environment around the individual. The influence of the environment around the individual is called social influence. Where someone who lives in an environment can not be separated from the norms that exist within. The current phenomenon is that many influencers have emerged, many products have been advertised using the services of influencers (endorsement). Similar to the use of e-wallet, the presence of a close or important person who has used an e-wallet can influence other people to use it.

At this time, knowledge about digitizing payments is needed to face the times. Minimum knowledge of digital finance can be one of the things that influence students in using e-wallet as a means of payment and transactions. Financial literacy is useful so that people can determine financial products and services that suit their needs and can properly understand the benefits and risks that exist in order to improve people's welfare (OJK, 2013). In research

conducted by Burhanuddin & Abdi (2019) the public still lacks knowledge regarding the understanding of fintech (financial technology), they admit that they have read on the internet but do not know exactly. Quoted from Kontan.co.id news (2020) Mr. Teten Masduki, the Minister of Cooperatives and SMEs, said that digital financial literacy in the community was only 35.5%. With the development of technology in it some risks and crimes lurk. In Tempo.co (2021) an article entitled New Modes of Digital Crimes lurking, explained that OJK has prepared anticipation to address digital crime, namely by increasing consumer literacy and awareness with various policies related to education on the use of digital platforms and strengthening information technology risk management for financial institutions concerned. Digital financial literacy is a combination of financial literacy and digital platforms, with knowledge, behavioral attitudes towards finance being the basis for using digital financial platforms (Tony, et al. 2020). According to Prasad et.al. (2018) digital financial literacy reveals awareness and level of use of financial products and services related to digital platforms. Global Partnership for Financial Inclusion (GPII), formulates principles related to digital financial inclusion. In the 2016 G20 High-Level Principles for Digital Financial Inclusion, digital financial education is needed by the public to increase awareness and trust in digital financial services, including how to access financial products and services digitally, digital financial service tools to be used, simple instructions that explain the process of utilizing digital financial services, including complaints services for errors in the utilization of these financial services (Indonesian financial literacy national strategy, OJK: 2017). Digital financial literacy is influenced by socioeconomic, which also affects individual behavior in shopping. (Sewiawan M, et al. 2020). Knowledge of digital financial literacy is one of the factors that determine a person's attitude in dealing with his finances, including the decision to use e-wallet as a means of payment.

Another factor that supports the use of e-wallet is computer self-efficacy. According to the theory of Compeau and Higgins (1995) in Taylor and Todd (1995), someone who has computer self-efficacy skills will direct the use of information technology systems to the intention to use information technology systems. From research conducted by Yoyok and Isharijadi (2015), it is stated that computer self-efficacy is one of the important variables in behavioral studies related to the field of information technology. In this study, computer self-efficacy is intended to measure how sure someone is using information technology. Bunyamin and Sauda (2018) explain that computer self-efficacy is an assessment of a person's capability or ability to utilize information technology. According to Indriantoro (2000) computer self-efficacy is defined as the ability to use computer applications, operating systems, file handling, and hardware, data storage, and use of keyboard keys. It is not limited to intentions, but computer self-efficacy is also said to have a direct influence on the use of new technology such as in the

research of Ikegune and Abiola in 2016 computer self-efficacy has an influence on the use of PDAs (personal digital assistants), the higher the computer self-efficacy, the higher the computer self-efficacy confident and belief in the use of technology. In the research of Setyono and Astuti (2013), it is stated that in computer science there is mobile computing which is defined as a set of computational operations by which users can access information from portable devices such as notebooks, PDAs (personal digital assistants), mobile phones, etc. as long as they can support communication. Setyowati et al in Adi and Yanti (2018) Computer self-efficacy is not only about skills in the use of computer applications but also becomes one of the factors that influence the use of the system. Trust is an important factor for consumers to decide whether to make transactions online or not. This is in line with the use of e-wallet which required the ability to run information technology. In the use of e-wallet, of course, this ability is needed. People sometimes still confused and scared to use latest or even existing technology. The confidence and ability of students in using information technology is one thing that needs attention.

The benefit of this research is to discovered about how accounting students of YSU behave towards the use of e-wallet by looking at the effects of performance expectancy, social influence, digital financial literacy, and computer self-efficacy. This research is expected to provide knowledge and references about the variables studied for future

research. It is hoped that this research can be useful for further relevant research. The purpose of this study was to test whether Performance Expectancy, social influence, digital financial literacy, and computer self-efficacy has positive effect on the use of E-wallet in Accounting Students of YSU.

II. METHOD

The method used in this study is a quantitative research method using primary data directly from the source. This research was conducted in March 2021 online by distributing questionnaires via Google forms to The undergraduate accounting student of YSU class of 2017-2020 with the Whatsapp group media. This study used purposive sampling method, only those who meet the criteria can fill out the questionnaire. The samples taken were 191 form 367 undergraduate students of Accounting, Faculty of Economics, Yogyakarta State Universit, 206 who filled in were accounting students from the 2017-2020 class and 191 incoming questionnaires that can be processed and 15 of them are damaged. This study used descriptive analysis technique and used the Sturges formula for the frequency distribution. The classic assumption test was also used in this study. It consisted of the normality test, linearity test, multicollinearity test, and the last is the heteroscedasticity test, overall there is no problem with the classical assumption test. Hypothesis testing is done by using multiple linear regression tests and T-test or partial tests.

Table 1. Indicator

<b>Indicator Performance Expectancy</b>	<b>Question</b>
Perceived usefulness	E-wallet makes it easier to carry out financial transactions.
Extrinsic motivation	E-wallet increases productivity in conducting financial transactions.
Job fit	E-wallet increases effectiveness in conducting financial transactions.
Relative advantage	Using an E-wallet will make financial transactions easier.
Outcome expectations	Transacting using E-wallet provides benefits for.
Venkantesh et al (2003)	
<b>Indicator Social influence</b>	<b>Question</b>
Subject norm	Influential people in the environment advise to use e-wallet products. People important to me think that I should use an e-wallet.
Social factors	Using e-wallet because the majority of friends use e-wallet. In general, the environment supports the use of e-wallet.
Image	People in my neighborhood who use e-wallet are considered “Millennials”.
Venkantesh et al (2003)	Using an e-wallet is one of the status symbols in the environment.



<b>Indicator digital financial literacy</b>	<b>Question</b>
Digital Financial Knowledge	<p>M Have a good understanding of digital payment products such as E-Debit, E-Credit, E-Money, Mobile/Internet banking, Ewallet, etc.</p> <p>Have a good understanding of digital asset management products such as TanamDuit, Finansialku, Bareksa.</p> <p>Have a good understanding of digital loan alternatives such as Investree, Installment, Shopee payLater, Go Loans etc.</p> <p>Have a good understanding of digital insurance comparison information such as Cekpremi, Rajapremi.</p> <p>Have a good understanding of customer rights and protections as well as procedures for complaining about services from digital financial providers.</p>
Digital Financial Experience	<p>Have experience in using fintech products and services for digital payments such as OVO, Gopay, LinkAja, etc.</p> <p>Have experience in using fintech products and services for financing (loans) and investments such as ShopeePay Later, Investree, Amarta, Cicil, KoinWorks etc.</p> <p>Has experience in using fintech products and services for asset management such as Bareksa, Tanamduit, and Finansialku.</p>
Digital Financial Awareness	<p>Have an awareness of the potential financial risks in using digital financial or fintech providers, such as the legality of fintech providers, interest rates, and transaction fees.</p>
Digital Financial Service	<p>Have good skills in managing financial activities through digital platforms such as managing fees for using digital financial transactions.</p> <p>Have good control on financial activities using digital platforms by evaluating expenses on digital financial platforms.</p>
Prasad and Meghwal 2017; Morgan and Trinh dikutip dari Maman (2020)	
<b>Indicator Computer Self Efficacy</b>	<b>Question</b>
Magnitude	<p>Can make transactions via e-wallet.</p> <p>Don't ask for help if you have trouble using your e-wallet</p>
Strength	<p>No need for manual assistance to transact using e-wallet.</p> <p>No need for online help to transact using e-wallet.</p> <p>You can use an e-wallet even if you have never used it before.</p>
Generability	<p>Can make transactions if there is sufficient time to complete various procedures and transactions that you want to do.</p>
Compeau dan Higgins (1995)	<p>Use e-wallet more than any other means of payment (except cash)</p>
<b>Indicator use E-wallet</b>	<b>Question</b>
Actual use	<p>Using e-wallet services for daily necessities transactions (OVO, LinkAja, Dana, ShopeePay, GoPay, etc.).</p>
Venkatesh (2003) with adjusment	<p>Use e-wallet services more often than other services.</p> <p>Likes e-wallet services such as OVO, LinkAja, Dana, ShopeePay, GoPay, etc.</p> <p>Using e-wallet several times a week (more than once).</p> <p>Inviting relatives and friends to use the e-wallet.</p>

III. RESULT

The respondent of this study dominated by calcs of 2018 and 2019 with 28% or 53 respondents. As for the fewest respondents, it was 2017 with 18% or 35 respondents. For the age category of respondents aged

17-18 totaling 19 people or 10%, for respondents aged 21-22 as many as 71 people or 37% and most respondents aged between 19 years to 20 years with a total of 101 respondents or 53%. Based on gender 75% of respondents are women.

Table 2. Descriptive Table

Variabel	N	Range	Min	Max	Mean	Std. Deviation
<i>Performance Expectancy (X1)</i>	191	11	13	24	21,68	2,494
<i>Social Influence (X2)</i>	191	18	6	24	16,71	3,491
Digital Financial Literacy (X3)	191	23	21	44	30,76	5,155
<i>Computer Self Efficacy (X4)</i>	191	17	11	28	20,72	3,406
Use E-wallet (Y)	191	10	10	20	14,89	2,618

Source: processed data

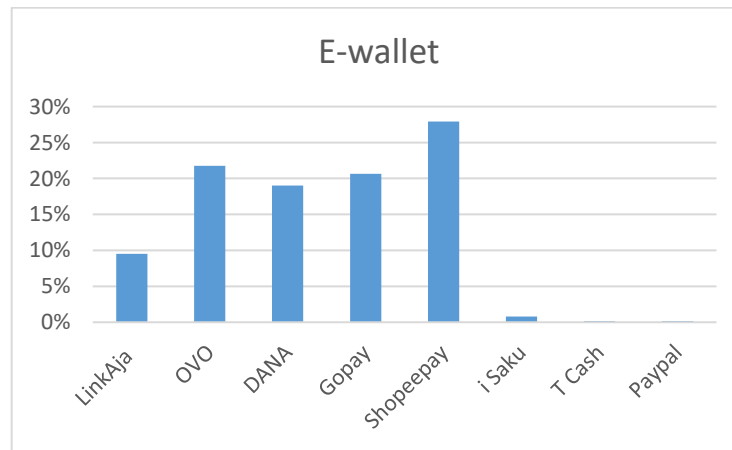


Figure 1. E-wallet Usage Diagram

ShopeePay is the e-wallet with the most users at 27.9%, followed by OVO at 21.8%. Based on the calculation of the frequency distribution, using the Sturges performance expectancy formula is in the high category with 77%, social influence is in the high category with 51%, digital financial literacy is in the low category with 47%, computer self-efficacy is in the medium category with 64%, and the use of e-wallet is in the moderate category with 53%. Based on the results of the validity test that has been carried out, 35 out of 37 questions are declared valid, 35 questions have a calculated r-value greater than the r table therefore, these items are valid. For the reliability test, all variables were declared reliable (Cronbach's alpha value > 0.6).

Based on the table above the data that has been processed 35 out of 37 are declared valid and all variables are declared reliable.

Table 3. Validity and Reliability test

Variabel	Total valid questions	Nilai Cronbach's	Description
<i>Performance Expectancy (X1)</i>	6/6	0,905	Reliable
<i>Social Influence (X2)</i>	6/6	0,822	Reliable
Digital Financial Literacy (X3)	11/11	0,908	Reliable
<i>Computer Self Efficacy (X4)</i>	7/9	0,861	Reliable
Use E-wallet (Y)	5/5	0,733	Reliable

Source: processed data

**Table 4. Normality test**

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		191
Normal Parameters <sup>a,b</sup>	Mean	0,0000000
	Std. Deviation	1,98943168
Most Extreme Differences	Absolute	0,045
	Positive	0,035
	Negative	-0,045
Test Statistic		0,045
Asymp. Sig. (2-tailed)		.200c,d

Source: processed data

Normality test shows that the data is normally distributed. Based on normality test using spss, the sig value is 0.200 > 0.050, so that after testing the hypothesis it can be said that the variables are normally distributed.

**Table 5. Linearity test**

Variabel	Sig	F value	Description
<i>Performance Expectancy (X1)</i>	0,367	1,098	Linear
<i>Social Influence (X2)</i>	0,165	1,374	Linear
Digital Financial Literacy (X3)	0,478	0,991	Linear
<i>Computer Self Efficacy (X4)</i>	0,194	1,339	Linear

Source: processed data

The independent variables in this study have a linear relationship to the dependent variable, as indicated by the sig value of all variables more than 0.05.

**Table 6. Multicollinearity test**

Variabel	Tolerance	VIF	Description
<i>Performance Expectancy (X1)</i>	0,759	1,318	There is no multicollinearity
<i>Social Influence (X2)</i>	0,771	1,297	There is no multicollinearity
Digital Financial Literacy (X3)	0,643	1,555	There is no multicollinearity

**Table 9. Hypothesis Testing**

Hypothesis	Estimate	Unstandardized B	T. Value	Sig. value	Decision
<b>Performance Expectancy</b> has a positive effect on the use of E-wallet in Accounting Students of YSU	Accepted	0,245	3,646	0,000	Accepted
<b>Social Influence</b> has a positive effect on the use of E-wallet in Accounting Students of YSU	Accepted	0,144	3,018	0,003	Accepted
<b>Digital Financial Literacy</b> has a positive effect on the use of E-wallet in Accounting Students of YSU	Accepted	0,078	2,221	0,028	Accepted

<i>Computer Self Efficacy (X4)</i>	0,689	1,450	There is no multicollinearity
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Source: processed data

For the multicollinearity test in this study, there was no multicollinearity with all variables having a tolerance value > 0.05 and a VIF value < 10.

**Table 7. Heteroscedasticity test**

Variabel	n. sig	sig	Description
<i>Performance Expectancy (X1)</i>	0,858	>0,05	There is no heteroscedasticity
<i>Social Influence (X2)</i>	0,919	>0,05	There is no heteroscedasticity
Digital Financial Literacy (X3)	0,465	>0,05	There is no heteroscedasticity
<i>Computer Self Efficacy (X4)</i>	0,346	>0,05	There is no heteroscedasticity

Source: processed data

The last classical assumption test is the heteroscedasticity test using the Spearman's rho method, in this study, it was concluded that there were no heteroscedasticity symptoms for all the variables.

**Table 8. Multiple Linear Regression**

Testing	Result
R Square	0,423
F value	34,053
Sig.F	0,00

Source: processed data

Based on the table above, it can be concluded that the R Square value is 0.423, which means that the variables of performance expectancy, social influence, digital financial literacy, and computer self-efficacy affect 42.3% of the use of e-wallet and 57.7% are influenced by other factors that are not researched. The F value is 34.053 with a significance of 0.00 < 0.05, which means that the variables of performance expectancy, social influence, digital financial literacy, and computer self-efficacy have a positive effect simultaneously on the dependent variable which is the e-wallet use in accounting students at YSU.

<b>Computer Slef Efficacy</b> has a positive effect on the use of E-wallet in Accounting Students of YSU	Accepted	0,249	4,821	0,000	Accepted
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Source: processed data

IV. DISCUSSION

The results of the study show that the Performance Expectancy (H1) variable has a positive and significant effect on the use of e-wallet in accounting students at YSU. This is indicated by the regression coefficient value of 0.245 which stated that every increase in performance expectancy of 1 unit will increase the use of e-wallet by 0.245 units. This means that the direction of the model is positive. Performance expectancy has at the count of  $3.646 > t$  table of 1.653 and has a significance of  $0.000 < 0.050$ . It is concluded that the results of the data analysis of the performance expectancy variable have a positive effect on the use of e-wallet, so the first hypothesis is accepted. The results of this study are in accordance with previous research conducted by Abrahão et. al. (2016), That performance expectancy has an influence on the use of mobile payments is supported by research conducted by Dewayanti et.al. (2018) and Anugrah & Ompusunggu (2021) state that performance expectancy has a positive and significant influence on the acceptance of the use of financial technology. This study shows that users who have more performance expectations on the use of e-wallet can have a positive influence on their use to use e-wallet more. The higher the performance expectation on the e-wallet, the higher the use of the e-wallet.

The results of the study show that the Social Influence (H2) variable has a positive and significant effect on the use of e-wallet in accounting students at YSU. This is indicated by the regression coefficient value of 0.144 which states that each increase in social influence by 1 unit will increase the use of e-wallet by 0.144 units. This means that the direction of the model is positive. Social influence has at the count of  $3.018 > t$  table of 1.653 and has a significance of  $0.003 < 0.050$ . It is concluded that the results of the data analysis of social influence variables have a positive effect on the use of e-wallet, so the second hypothesis is accepted. This study supports previous research that social influence affects the use of new technology. Rahmawati et al (2020) in their research show that social influence has a positive and significant effect on the use of new financial technology, namely mobile banking. In research conducted by Mustaqim, Kusyanti, & Aryadita (2018), it is stated that social influence also has a positive influence on a person's intention to use technology. Hidayat, Aini, Fetrina (2020) stated that social influence has a significant influence on the use of e-wallet technology. Another study states that social influence has a significant influence on the acceptance of the use of mobile payments (Ariffin, Ahmad, & Haneef, 2020). This implies that individuals who use e-wallet are influenced by the surrounding environment that is considered important by the individual. The more people in the neighborhood who use e-wallet

technology, the more people who live around them will use the e-wallet as well.

The results of the study show that the Digital Financial Literacy variable (H3) has a positive and significant effect on the use of e-wallet in accounting students at YSU. This is indicated by the regression coefficient value of 0.078 which states that every 1 unit increase in Digital Financial Literacy will increase the use of e-wallet by 0.078 units. This means that the direction of the model is positive. The Digital Financial Literacy variable in this study has at the count of 2.221  $> t$  table of 1.653 and has a significance of  $0.028 < 0.050$ . It is concluded that the results of the data analysis of the Digital Financial Literacy variable have a positive effect on the use of e-wallet, so the third hypothesis is accepted. Just like previous research according to Tony & Desai (2020) that Digital Financial Literacy affects the use of financial technology in this case is e-wallet which is one of the products of digital financial inclusion. It is also supported by George's (2020) research that digital financial literacy is needed to address digital financial inclusion including e-wallet. Saini's (2019) states that awareness about digital financial platforms affects the use of financial technology itself. This means that individuals who have a high level of digital financial literacy will influence their use of digital financial platforms. Individuals with high digital financial literacy will avoid problems that may occur when using e-wallet financial technology.

The results of the study show that the variable Computer Self Efficacy (H4) has a positive and significant effect on the use of e-wallet in accounting students at YSU. This is indicated by the regression coefficient value of 0.249 which states that each increase in computer Self Efficacy (self-confidence) by 1 unit will increase the use of e-wallet by 0.249 units. This means that the direction of the model is positive. Computer Self Efficacy has a count of 34,821  $> t$  table of 1,653 and has a significance of  $0.000 < 0.050$ . It can be concluded that the results of the data analysis of the Computer Self Efficacy variable have a positive effect on the use of e-wallet, it is concluded that the fourth hypothesis is accepted. This study supports previous research which states that Computer Self Efficacy has an effect on the use of new technology. In previous research belonging to Yudha & Isgiyarta (2015) and Medyawati et.al. (2011), showed that computer self-efficacy has a positive effect on the use of digital technology. In line with research conducted by Cahyogumilang, A.P. (2020) that in using mobile payments it is influenced by computer self-efficacy. This means that individuals who have confidence in operating hardware (computers, tablets, mobile phones, etc.) influence these individuals to use new payment technologies through their smartphones. By having confidence in operating e-wallet products on mobile

phones, individuals will be confident to transact with new financial technologies such as e-wallet.

## V. CONCLUSIONS AND SUGGESTIONS

### A. Conclusions

The conclusion of this study is that Performance expectancy has a positive effect on the use of e-wallet on accounting students at YSU. Shown with a significance value of  $0.000 < 0.050$ . Thus it can be concluded that the first hypothesis is accepted. This means that performance expectancy has a positive influence on the use of e-wallet. Social influence has a positive influence on the use of e-wallet in accounting students at YSU. It is indicated by a significance value of  $0.003 < 0.050$ . It can be concluded that the second hypothesis is accepted, which means that social influence has a positive influence on the use of e-wallet. Digital financial literacy has a positive effect on the use of e-wallet in YSU accounting students. The significance value of the digital financial literacy variable is 0.028, which is greater than 0.050. The calculation results show that the third hypothesis is accepted, which means that digital financial literacy has a positive influence on the use of e-wallet. Computer self-efficacy has a positive influence on the use of e-wallet in accounting students at YSU. From the results of computer self-efficacy calculations, it has a significant value of  $0.000 < 0.050$ . By looking at the results of the calculations, it can be concluded that the fourth hypothesis is accepted, which means that computer self-efficacy has a positive influence on the use of e-wallet.

### B. Suggestions

The implication of this research is to provide research references for further relevant research. It can be an evaluation that today's knowledge of digital finance is needed considering the increasingly developing era towards the era of digital society 5.0. The future researcher can add more relevant variable so the limit of this study can be an improvement to the future research. Providing key question can minimize dishonesty (or bias) in filling out the questionnaire, monitoring the questionnaire properly will also minimize the damage so it can be useful for the research. Future research can consider to use more representative sample so the result can be generalized widely.

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# The Effect Of Receivables Turnover And Inventory Turn On Return On Equity (ROE)

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**Abstract**— The object of research in the preparation of this thesis focuses on the problem of the Effect of Accounts Receivable Turnover and Inventory Turnover on Return On Equity in Cigarette Companies listed LQ 45 on the Indonesia Stock Exchange. The method used in this study is the descriptive and associative method, which is to see and describe the situation systematically by collecting data based on the facts that appear in the financial statements of Cigarette Companies listed LQ 45 on the Indonesia Stock Exchange, financial data taken in the form of profit and loss statements, and the company's balance sheet for six years from 2014-2019. The results of data analysis on the variable ( $X_1$ ) on Return On Equity ( $Y$ ) are moderate with a positive relationship direction that is not significant or directly proportional where  $r_{table} > r_{count}$ , which means Accounts Receivable Turnover ( $X_1$ ) to Return On Equity ( $Y$ ) will increase. And the results of data analysis on the Inventory Turnover ( $X_2$ ) variable on Return On Equity is very strong with a significant positive relationship direction or directly proportional where  $r_{table} < r_{count}$ , which means that if Inventory Turnover ( $X_2$ ) increases or the faster the turnover, the Return On Equity ( $Y$ ) increases. Meanwhile, the results of data analysis on the variables of Accounts Receivable Turnover ( $X_1$ ) and Inventory Turnover ( $X_2$ ) on Return On Equity ( $Y$ ) are very low and have a negative or inverse relationship direction where  $r_{table} > r_{count}$ .

**Keywords**—Accounts Receivable Turnover, Inventory Turnover and Return On Equity

## I. INTRODUCTION

The financial condition of a company which is analyzed by calculating financial ratios, one of the ways used to assess and measure financial performance is to look at the company's financial statements, by looking at the financial statements of a company will be reflected in the company's activities and in assessing and measuring financial performance must balance with good financial planning, every company in the Tobacco Manufacturers sector must be able to survive and compete so as not to be eliminated due to increasing competition. Tobacco Manufacturers sector companies must continue to increase profitability by using one of the ratios, namely Return On Equity (ROE). Return on Equity (ROE) is useful for measuring the company's ability to generate profits with its own capital, so this ROE is called the profitability of its own capital. Profits must be planned properly so that management can achieve it effectively and this Return On Equity illustrates the extent to which the company's ability in the Tobacco Manufacturers sector to generate profits that can be obtained by investors to

see the company's development over the next few years. There are several factors that influence Return On Equity, including the nature or type of the company involving elements of net income, namely the amount of the difference in income that exceeds expenses or expenses, such as revenue income, expansion expenses, and total equity. In addition to the above factors, there are still many other factors that affect the Return On Equity of a company, namely the calculation of Accounts Receivable Turnover, the ratio used to measure how long it takes to collect for one period or how many times the funds invested in these receivables rotate in one period and the calculation of Inventory Turnover. shows how fast inventory turns in a normal production cycle.

## II. LITERATURE REVIEW

### A. Return Of Equity

Return On Equity is the ratio used by the company to measure the company's ability to generate net income from all financial resources invested by the company.

According to Kasmir (2017:115): "Return On Equity or Profitability of Own Capital is a ratio to measure net profit after tax with own capital". From this definition, it can be explained that Return On Equity is a tool to measure profit minus tax costs with own capital.

### B. Accounts Receivable Turnover

Accounts receivable turnover shows the company's efficiency in managing its receivables, if low turnover indicates poor collection efficiency during the period because of the length of collection carried out.

According to I Made Sudana (2015:25): "Receivable turnover is the ratio used to measure the average receivables in generating sales". From the statement that the higher the receivables turnover means the more effective and efficient the receivables management is carried out by the company and vice versa. According to I Made Sudana (2015:25), Accounts Receivable Turnover can be calculated by the formula:



### C. Inventory Turnover

Inventory turnover is the main component of the goods sold, therefore the higher the rotating inventory the more effective the company in managing inventory. This ratio is useful to determine the company's ability to manage existing inventory to be converted into sales.

According to Hery (2016: 181): "Inventory turnover is a ratio used to measure how many times the funds embedded in inventory will rotate in one period or how long (in a day) the average inventory is stored in the warehouse until the end of sales". From the definition above, the researcher concludes that inventory turnover is a measuring tool for funds embedded in inventory that will rotate in one period. According to Hery (2016: 181) Inventory Turnover in one period can be calculated by the formula:

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

### D. Factors Affecting Return On Equity

Return On Equity According to (Ainiyah, 2016) the factors that influence return on equity (ROE) are as follows:

#### 1) Accounts Receivable Turnover

The more sales volume by the company, the greater the company will benefit

#### 2) Inventory Turnover

Sufficient inventory means will support the planned production process and can fulfill orders from customers quickly

#### 3) Debt to Equity Ratio (DER)

If the company has large amounts of own capital in carrying out its operational activities, the company will minimize loans to other parties.

### E. Relationship between variables

- *Effect of Accounts Receivable Turnover on Return On Equity*

Accounts receivable turnover is a ratio used to measure how long it takes to collect receivables for a period. The level of receivable turnover can be determined by dividing the amount of credit sales during a certain period by the average amount of receivables (average receivable). Thus the Effect of Accounts Receivable Turnover on Return On Equity because receivables turnover increases, the ROE also increases, receivables turnover shows the period of binding working capital in receivables where the faster the rotation period indicates the faster the company will benefit from the credit sales, the higher the receivables turnover of a company. The better the company's receivable management indicates a good profit return.

- *Effect of Inventory Turnover on Return On Equity*

Inventory Turnover is a ratio used to measure how many times the funds invested in inventory rotate in one period. This ratio shows the number of times inventory is replaced in one year. Thus, inventory turnover has an effect on Return On Equity partially positive and significant, this research is possible because inventory turnover increases, ROE also increases, the more inventory turnover in the company's operational activities in one period will generate profits or increase owner's capital

- *Effect of Simultaneous Accounts Receivable Turnover and Inventory Turnover on Return On Equity*

Return On Equity is the company's ability to generate profits as measured by comparing net income with ordinary equity (total equity). Profitability is the net end result of various management policies and decisions. If Accounts Receivable Turnover, Inventory Turnover increases, then Return On Equity also increases with accounts receivable turnover and Inventory Turnover indicates the period of working capital is tied up in one period where the faster the rotation period indicates the faster the company gets profits.

### F. framework of thinking

### G. Research Hypothesis

- H<sub>1</sub>: There is a contribution of Accounts Receivable Turnover to Return On Equity
- H<sub>2</sub>: There is a contribution of Inventory Turnover effect on Return On Equity
- H<sub>3</sub>: There is a contribution of Accounts Receivable Turnover and Inventory Turnover that simultaneously affect Return On Equity

## III. RESEARCH METHODOLOGY

### A. Research Method

According to Sugiyono (2017:2): "The research method is basically a scientific way to obtain data with a specific purpose and use". The method used in this study:

- Descriptive method  
According to Sugiyono (2017:35):

"Descriptive method is a formulation that deals with the question of the existence of independent variables, either only on one or more variables (stand-alone variables)".

- Associative Method

According to Sugiyono (2017:37):

"Associative research method is defined as a research problem formulation that states the relationship between two or more variables".

### B. Population

The population in this study is in the form of financial statements from the Cigarette Company PT HM SAMPOERNA Tbk and PT Gudang Garam Cigarette Company Tbk which are listed on LQ 45 on the Indonesia Stock Exchange.

### C. Sample

The sample in this research is in the form of financial statements from the Cigarette Company PT HM SAMPOERNA Tbk and PT Cigarette Company Tjap Gudang Garam Tbk which are listed on LQ 45 on the Indonesia Stock Exchange for six periods from 2014-2019. The financial statements studied are in the form of income statements and balance sheets. With a sample size of 36 samples, namely from (3 Variables x 2 Companies x 6 research periods).

## IV. RESULTS AND DISCUSSION

### A. Results of Average Accounts Receivable Turnover, Inventory Turnover and Return On Equity of Cigarette Companies Listed in LQ 45 2014-2019

Periode	ROE (%)	Perputaran Piutang (Kali)	Perputaran Persediaan (Kali)
2014	45,83	46,94	2,53
2015	24,67	37,99	2,61
2016	27,10	30,67	2,66
2017	27,76	30,52	2,86
2018	27,78	38,25	3,45
2019	29,91	19,35	3,61
$\Sigma$	183,06	203,71	14,11
$\bar{x}$	33,95	30,51	2,35
Standar Deviasi	7,689	9,37	0,80

(Source: Secondary data that has been processed)

- Correlation Analysis Between Accounts Receivable Turnover ( $X_1$ ) Against ROE (Y)

The results of the correlation between Accounts Receivable Turnover ( $X_1$ ) on Return On Equity (Y)  $r = 0.54$  with a significant value of 0.811, then based on  $r_{table}$  that the results of  $r_{table} > r$  ( $0.811 > 0.54$ ),

so the contribution of Accounts Receivable Turnover ( $X_1$ ) to Return On Equity (Y) with a significant level of 0.05 because Sales in the Tobacco Manufacturers sector in the 2014-2019 period increased and decreased, which means that the contribution of Accounts Receivable Turnover ( $X_1$ ) to Return On Equity (Y) is moderate with a positive or proportional relationship. straight, which means Accounts Receivable Turnover ( $X_1$ ) against Return On Equity (Y) will increase.

- Inventory Turnover Correlation Analysis ( $X_2$ ) Against ROE (Y)

The results of the correlation of Inventory Turnover ( $X_2$ ) to Return On Equity (Y)  $r = 1.3$  with a significant value of 0.811, then based on  $r_{table}$  that the results of  $r_{table} < r$  ( $0.811 > 1,3$ ) with a significant level of 0.05 due to inventory and total revenue In the Tobacco Manufacturers sector which is quite stable, it means that the contribution of Inventory Turnover ( $X_2$ ) to the Return On Equity (Y) is very strong with a positive or directly proportional relationship, which means that if the Inventory Turnover ( $X_2$ ) increases or the faster the turnover, the Return On His equity (Y) also increased.

- Multiple Correlation Analysis of Accounts Receivable Turnover, Inventory Turnover and Return On Equity

The results of the Breganda Receivable Turnover and Inventory Turnover to ROE = -1.02 because the total revenue in the Tobacco Manufacturers sector is unstable where in 2014-2019 the total revenue in the Tobacco Manufacturers sector has increased and decreased with a significant value of 0.811.  $r_{table} > r$  ( $0.811 > -1.02$ ) with a significant level of 0.05 the estimated negative correlation coefficient, so it can be concluded that Accounts Receivable Turnover ( $X_1$ ) and Inventory Turnover ( $X_2$ ) on Return On Equity (Y) are very low and have a direct relationship negative or inversely proportional, which means that if Accounts Receivable Turnover ( $X_1$ ) and Inventory Turnover ( $X_2$ ) increase, the Return on Equity (Y) will decrease.

### B. Research Discussion

- Effect of Accounts Receivable Turnover ( $X_1$ ) on Return On Equity (Y)

Receivable Turnover (Receivable Turnover) is a ratio used to measure how long it takes to collect receivables during a period or how many times the funds invested in these receivables rotate in one period. Accounts receivable turnover shows the company's efficiency in managing its receivables, if low turnover indicates poor collection efficiency

during the period because of the length of collection carried out.

Based on the results of correlation analysis shows that  $r = 0.54$  with a significant value of  $0.811$ , then based on  $r$ -table that the results of  $r$ -table  $> r$  ( $0.811 > 0.54$ ), so the contribution of Accounts Receivable Turnover ( $X_1$ ) to Return On Equity ( $Y$ ) with a significant level of  $0.05$  because sales of the Tobacco Manufacturers sector during the 2014-2019 period experienced an increase and decrease, which means that the contribution of Accounts Receivable Turnover ( $X_1$ ) to Return On Equity ( $Y$ ) is moderate with a positive relationship direction that is not significant or directly proportional, which means Accounts Receivable Turnover ( $X_1$ ) to his Return On Equity ( $Y$ ) will increase. Based on the results of the coefficient of determination of  $29\%$ . The contribution given by Accounts Receivable Turnover ( $X_1$ ) to Return On Equity ( $Y$ ) is  $29\%$ , while the remaining  $71\%$  is the contribution of Accounts Receivable Turnover ( $X_1$ ) to Return On Equity ( $Y$ ) not significantly influenced by other factors such as Volume Credit Sales, Credit sales payment terms, Conditions on credit sales volume limits.

The results of this study are in line with research conducted by Supatmin (2020). With the research title The Effect of Cash Turnover and Accounts Receivable Turnover on Return On Equity (ROE) at PT Indofood Sukses Makmur Tbk Period 2009-2017. The equation of the Accounts Receivable Turnover variable on Return On Equity with the results of the research for the Accounts Receivable Turnover ( $X_2$ ) variable on Return On Equity ( $Y$ ) at PT. Indofood Sukses Makmur Tbk, is that partially receivables turnover has a significant effect on return on equity (ROE). These results are in line with researchers Irman Deni, Merin Widasari, Eka Ayu Rahayu, Joni Susilowibowo and Tutri Indraswari (2018) who together say that accounts receivable turnover has a significant effect on profitability.

- Effect of Inventory Turnover ( $X_2$ ) on Return On Equity ( $Y$ )

Inventory Turnover is a ratio used to measure the number of times the funds invested in this inventory rotate in a period. Inventory Turnover is the main component of goods sold, therefore the higher the rotating inventory, the more effective the company in managing inventory. This ratio is useful to determine the company's ability to manage existing inventory to be converted into sales.

Based on the results of the correlation analysis showed that  $r = 1.3$  with a significant value of  $0.811$  then based on the  $r$ -table that the results of  $r$ -table  $< r$  ( $0.811 > 1.3$ ) with a significant level of  $0.05$  due to inventory and total revenue in the Tobacco Manufacturers sector which is quite stable

, meaning that the contribution of Inventory Turnover ( $X_2$ ) to the On Equity Return ( $Y$ ) is very strong with a significant positive relationship or directly proportional, which means that if the Inventory Turnover ( $X_2$ ) increases or the faster the turnover, the On Equity Return ( $Y$ ) also increases. Based on the results of the coefficient of determination of  $169\%$ , the contribution given by Inventory Turnover ( $X_2$ ) to Return On Equity ( $Y$ ) is  $169\%$  and based on  $r$ -table that it is known that the results of  $r$ -table  $<$  from  $r$ -count ( $0.811 < 1.69$ ), so the contribution of Inventory Turnover ( $X_2$ ) on Return On Equity ( $Y$ ) is significant, influenced by other factors such as: Sales volume, production process period, Endurance or final product mode factor.

The results of this study are in line with research conducted by Miftah Nur Expertna and Saur Costanius Simamora (2021). With the journal title The Effect of Receivable Turnover and Inventory Turnover on Return on Equity (ROE) in Manufacturing Companies in the Consumer Goods Industry Sector Listed on the IDX for the 2016-2018 period. The equation of the Inventory Turnover variable on Return on Equity with the results of the study. Based on the test results, inventory turnover ( $X_2$ ) has a significant positive effect on ROE, with a significant value of  $0.000$  less than  $0.05$ . The higher the inventory turnover, the faster the inventory turnover, which means the more efficient the use of inventory in one company, so from the results of the study, the hypothesis is accepted.

- Effect of Accounts Receivable Turnover ( $X_1$ ) Inventory Turnover ( $X_2$ ) on Return On Equity ( $Y$ )

Return on Equity is a ratio to measure net profit after tax with own capital. Return on Equity is the ratio used by the company to measure the company's ability to generate net income from all financial resources invested by the company.

Based on the results of the correlation analysis, it shows that the correlation coefficient is  $= -1.02$  because the total revenue in the Tobacco Manufacturers sector is not stable where in 2014-2019 the total revenue in the Tobacco Manufacturers sector has increased and decreased with a significant value of  $0.811$ , so based on  $r$ -table that the results of  $r$ -table  $> r$  ( $0.811 > -1.02$ ) with a significant level of  $0.05$  the estimated negative correlation coefficient, so it can be concluded that the contribution of Accounts Receivable Turnover ( $X_1$ ) and Inventory Turnover ( $X_2$ ) to Return On Equity ( $Y$ ) is very low and has a negative relationship direction. not significant or inversely proportional, which means that if Accounts Receivable Turnover ( $X_1$ ) and Inventory Turnover ( $X_2$ ) increase, the Return on Equity ( $Y$ ) will decrease. And based on the results of the determination coefficient of  $105\%$ , the contribution given by the variable Receivable Turnover ( $X_1$ ) and Inventory Turnover ( $X_2$ ) Against

ROE (Y) 105% so the contribution of Accounts Receivable Turnover ( $X_1$ ) and Inventory Turnover ( $X_2$ ) to Return On Equity (Y) significantly, influenced by other factors, namely (revenue income, expansion expenses, and total equity).

The results of this study are in line with research conducted by Susanti (2017). With the title Accounts Receivable Turnover and Inventory Turnover Against Return On Equity at PT Catur Sentosa Adiprana, Tbk and its Subsidiaries. Equation Variable Effect of Accounts Receivable Turnover and Inventory Turnover on Return On Equity with research results based on  $f_{count} < f_{table}$  ( $0.499 < 3.591$ ). The regression model in this study is said to be not good. Because there is no influence on the variables of accounts receivable turnover and inventory turnover on ROE. The value of the coefficient of determination is also low.

## V. CONCLUSION

Based on the calculations and analyzes that have been carried out by researchers during this study and discusses Receivable Turnover and Inventory Turnover on Return On Equity in Cigarette Companies listed in LQ 45, the researchers can conclude:

- A. Conditions The average development of Return On Equity in 2014-2019 was 30.51% in Cigarette companies listed in LQ 45 because Return On Equity in the Tobacco Manufacturers sector experienced an increase and decrease from 2014-2019.
- B. The condition of the largest average Receivable Turnover in 2014-2019 was 33.95 times due to Accounts Receivable Turnover in the Tobacco Manufacturers sector experiencing increases and decreases from 2014-2019.
- C. The average condition of inventory turnover is 2.35 times, which will experience a decrease and increase from the average inventory turnover in these periods. This is because inventory turnover in the Tobacco Manufacturers sector has increased and decreased from 2014-2019.
- D. The results of statistical analysis using a single correlation ( $r$ ) on the variable ( $X_1$ ) to Return On Equity (Y) of  $r = 0.54$  with a significant value of 0.811 then based on  $r_{table}$  that the results of  $r_{table} > r$  ( $0.811 > 0.54$ ), so the contribution of Accounts Receivable Turnover ( $X_1$ ) to Return On Equity (Y) with a significant level of 0.05 due to sales of the Tobacco Manufacturers sector during the 2014-2019 period increased and decreased, which means that the contribution of Accounts Receivable Turnover ( $X_1$ ) to Return On Equity (Y) is moderate with the direction of the positive relationship is not significant or directly proportional. And based on the results of the coefficient of determination of 29%. The contribution given by Accounts Receivable Turnover ( $X_1$ ) to Return On Equity (Y) of 29% is influenced by other variables that are not accurate.
- E. The results of statistical analysis using a single correlation ( $r$ ) on the Inventory Turnover ( $X_2$ ) variable to Return On Equity (Y) of  $r = 1.3$  with a significant value of 0.811 then based on  $r_{table}$  that the results of  $r_{table} < r$  ( $0.811 > 1,3$ ) with a significant level of 0.05 due to inventory and total revenue in the Tobacco Manufacturers sector which is quite stable, meaning that the contribution of Inventory Turnover ( $X_2$ ) to Return On Equity (Y) is very strong with a significant positive relationship or directly proportional. And based on the results of the coefficient of determination of 1.69%, the contribution given by Inventory Turnover ( $X_2$ ) to Return On Equity (Y) of 1.69% is influenced by other variables that are not accurate.

F. The results of statistical analysis using a single correlation ( $r$ ) on the variable Accounts Receivable Turnover ( $X_1$ ) and the contribution of Inventory Turnover ( $X_2$ ) to Return On Equity ( $Y$ ) of = -1.02 because the total revenue in the Tobacco Manufacturers sector is unstable where In 2014-2019 total revenue in the Tobacco Manufacturers sector has increased and decreased with a significant value of 0.811, so based on the  $r_{table}$  that the results of  $r_{table} > r$  ( $0.811 > -1.02$ ) with a significant level of 0.05 the estimated negative correlation coefficient can be concluded that the contribution Accounts Receivable Turnover ( $X_1$ ) and Inventory Turnover ( $X_2$ ) on Return On Equity ( $Y$ ) are of very low value and have a negative, insignificant or inverse relationship. And based on the results of the coefficient of determination of 105%, the contribution given by the variable Accounts Receivable Turnover ( $X_1$ ) and Inventory Turnover ( $X_2$ ) Against ROE ( $Y$ ) 105% is influenced by other variables that are not accurate.

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# The Effect of Softskills and Internal Locus of Control Toward The Readiness to be A Profesional Teacher

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**Abstract-** The research aimed to know: 1) the effect of Soft Skills on the readiness to be professional teachers, 2) the effect of Internal Locus of Control toward the readiness to be professional teachers, 3) the effect of Soft Skills and Internal Locus of Control simultaneously toward the readiness to be professional teachers. The research was ex post facto with a quantitative approach. The data was presented by number. The data collection method was a questionnaire. The result of this research was the positive effect and significance: (1) soft skills toward the readiness to be professional teachers of 24, 90% (2) locus of control internal toward the readiness to be professional teachers 34,10%; (3) soft skills, and locus of control internal toward the readiness to be professional teachers of 38,60%.

**Keywords —** soft skills, internal locus of control, readiness to be A professional Teachers

## I. INTRODUCTION

Education plays an important role in improving the quality of human resources. Act No. 20 of 2003 on the National Education System states that "Education has functions to develop the ability and character and civilization to be a dignified nation in the context of educating the nation's life, developing the potential of students to be human beings who believe and fear to God Almighty, have a noble character, healthy and knowledgeable, capable, creative, independent, and be a democratic and responsible citizen."

Improving the quality of human resources is needed to be ready to work in achieving Indonesia's goals. According to Pangestika & Alfarisa (2015)[1], one of the efforts in dealing with the development of the world of work is by improving the quality of education. Unfortunately, education in Indonesia still has complex problems, for example, the low quality of education in Indonesia. According to a new survey from The Organization for Economic Cooperation and Development (OECD) Program for International Student Assessment (PISA) in 2018 shows that learning abilities in Indonesia are ranked 72 out of 77 countries in the world, and placed in 13th in Asia. The position of Indonesia in Southeast Asia has not been able to outperform its three closest neighbors; Brunei Darussalam, Malaysia, and Singapore (idntimes.com, 2019).

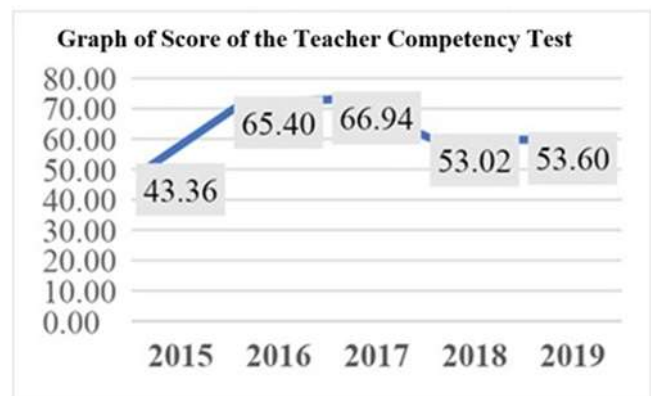
Budi Trikorayanto, an educational observer in Indonesia, states a factor to be a problem in the education of Indonesian is the quality of teachers (vivanews.com, 2019). The teacher is a component in the education system that must get attention from the stakeholder. The figure of a teacher is always in the highlight when discussing educational problems. Moreover, teachers greatly determine the success of students in the teaching and learning process to achieve the standard quality of education. Therefore, all efforts are made to improve the quality of education maximally

when supported by professional and competent teachers following their field of knowledge.

Professional teachers are required to always develop themselves in line with advances in technology, information, and science. The differences in the mastery of the required competencies are caused by the different conditions and situations of the teacher. Therefore, a mapping of teacher competence must be carried out through the Teacher Competency Test to find out the teacher competence. According to Act No. 14 of 2005 on Teachers and Lecturers, Article 1, Paragraph 10 states "Competence is a set of knowledge, skills, and behaviors that must be possessed, internalized, and mastered by teachers or lecturers in carrying out professional duties." Regulation of the Minister of National Education of the Republic of Indonesia Number 16 of 2007 on Academic Qualification Standards and Teacher Competencies, states four competencies that must be possessed by teachers. They are pedagogic competence, personality competence, social competence, and professional competence.

Teacher Competency Test (UKG) is a test used to measure basic competencies in the field of study and pedagogy in teacher training. The competencies tested are following the field of study certification (for teachers who are already certified educators) and the academic qualifications of teachers (for teachers who have not been certified as educators). UKG aims to find out a map of teacher mastery that will be used as consideration factor in providing coaching and professional programs. Teachers must meet the minimum competency standards set by the government, which is 55.0. If they cannot meet the standard, they must participate in various sustainable professional development programs.

Figure 1. Score of Teacher Competency Test



Source: Kemendikbud (2019), processed data

Figure 1 shows the increased score of the Teacher Competency Test from 2015 to 2017. But, in 2018, there was a decrease to 53.02 from the previous year of 66.94. In 2019 there was a slight increase of 53.60 but still not yet reached the minimum competency standard set of 55.0. The quality of educators in

Indonesia is still far from adequate where the government hopes there will be an increase every year. Moreover, in 2019, it has discussed the standard value might be increased to 80. Chairman of the Executive Board of the Indonesian Teachers Association (PB PGRI), Dudung Nurullah Koswara argues that the government hopes the competency achieves a minimum score of an average of 80 (pikiranrakyat.com). Educational Personnel Education Institutions (LPTKs) in Indonesia are expected to improve their quality in performing their duties and responsibilities to produce more competent and professional educators.

Yogyakarta State University (UNY) is one of the LPTKs in Indonesia that creates professionals in the world of education. Therefore, UNY teaches students by providing maximum knowledge and skills through teaching and learning processes and supporting programs. UNY also provides various competencies to support the educational study programs as well as creating professional educators which are summarized in compulsory subjects such as learning strategies, learning media, learning assessments, teacher professional ethics, information technology, micro-teaching, and Introduction to the School Field (PLP).

Students in Teacher education as prospective educators must have hard skills such as teaching. Besides good teaching skills, the readiness of students to be teachers is also influenced by their soft skills. LaFrance (2016) in Andi Hidayat (2018) [2] define soft skills as personal and interpersonal behaviors that develop and maximize the performance of a person related to self-confidence, flexibility, honesty, and self-integrity. Research by Majid., S, Liming., Z. Tong., S. & Raihana (2012) [3] shows that business management students in Singapore are aware of the importance of soft skills, especially the ability to communicate for work and career advancement. However, many students feel that their soft skills are less than the standard level.

Wagiran (2019)[4] states the relevant core competencies to be a vocational teacher in the future with hard skills aspects, such as pedagogic knowledge (instruction), content knowledge, and educational technology. The main competencies of soft skills that are very important for future vocational teachers are being exemplary, honest, and disciplined. Sharma in I Made S. Utama [5] states that there are 7 (seven) important soft skills for students to develop, including communicative skills, thinking skills and problem-solving, teamwork strength, life-long learning and information management, entrepreneurial skills, ethics, morals, and professionalism, and leadership skills.

Data on pre-survey from students of 2016 in Study Program of Office Administration, according to Sharma's theory (2006), not all aspects can be met, such as the ethical, moral, and professional aspects with a percentage of 50.7% of students admit late when working on group assignments. In the communication skill aspect, 60.6% of students do not have this skill, meanwhile, according to Majid S., (2012)[3] communication is the most important soft skill for work and career advancement. And, for leadership skills, 54.5% or more than half of the students do not have the skills to lead a group.

The readiness of students to be educators is not only seen from the quality of micro-teaching and soft skills but also the internal locus of control [6]. Students with a high internal locus of control will take advantage of activities, that support building abilities and skills that must be possessed by a teacher. Rotter in Syatriadin [7] defines a locus of control as a personality variable. First, the belief of an individual to control the events or phenomena that occur in life, called an internal locus of control. Second, the belief of an individual that environment or external factors can control events in life, called an external locus of control.

Danang Bahtiar [8] states that someone who has a mature career tends to have the belief, that the desired career can only achieve with efforts, not luck, fate, or destiny. This means, that people who have an internal locus of control are more likely to have the maturity to determine a career. Meanwhile, those who have an

external locus of control tend to have less maturity in determining a career.

The characteristics of a teacher are listed in the Act on Teachers and Lecturers (UUGD) No. 14 of 2005, Article 7, paragraph 1, that teachers must have interests, talents, educational qualifications, and competencies. In line with David and Phares (1969) [9], the aspects in the internal locus of control are ability, interest, and effort. And, those aspects are needed to be a professional teacher who plays a role in realizing educational goals. This statement explains that students' internal locus of control is related to readiness to be professional teachers.

Data on the pre-survey, 43.6% of students states they were confident in their abilities. However, the percentage of students who were not confident in their abilities to be professional teachers was 56.4%. The percentage shows that their readiness was not evenly distributed. The aspect of interest of 65.4% or more than half of the students of 2016 in the Study Program of Office Administration is not interested to be a teacher after graduating from UNY. The third aspect of effort shows that 61.5% of students had tried to be professional teachers. The pre-survey shows that students lack the ability and interest to be professional teachers. The results of the pre-survey are supported by tracking data conducted by the Education Quality Assurance and Development Institute (LPPMP) of UNY to alumni of Office Administration Education, which obtained the following data in table 1:

Table 1. Data of Alumni who have teacher as profession

Year of	Number of Students	Year of Graduation	Teacher	Percentage %
2011	95	2015	2	2,1
2012	92	2016	2	2,1
2013	77	2017	10	12,9
2014	83	2018	0	0
2015	78	2019	1	1,2

Source: Career Centre of LPPMP UNY

Data in Table 1 shows the interest of alumni in a continuing career as a teacher is low by 13% of students have profession as teachers after graduating from college. The data shows that the alumni of Office Administration Education continue their careers as staff or employees, office practitioners, and entrepreneurs.

Based on the previous background, problems identification were 1) the low quality of education in Indonesia with PISA survey placed Indonesia in the 13th position in Southeast Asia. 2) The results of the Teacher Competency Test have not been able to meet the quality standards of pedagogic and professional competence as the main requirements of a competent teacher. 3) The competence aspects have not been fulfilled. Soft skills need to be possessed by students in educational institutions. 4) Students do not feel confident to be professional teachers based on their abilities. 5) Only a few students are interested in continuing their careers as professional teachers. 6) It has not fulfilled the aspects of locus of competence. Internal control is ability and interest.

The problem formulations in this study are: 1) how is the influence of soft skills on readiness to be a professional teacher? 2) how does the internal locus of control affect the readiness to be a teacher? 3) how do soft skills and internal locus of control simultaneously affect readiness to be a professional teacher?

The objectives of the research are to 1) find out the influence of soft skills on the readiness to be a professional teacher, 2) find out the influence of internal locus of control on readiness to be a professional teacher, 3) find out the influence of soft skills and locus of control simultaneously affects the readiness to be a professional teacher

The research significance both theoretically and practically are explained as follows. First, in theoretical benefits, it provides

information on the influence of soft skills and internal locus of control simultaneously on readiness to be professional teachers at students of 2016 in Office Administration Education, FE UNY and be a reference for further research. Second, practical benefits include, for researchers, the research as a means of applying the knowledge gained during the study period, developing thinking skills, adding experience, and practicing scientific writing skills. for students, it provides knowledge about soft skills, and internal locus of control, and their influence on readiness to be professional teachers

## II. LITERATURE REVIEW

### A. Readiness to be Professional Teacher

The quality of the generation is influenced by the responsibility of a professional teacher who has a big role as an educator. By the importance of the role of teachers, it needs to prepare them carefully. Therefore, students as teacher candidates in the future are required to have the readiness to possess the teacher competencies including pedagogic competence, professional competence, personality competence, and social competence.

According to Oemar Hamalik's opinion on readiness as follows:

“...that professional teachers who work to carry out the functions and objectives of the school must possess the required competencies so that teachers can carry out their duties as well as possible.” [10] .

By the definition of readiness and professional teachers, concluded that readiness to be a professional teacher defines as the level of maturity to what extent a person or a student possesses the requirements to be a professional teacher to carry out various educational tasks based on their expertise or abilities following qualification standards and improve the quality of an education.

### B. SoftSkills and Internal Locus of Control

Sharma in I Made S. Utama et al.[5] states that soft skill is all aspects of generic skills which also include cognitive elements related to non-academic skills. Seven soft skills were identified and important for students to develop at higher education institutions. They are communicative skills, thinking skills and problem solving, team workforce, lifelong learning and information management, entrepreneur skills, ethics, morals, and professionalism, and leadership skills. Sharma tabulates the soft skills elements with sub-skills and categorized them as skills that are individually needed (must have) and as good to have abilities.

Soft skill is the skills and life skills of a person both for themselves and in groups that are invisible or invisible in managing relationships interpersonal and interpersonal skills where, by soft skills, a person is needed by the community in the middle of society. The soft skills might be seen from the attitudes and values of the character, the ability to interact with others, such as the ability to communicate, work together in teams, and the ability to solve problems.

Rotter in Zakiyah (2017)[11] states that locus of control is divided into two, namely internal (internal locus of control) and external (external locus of control). Lefcourt and Martin (1983) [12] define the internal locus of control as a

belief from interactions between individuals and events or phenomena that occur from the individual. Internal locus of control is the view of good or bad, due to the action of capacities and factors within themselves.

A person has an internal locus of control when he believes that the success and failure of everything are determined by efforts and abilities. Owen (1981) in Satriyadin (2017)[7] states "If you assume that you are the owner of your destiny and the captain of your soul, doing what you want to do and receiving the results of your efforts, you have an internal locus of control."

## III. RESEARCH METHOD

### Research Type

The research was an ex post facto. It means that data collection is carried out after the problem has occurred between the independent and the dependent variable. This study used a quantitative approach. This means, all information or data was in numbers and based on statistical analysis.

### Time and Place of the Research

The research was conducted at the Office Administration Education Program of 2016, Faculty of Economics, Yogyakarta State University which is located at Jalan Colombo, Karangmalang, Depok, Sleman, Yogyakarta. This research was conducted from February – June 2020.

### Target/Subjek of the Research

The subjects were students of the Study Program of Office Administration Education, Faculty of Economics, Yogyakarta State University of 2016. The total of students was 83 students, consisting of 40 students in P. ADP A-class and 43 students in P. ADP B-class. The research was a population study as the number of research subjects was less than 100.

### Data, Instrument, and Data Collecting Technique

The data collection technique was a questionnaire by giving a set of written statements to the respondents. The questionnaire was a closed-ended type. It means that respondents only choose the available answers on the questionnaire provided by the researcher. The research instrument was used to measure the value of the variable using a Likert scale. Likert scale measurement was used by describing variable indicators. Then, the indicator was used as a starting point for compiling instrument items in statements and questions.

The instrument trial was conducted on students of the Economics Education Study Program, Faculty of Economics, class of 2016 Yogyakarta State University. The reason for the selection of the trial sample was the similar characteristics of the population. The instrument trial was carried out on 30 students. The instrument test consisted of validity and reliability tests. The validity test used the Person's Product Moment formula according to Arikunto [13] and the reliability test used the Cronbach Alpha formula according to Arikunto [13]

The validity test showed that 2 of the 16 statement items on the readiness variable to be a professional teacher and 1 out of 11 items on the soft skills variable were invalid. The invalid statement items were then erased from the questionnaire. The results of the reliability test, the Cronbach alpha coefficient value was 0.842 for the variable of readiness to be a professional teacher, 0.689 for the soft skills variable, and 0.786 for the internal locus of the control variable. The interpretation of reliability test used guidelines according to Sugiyono [14]. So, it concluded that the three variables have a strong level of interpretation. The validity and reliability test used the help of the SPSS 22 program for Windows.

### Data Analysis Technique



Data analysis techniques were descriptive analysis, analysis prerequisite test, and hypothesis test. The descriptive analysis consisted of the analysis of the mean, mode, median, and standard deviation which was then presented in a frequency distribution table. The analysis prerequisite tests were the normality test, linearity test, and multicollinearity test. Hypothesis tests were simple regression analysis, multiple regression analysis, relative contribution, and effective contribution.

IV. RESULTS

The results of data analysis regarding the variables of readiness to be a professional teacher, soft skills, and internal locus of control were further explained.

**Readiness to Be a Professional Teacher**

The results of the descriptive analysis of public speaking anxiety variable data showed that the highest score of 69; the lowest score of 42; an average of 55.00; the mean value of 55.00; the mode value of 54, and the standard deviation was 5.70.

The data was then presented in a frequency distribution table in table 2.

Table 2. Readiness to be Professional Teacher

No.	Interval Class	Frequency	Percentage (%)
1.	42 – 45	5	6,02
2.	46 – 49	9	10,84
3.	50 – 53	15	18,07
4.	54 – 57	27	32,53
5.	58 – 61	19	22,90
6.	62 – 65	4	4,82
7.	66 – 69	4	4,82
<b>Total</b>		83	100

Source: Processed primary data

Then, it determined the tendency of the readiness variable using the ideal mean and ideal standard deviation. The results of the ideal mean and ideal standard deviation, the tendency of the readiness variable to be a professional teacher was in the medium category. It means the readiness to be a professional teacher in students was classified as moderate.

The following pie chart is a tendency of public speaking in figure 2.

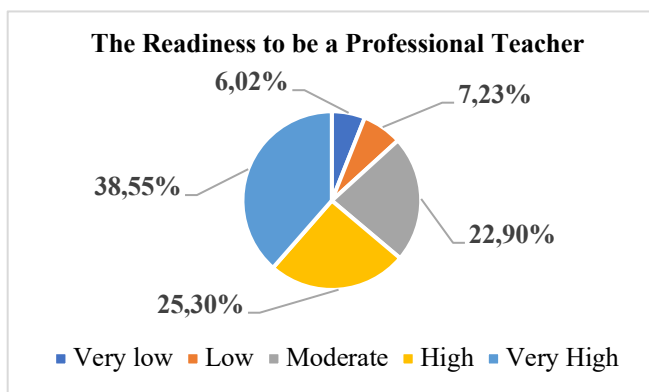


Figure 2. Pie chart of readiness to be a professional teacher

The picture above shows that the tendency of the readiness variable to be a professional teacher obtained 25.30% (very high), 7.23% (high), 38.55% (medium), 22.90% (category), and 6.02% (very low). So, it concluded that the tendency of the readiness variable to be a professional teacher was in the medium category by 38.55%.

Then, it continued to determine the tendency of the soft skills variable by using the ideal mean and ideal standard deviation. Based on the analysis of the ideal mean and ideal standard deviation, the

soft skills variable tends to be in the medium category. This means that the soft skills ability of most students was still classified as moderate.

The following pie chart is a tendency of soft skills variable in figure 4.

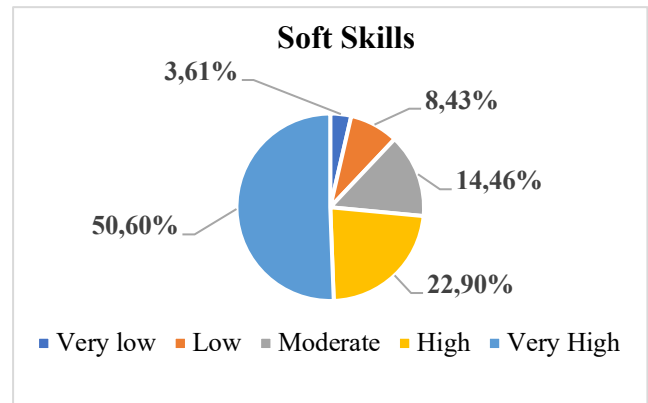


Figure 4. Pie chart of a tendency of Soft Skills

Figure 4 shows the tendency of soft skills obtained 14.46% (very high), 22.90% (high), 50.60% (medium), 8.43% (low), and 3.61% (very low). So, it concluded that the tendency of students' soft skills variables was in the medium category by 50.60%.

**Locus of Control Internal**

The descriptive analysis of data on internal locus of control shows that the highest score was 58, the lowest score of 24, the mean of 44.99, the median score of 45.00, the mode score of 46, and the standard deviation of 5.529.

The data was then presented in a frequency distribution in table 5.

Table 5. Frequency Distribution of Locus of Control

No.	Interval Class	Frequency	Percentage (%)
1.	24 – 28	1	1,20
2.	29 – 33	1	1,20
3.	34 – 38	7	8,43
4.	39 – 43	20	24,09
5.	44 – 48	34	41,00
6.	49 – 53	16	19,27
7.	54 – 58	4	4,81
<b>Total</b>		83	100

Source: Processed of primary data

Then, it continued to determine the tendency of the variable of locus of control internal by using the ideal mean and ideal standard deviation. Based on the analysis of the ideal mean and ideal standard deviation, the variable tends to be in the high category.

The following pie chart is a tendency of locus of control internal variable in figure 5.

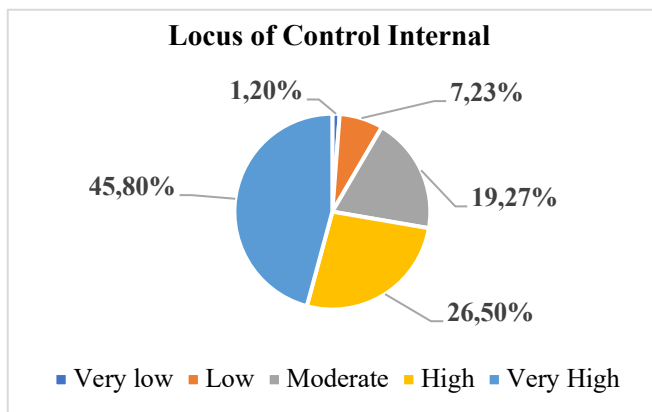


Figure 5. Pie chart of a tendency of Locus of Control Internal

Figure 5 shows the tendency of Locus of Control Internal obtained 19.72% (very high), 45.80% (high), 26.50% (medium), 7.23% (low), and 1.20% (very low). So, it concluded that the tendency of Locus of Control Internal variables was in the high category by 45.80%.

Analysis Prerequisite Test

A normality test aimed to determine the distribution of the independent variables and the dependent variable in this study was normal or not. The test used the Kolmogorov Smirnov formula or by using the SPSS 22 application program for Windows. The decision-making criteria were if the significant value of Asymp.Sig was more than 0.05, then the data is normally distributed and vice versa. The calculations using the SPSS 22 program for Windows show that the significance value of Asymp.Sig was 0.200 or more than 0.05. It concluded that the research data was normally distributed.

The linearity test aimed to determine a linear relationship between the independent variable (X) with the dependent variable (Y). The linearity test used the F-test with a significant level of 5% and was analyzed using the SPSS 22 application for Windows. If the significance value was higher than 0.05, then the relationship between variables was linear. Otherwise, if the significance value is less than 0.05, then the relationship between variables was not linear. The calculation of the linearity was presented in table 6.

Table 6. Summary of Linearity Test Results

Variable	Df	F count	F table	Description
X <sub>1</sub> to Y	19:62	1,624	1,75	Linear
X <sub>2</sub> to Y	22:59	1,350	1,75	Linear

Source: Processed of primary data

The multicollinearity test serves to fulfill the requirements of multiple regression analysis, namely determining the multicollinearity that occurs in the relationship between independent variables. Multicollinearity did not occur if the correlation coefficient between independent variables has a tolerance of more than 0.1 and the value of VIF (Variance Inflation Factor) is less than 10. So, multiple regression analyses can be performed. The results of the multicollinearity calculation using SPSS 22 for Windows were presented in table 7.

Table 7. Summary of Multicollinearity Test

Variable	Value of Tolerance	Value of VIF	Description
X <sub>1</sub>	0,654	1,530	Non-Multicollinearity
X <sub>2</sub>	0,486	2,057	Non-Multicollinearity

Source: Processed of primary data

The results showed that the two independent variables, namely soft skills, show a tolerance value of 0.654 > 0.1 and a VIF value of 1.530 ≤ 10 and the internal locus of control variable shows a tolerance value of 0.486 > 0.1 and a VIF value of 2.057 ≤ 10. So, it concluded that there is no multicollinearity between independent variables, so multiple regression can be continued.

Test of Relative Contribution (SR) and Effective Contribution (SE)

Based on the results of multiple regression analysis, the value of the relative contribution and effective contribution of the independent variables to the dependent variable of the study was presented in table 8.

Table 8. Summary of Test Result of SR and SE

Variable	SR (%)	SE (%)
Soft Skills	29,65	11,43
Locus of Control Internal	58,33	22,48

Based on the calculation in table 8, the relative contribution of soft skills was 29.65% and the internal locus of control was 58.33%. The effective contribution of soft skills was 11.43%, and the internal locus of control was 22.48%. Variable soft skills and internal locus of control simultaneously provide an effective contribution of 38.55%.

V. DISCUSSION & CONCLUSION

A. DISCUSSION

**There was a Positive and Significant Effect of Soft Skills on Readiness to Be a Professional Teacher in students of Office Administration Education of 2016, FE, UNY.**

Based on the research analysis with simple regression analysis of the influence of soft skills, the correlation coefficient value (r<sub>x<sub>2</sub>y</sub>) was 0.499. So, it has a positive correlation. The price of the coefficient of determination (r<sup>2</sup><sub>x<sub>2</sub>y</sub>) was 0.249 or 24.90%. The results of the t-test indicate the research significance value was 0.000 < 0.05 and the t<sub>count</sub> value was 5.181 or higher than t<sub>table</sub> of 1.989. Then, it was significant. In short, it concluded that there is a positive and significant influence of soft skills on readiness to be a professional teacher.

The study was in line with the theoretical studies that aspects of soft skills are important for an educator. Elfindri (2011:2) states that educators who have high soft skills were better to make their students have good character and develop than educators with low soft skills. Therefore, the higher the soft skills possessed by students, the higher their readiness to be teachers, conversely, the lower the soft skills possessed, the lower their readiness to be teachers.

Also, the study is in line with previous research conducted by Bkti Noorhayati in a study entitled "The Influence of Teaching Skills and Soft Skills on Readiness to Be a Teacher of Office Administration Education Students Class of 2012 FE UNY". In this study, obtained r<sub>x<sub>2</sub>y</sub> of 0.563 and r<sup>2</sup><sub>x<sub>2</sub>y</sub> of 0.317 and the t-test of the significance of the influence of soft skills on teaching readiness is 6.398 while t-table of 1.986 shows t<sub>count</sub> > t<sub>table</sub> so that it can be concluded that the hypothesis that there is an influence of soft skills on readiness to be a teacher has a positive and significant influence.

Based on the discussion, it concluded that this study supported the theory and previous research that soft skills have a positive and significant effect on readiness to be professional teachers in Students of Office Administration Education of 2016, FE, UNY. Proved by the hypothesis shows that soft skills have an effect of 24.90% on readiness to be a professional teacher.

**There is a Positive and Significant influence of the Internal Locus of Control on Readiness to Be a Professional Teacher in students of Office Administration Education of 2016, FE, UNY.**

Based on the calculation with simple regression analysis of the influence of internal locus of control, the correlation coefficient value ( $r_{x_3y}$ ) was 0.584. So, it has a positive correlation. The value of the coefficient of determination ( $r^2_{x_3y}$ ) was 0.341 or 34.10%. The results of the t-test indicate that the research significance value was  $0.000 < 0.05$  and the tcount value was 6.476 or higher than ttable of 1.989. So, it is declared significant. So, it can be concluded that there is a positive and significant influence of internal locus of control on readiness to be a professional teacher.

The statement, the higher the student's internal locus of control, the higher the readiness to be a professional teacher and vice versa. In line with the framework of thinking that internal locus of control was an important aspect of readiness to be a professional teacher. Because, students with a high tendency of internal locus of control increasingly convinced the readiness can be achieved by believing their abilities, desired, and interests, as well as hard work to achieve a goal.

Also, in line with previous research conducted by Fahami Ulin Ni'mah in a study entitled "The Influence of Teacher Professional Interest, Internal Locus of Control, the Role of Civil Service Teachers, and Learning Achievement on Economic Education, Faculty of Economics, State University of Semarang." The hypothesis test of the influence of internal locus of control on student readiness to be teachers by using a partial test obtained a significance value of  $0.000 < 0.05$ . It concluded that  $H_a$  accepted and  $H_0$  rejected. The contribution of internal locus of control was obtained from the coefficient of determination ( $r^2$ ) of  $(0.316^2) \times 100\% = 9.98\%$

Based on the discussion, it concluded that this study supported the previous research. That, internal locus of control has a positive and significant effect on readiness to be a professional teacher. Proved by the hypothesis test showed that the internal locus of control has an effect of 34.10% on the readiness to be a professional teacher in the students of Office Administration Education of 2016, FE, UNY.

**There is a Positive and Significant influence of the Soft Skill and Internal Locus of Control on Readiness to Be a Professional Teacher in students of Office Administration Education of 2016, FE, UNY.**

Based on the calculation of research results with simple regression analysis of the influence of soft skills and internal locus of control, the correlation coefficient value ( $r_{y(1,2)}$ ) was 0.621. In sum, it has a positive correlation. The price of the coefficient of determination was ( $r^2_{y(1,2)}$ ) of 0.386 or 38.60%. The t-test indicated that the research significance value was  $0.000 < 0.05$  and the  $F_{count}$  value was 16.55 or higher than  $F_{table}$  of 2.72. And, it declared significant. So, it can be concluded that there is a positive and significant influence of soft skills and internal locus of control on readiness to be a professional teacher.

The multiple regression analysis with three predictors showed that, the effective contribution of the three variables was 38.55%, and 61.46% were from other variables that were not examined in this study. This finding was following the framework of thinking, the higher the soft skills and internal locus of control possessed by students, the higher the readiness to be a professional teacher. Proved by the fourth hypothesis that soft skills and internal locus of control simultaneously need to be considered to increase readiness to be professional teachers in facing the world of work.

Based on the discussion, it concluded that this study supported the previous research that soft skills and internal locus of control have a positive and significant effect on readiness to be professional teachers in students of Office Administration Education of 2016, FE UNY. The third hypothesis showed that the internal

locus of control has an effect of 38.60% on the readiness to be professional teachers in students of Office Administration Education of 2016, FE UNY.

**B. CONCLUSION**

Based on findings and discussion of the research, it concluded as follows:

There is a Positive and Significant Effect of Soft Skills on Readiness to Be a Professional Teacher. Proved by the correlation coefficient ( $r_{x_2y}$ ) of 0.499 and the value of the coefficient of determination ( $r^2_{x_2y}$ ) of 0.249. This means, the soft skills variable affects readiness to be a professional teacher by 24.90% and the tcount value of 5.181 was higher than ttable of 1.989 ( $5.181 > 1.989$ ) at the 5% significance level with  $N=83$ . It concluded that the higher the soft skills possessed, the higher the readiness to be a professional teacher.

There is a Positive and Significant Influence of Internal Locus of Control on Readiness to Be a Professional Teacher. Proved by the correlation coefficient ( $r_{x_3y}$ ) of 0.584 and the value of the coefficient of determination ( $r^2_{x_3y}$ ) of 0.341. This means, the internal locus of control variable affects readiness to be a professional teacher by 34.10% and tcount of 6.476 was higher than ttable of 1.989 ( $6.476 > 1.989$ ) at a 5% significance level with  $N=83$ . It concluded that the higher the internal locus of control, the higher the readiness to be a professional teacher.

Proved by the correlation coefficient ( $r_y(1,2)$ ) of 0.621 and the coefficient of determination ( $r^2_y(1,2)$ ) of 0.386, means that the Soft Skills variable and Internal Locus of Control affect Readiness to Be a Professional Teacher by 38, 60% and the Fcount value of 16.55 was higher than Ftable of 2.72 ( $16.55 > 2.72$ ) at the 5% significance level with  $N=83$ . The relative contribution and effective contribution of Soft Skills were 29.65% and 11.43%, meanwhile, Internal Locus of Control was 58.33% and 22.48%. In short, the higher the soft skills and internal locus of control, the higher the readiness to be a professional teacher.

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# The Influence of Working Capital Turnover and Debt To Equity Ratio on Return On Assets (ROA)

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**Abstract**— This study aims to determine the influence of Working Capital Turnover and Debt To Equity Ratio on Return On Assets (ROA). The method used in this study is the associative method, which is to see and describe the situation systematically by collecting data based on the facts that appear in the financial statements of telecommunications companies listed on the BEI, namely Telekomunikasi Indonesia (Persero) Tbk, PT XL Axiata Tbk, PT Smartfren Telecom, Tbk. The data used are secondary data, in the form of profit and loss statements and company financial balances for the period 2015 to 2019. Based on the results of single correlation analysis calculations, the correlation between Working Capital Turnover and Return on Assets is  $r = -0.44$  which means that the contribution of Working Capital Turnover to Return On Assets is very low with a negative relationship. The coefficient of determination  $KD = 12\%$  means that the Working Capital Turnover variable contributes to the Return on Assets of 19% while the remaining 81% is influenced by other variables not examined by the researcher. Equity Ratio (DER) to Return On Assets is 0.58, which means that the effect of Debt To Equity Ratio (DER) on Return On Assets is moderate with a positive relationship. The coefficient of determination  $KD = 34\%$  means that the variable Debt To Equity Ratio (DER) contributes to Return On Assets by 34% while the remaining 66% is influenced by other variables not examined by researchers, then based on the results of multiple correlation analysis calculations, the correlation results are obtained between Working Capital Turnover and Debt To Equity Ratio (DER) to Return On Assets of 0.59 which means that the contribution of Working Capital Turnover and Debt To Equity Ratio (DER) to Return On Assets is moderate with a positive relationship direction. The coefficient of determination  $KD = 33\%$  means that the variables of Working Capital Turnover and Debt To Equity Ratio (DER) contribute to Return On Assets by 33% while the remaining 77% is influenced by other variables not examined by researchers. then based on the results of the calculation of multiple correlation analysis, the correlation between Working Capital Turnover and Debt To Equity Ratio (DER) on Return On Assets is 0.59, which means that the contribution of Working Capital Turnover and Debt To Equity Ratio (DER) to Return On Assets is moderate with a positive relationship direction. The coefficient of determination  $KD = 33\%$  means that the variables of Working Capital Turnover and Debt To Equity Ratio (DER) contribute to Return On Assets by 33% while the remaining 77% is influenced by other variables not examined by researchers. then based on the results of the calculation of multiple correlation analysis, the correlation between Working Capital Turnover and Debt To Equity Ratio (DER) on Return On Assets is 0.59, which means that the contribution of Working

Capital Turnover and Debt To Equity Ratio (DER) to Return On Assets is moderate with a positive relationship direction. The coefficient of determination  $KD = 33\%$  means that the variables of Working Capital Turnover and Debt To Equity Ratio (DER) contribute to Return On Assets by 33% while the remaining 77% is influenced by other variables not examined by researchers. 59 which means that the contribution of Working Capital Turnover and Debt To Equity Ratio (DER) to Return On Assets is moderate with a positive relationship. The coefficient of determination  $KD = 33\%$  means that the variables of Working Capital Turnover and Debt To Equity Ratio (DER) contribute to Return On Assets by 33% while the remaining 77% is influenced by other variables not examined by researchers. 59 which means that the contribution of Working Capital Turnover and Debt To Equity Ratio (DER) to Return On Assets is moderate with a positive relationship. The coefficient of determination  $KD = 33\%$  means that the variables of Working Capital Turnover and Debt To Equity Ratio (DER) contribute to Return On Assets by 33% while the remaining 77% is influenced by other variables not examined by researchers.

**Keywords**— Return On Assets, Working Capital Turnover, Debt To Equity Ratio

## I. INTRODUCTION

The development of telecommunications in Indonesia is very fast and growing. This situation is supported by the increasingly sophisticated telecommunications equipment and the public's need for information is getting higher. Several telecommunications companies operating in Indonesia have been listed as issuers on the Indonesia Stock Exchange (IDX). This is caused by the development of the flow of information that continues to grow, so that telecommunications services are needed to accommodate this. There are many investors who are interested in investing in the securities of telecommunication service companies. This is indicated by the movement of stock prices of telecommunications service companies listed on the Indonesia Stock Exchange (IDX). The company will carry out various business activities with the ultimate goal to be achieved, namely, to earn a profit. The company's performance can be measured from the profits earned, but large profits are not necessarily a measure that the company has worked efficiently. Efficient can be known by comparing profit with other indicators and then the level of

profitability will be known. The profitability of a company shows a comparison between net income and assets, in other words profitability is a ratio that measures the company's ability to generate profits. Profitability in this study is proxied by return on assets (ROA) because it can show how the company's performance is seen from the use of all assets owned by the company in generating profits. The high and low ROA is influenced by many factors such as Current Ratio, Total Asset Turnover, Debt To Equity Ratio, Debt Ratio, Net Profit Margin, sales growth, and company size. Factors that can affect ROA are working capital, in this study using the calculation of working capital turnover. The higher the value of working capital turnover, the profits obtained will also increase. Debt To Equity Ratio (DER) is a ratio used to find out how much of each rupiah of capital is used as debt collateral. The lower the Debt To Equity Ratio, the less the company's liabilities in the future, this can affect the increase in company profits.

**Return On Assets in telecommunications companies listed on the Indonesia Stock Exchange (IDX)**

Looking at the phenomenon of the financial statements of telecommunications companies, there is a ROA movement that is not always balanced as was the case in 2014. in 2015 ROA increased until 2016. In 2017 ROA decreased again until 2018 and increased again in 2019.

This attracts the author to conduct research on Telecommunications Companies listed on the Indonesia Stock Exchange (IDX) for six consecutive years, namely the 2014-2019 period, namely PT Telekomunikasi Indonesia (Persero) Tbk, XL Axiata Tbk, PT Smartfren Telecom Tbk.

**II. METHODOLOGY**

The research method is a technique for searching, obtaining, and collecting data that will be used to compile a scientific work. Each researcher must be able to present the data that has been obtained, both obtained through observation, interviews and documentation. The basic principle of presenting data is communicative and complete. according to (Sugiyono, 2017:2): "Research method is basically a scientific way to obtain data with a specific purpose and use". The method used in this research is descriptive and associative methods. According to (Sugiyono 2017:17) "descriptive method is a statistic used to analyze data by describing or describing the data that has been collected as it is without intending to make conclusions that apply to the public or generalizations". According to (Sugiyono 2017:37) the associative method is defined as a research problem formulation that states the relationship between two or more variables ".<sup>[12]</sup>

The population used is data and financial statements in the form of balance sheets and income statements made by 3 telecommunications companies listed on the Indonesia

Stock Exchange (IDX), namely PT Telekomunikasi Indonesia (Persero) Tbk, PT XL Axiata Tbk, PT Smartfren Telecom Tbk. With a total sample of 54 (3 Variables, 3 Companies, and 6 Periods). The data analysis technique used is descriptive analysis (mean, frequency table, and standard deviation) and associative analysis (single correlation, multiple correlation and coefficient of determination).

**III. FINDINGS / RESULTS**

This study explains about Return On Assets (ROA), Working Capital Turnover, and Debt To Equity Ratio (DER) in telecommunications companies listed on the Indonesia Stock Exchange, namely PT Telekomunikasi Indonesia (Persero) Tbk, PT XL Axiata Tbk, PT Smartfren Telecom Tbk for six years from 2014 to 2019. The results of the research are as follows:

**A. The Development of Return on Assets (Y) In Telecommunication Companies Listed on The IDX**

ROA shows the company's ability to use all of its assets to generate after-tax profits. Based on the balance sheet and profit and loss statements for telecommunications companies listed on the Indonesia Stock Exchange (IDX). The formula for determining Return On Assets according to I Made Sudana (2015:25) is as follows:<sup>[11]</sup>

**Average Return On Assets (ROA) Telecommunication Company listed on Indonesia Stock Exchange Period 2014-2019**

Year	XL Axiata (%)	Telekomunikasi Indonesia (Persero) (%)	Smartphone (%)	Average (%)
2014	-1.30	15.24	-7.77	2.06
2015	-0.01	14.41	-7.53	2.29
2016	0.72	15.07	-8.68	2.37
2017	0.72	15,30	-12.54	1.16
2018	-5.69	15.48	-14.01	-1.41
2019	1.16	11.48	-7.95	1.56

**Condition of Return On Assets (ROA) Telecommunication Company listed on Indonesia Stock Exchange Period 2014-2019**

Year	ROA (%)	Ups and down (%)	Change (%)
2014	2.06	-	-
2015	2.29	0.23	10,19
2016	2.37	0.08	3.38
2017	1.16	(1,21)	(104.31)
2018	-1.41	(2.57)	182.46
2019	1.56	2.97	189.98
Amount	8.03	-	-
Average	1.34	-	-

Source: secondary data that has been processed

From the calculation of the data above, it can be concluded that the Return On Assets (ROA) of Telecommunication Companies listed on the Indonesia Stock Exchange (IDX) in 2014 to 2019 namely *Return On Assets* (ROA) in 2014 was 2.06%, then in 2015 the Return On Assets (ROA) of 2.29% increased by 0.23% or 10.19%, then in 2016 the Return On Assets (ROA) was 2.37% increased by 0.08% or 3.38%. In 2017 Return On Assets (ROA) was 1.16% decreased by (1.21%) or 104.31%, then in 2018 the Return On Assets (ROA) was (1.41%) decreased by (2.57%) or 182.46%, and in 2019 Return On Assets (ROA) was 1.56% increased by 2.97% or 189.98%. So the average development of Return On Assets (ROA) in Telecommunications companies listed on the Indonesia Stock Exchange (IDX) for six years from 2014 to 2019 is 1.34%.

**B. Development of Working Capital Turnover in Telecommunications Companies Listed on The Indonesia Exchange Stock (IDX)**

Working Capital Turnover is a ratio used to measure the effectiveness of the company's working capital (current assets) in generating sales. Based on the balance sheet and profit and loss statements for telecommunications companies listed on the Indonesia Stock Exchange (IDX). The formula for determining Working Capital Turnover according to Dwi Prastowo (2019:76) is as follows:<sup>[3]</sup>

In this study, sales are replaced with income because the company under study is a company engaged in the telecommunications sector

**Average Working Capital Turnover Telecommunication Company listed on Indonesia Stock Exchange Period 2014-2019**

Year	XL Axiata (time)	PT Telekomunikasi Indonesia (Persero) (times)	Smartphone (time)	Average (time)
2014	1.88	1.80	0.98	1.55
2015	1.24	1.78	0.97	1.33
2016	1.57	1.62	1.08	1.42
2017	2.20	1.79	1.30	1.76
2018	2.14	1.89	1.54	1.86
2019	2.35	2.11	2.45	2.30

**Working Capital Turnover Condition Telecommunication Company listed on Indonesia Stock Exchange Period 2014-2019**

Year	PMK (times)	Ups and down (%)	Change (%)
2014	1.55	-	-
2015	1.33	(0.22)	(16.79)
2016	1.42	0.09	6.56
2017	1.76	0.34	19.28
2018	1.86	0.09	5.03
2019	2.30	0.45	19.39

Amount	10.23	-	-
Average	1.71	-	-

Source: secondary data that has been processed

From the calculation of the data above, it can be concluded that the Working Capital Turnover in Telecommunication Companies listed on the Indonesia Stock Exchange (IDX) in 2014 to 2019 is the Working Capital Turnover in 2014 of 1.55 times, then in 2015 the Working Capital Turnover was 1.33 times decreased by (0.22%) or (16.79%), then in 2016 Working Capital Turnover was 1.42 times increased by 0.09% or 6.56%. In 2017 the Working Capital Turnover was 1.76 times, an increase of 0.34% or 19.28%, then in 2018 the Working Capital Turnover was 1.86 times increased by 0.09% or 5.03%, and in 2019 the Working Capital Turnover was 2.30 times increased by 0.45% or 19.39%. Then the average development of working capital turnover in telecommunications companies listed on the Indonesia Stock Exchange (IDX) for six years from 2014 to 2019 is 1.71 times.

**C. Development of Debt To Equity Ratio (DER) in Telecommunication Companies Listed on The Indonesia Exchange Stock (IDX)**

*Debt To Equity Ratio* is the ratio used to value debt to equity. Based on the balance sheet and profit and loss statements for telecommunications companies listed on the Indonesia Stock Exchange (IDX). The formula for determining the Debt to Equity Ratio according to Hery (2016:169) is as follows:<sup>[5]</sup>

In this study, sales are replaced with income because the company under study is a company engaged in the telecommunications sector

**Average Debt To Equity Ratio (DER) Telecommunication Company listed on Indonesia Stock Exchange Period 2014-2019**

Year	XL Axiata (%)	Telekomunikasi Indonesia (Persero) (%)	Smartphone (%)	Average (%)
2014	3.53	0.64	3.48	2.55
2015	3.18	0.78	2.02	1.99
2016	1.59	0.70	2.89	1.73
2017	1.60	0.77	1.61	1.33
2018	2.14	0.76	1.03	1.31
2019	2.28	0.89	1.17	1.45

**Condition of Debt To Equity Ratio (DER) Telecommunication Company listed on Indonesia Stock Exchange Period 2014-2019**

Year	DER (%)	Ups and down (%)	Change (%)
2014	2.55	-	-
2015	1.99	(0.56)	(27.93)
2016	1.73	(0.27)	(15.44)
2017	1.33	(0.40)	(30,15)
2018	1.31	(0.02)	(1,27)
2019	1.45	0.14	9.45
Amount	10.35	-	-
Average	1.73	-	-

Source: secondary data that has been processed

From the calculation of the data above, it can be concluded that the Debt To Equity Ratio (DER) in Telecommunication Companies listed on the IDX in 2014 to 2019 is the Debt To Equity Ratio (DER) in 2014 of 2.55%, then in 2015 the Debt To Equity Ratio (DER) was 1.99%decreased by (0.56%) or (27.93%), then in 2016 the Debt To Equity Ratio (DER) of 1.73%decreased by (0.27%)or (15.44%), then in 2017 the Debt To Equity Ratio (DER) was1.33%decreased by (0.40%) or (30.15%), then in 2018 the Debt To Equity Ratio (DER) was 1.31%decreased by (0.02%)or (1.27%), and in 2019 the Debt To Equity Ratio (DER) was 1.45%increased by 0.14%or 9.45%. So the average development of the Debt To Equity Ratio (DER) in Telecommunication companies listed on the Indonesia Stock Exchange (IDX) for six years from 2014 to 2019 is1.73%.

**Research Results on Telecommunication Companies Listed on the Indonesia Stock Exchange (IDX)**

Year	ROA (Y)	Working Capital Turnover (X1)	Der b (X2)
2014	2.06	1.55	2.55
2015	2.14	1.33	2.11
2016	2.75	1.42	1.73
2017	1.54	1.76	1.33
2018	-2.24	1.86	1.31
2019	1.90	2.30	1.45
2020	8.16	10.23	10.47
mean	1.34	1.71	1.72
Standard Deviation	1.42	0.35	0.48
Single Correlation	0.59	-0.44	0.58
Coefficient of Determination	33%	19%	34%

Source: secondary data that has been processed

**IV. DISCUSSION**

In this discussion, we will compare the research conducted by the researcher with the research contained in the results of previous studies. The comparison is as follows:

**A. The Influence of Working Capital Turnover (X1) on Return On Assets (Y)**

Working Capital Turnover is a ratio used to measure the effectiveness of the company's working capital (current assets) in generating sales. This ratio is calculated as the quotient between the amount of sales (cash and credit) with the average current assets. If the working capital turnover

increases every year, it means that the flow of funds returning to the company will be smoother. And vice versa, the lower the working capital turnover rate, the longer the time for which the funds are tied up, which means that the management of working capital is less effective and tends to reduce its profitability. Profitability in question is Return On Assets.

Research conducted by researchers obtained the results of the calculation of the single correlation of Working Capital Turnover on Return On Assets is  $r = -0.44$  which means that the contribution of Working Capital Turnover has a negative effect on Return On Assets. Based on the results of the coefficient of determination of 19%, the contribution given by Working Capital Turnover to Return On Assets is 19%, while the remaining 81% is influenced by other factors not examined.

The results of this study are in line with research conducted by (Dwi Ambarsari, 2017), with the title "The Effect of Working Capital Turnover, Leverage, and Accounts Receivable Turnover on Profitability"<sup>[2]</sup>. With the results of the study that based on the results of the t test, it shows that working capital turnover has a negative and significant effect on profitability with a significance value of 0.05. The results of this study support hypothesis 1 which states that working capital turnover (PMK) has a significant effect on profitability in food and beverages companies on the Indonesia Stock Exchange (IDX). The working capital turnover in food and beverages companies has an influence on the company's profitability, but the increasing working capital turnover causes the profitability to decrease, because the greater the ratio of current assets to total assets, the smaller the profitability obtained or faced. The smaller the profitability because current assets generate less than fixed assets. The working capital that has been issued by the company is expected to be received back from the sales of the products produced in a short time (less than 1 year). The working capital received is used again for the company's further operating activities, and so the working capital will always rotate as long as the company is still operating. Effective and efficient working capital management can determine the amount of profitability or profit in food and beverages companies on the Indonesia Stock Exchange (IDX). The results of this study are in line with the results of research conducted by Kusomo and Darmawan (2017) which shows that the working capital turnover variable has a significant effect on profitability.

**B. The Influence of Debt To Equity Ratio (X2) on Return On Assets (Y)**

*Debt To Equity Ratio* is the ratio used to value debt to equity. This ratio is sought by comparing all debt, including current debt with all equity.If the Debt to Equity Ratio increases, the ROA will decrease or vice versa. This is presumably because if the debt ratio increases, the interest expense rate will also increase, this will reduce the profits obtained by the company.

Research conducted by researchers obtained the results of the calculation of the single correlation Debt to Equity Ratio to Return On Assets is 0.58, which means that the contribution of Debt to Equity Ratio has a positive effect on Return On Assets. Based on the results of the coefficient of determination of 34%, the contribution given by the Debt to



Equity Ratio to Return On Assets is 34%, while the remaining 66% is influenced by other factors not examined.

The results of this study are in line with research conducted by (Felany & Worokinasih, 2018) with the title "The Effect of Working Capital Turnover, Leverage and Liquidity on Profitability (Study on Food and Beverage Sub-Sector Companies Listed on the Indonesia Stock Exchange in 2012-2016)"<sup>[4]</sup>. With the results of the study that Based on the results of data analysis showed that partially the DER (X3) variable had a significant effect on ROA (Y1) because it was seen from the t test results obtained that  $t_{count} > t_{table}$  ( $3.143 > 2.004$ ) and the significance was less than 0.05 ( $0.003 < 0.05$ ). In addition, from the results of the regression analysis obtained 3 of 0.496 which shows the DER variable is directly proportional to ROA, which means that if the DER variable increases by one unit and other independent variables are considered constant, the ROA will increase by 0.496. When the DER value increases, the ROA also increases. This means that the companies in this research sample have large debts and large capital, which is seen from the average DER of 60.0517% and ROA of 14.0099%. The value of large debt and balanced by large capital is able to generate large net income, so that ROA will increase. The increase is highly dependent on economic conditions if economic conditions are good, the use of greater debt can increase profitability and if economic conditions are bad, it can reduce profitability. Basically the company needs to pay attention if the DER value is high while the ROA value decreases or does not change because it is feared that the company will not be able to pay off its debts with the capital it has so that it can reduce financial performance.

### C. The Influence of Working Capital Turnover (X1) and Debt To Equity Ratio (X2) on Return On Assets (Y)

Profitability is the company's ability to generate profits. To show the efficiency of the company in managing all of its assets and obtaining its income, it can be measured by ROA (Return on Assets). The higher the profit generated, the higher the ROA, which means that the company is more effective in using assets to generate profits. There are several factors that influence the high and low profitability of the company, one of which is working capital, leverage and liquidity. Working Capital Turnover Ratio is the relationship between working capital and sales. So it is important for companies to continue to increase their working capital turnover. the greater this ratio indicates the effective use of available working capital in increasing the profitability (ROA) of the company. Debt to Equity Ratio is the company's ability to fulfill its obligations through the company's own capital. If the Debt to Equity Ratio increases, the ROA will decrease or vice versa. This is presumably because if the debt ratio increases, the interest expense rate will also increase, this will reduce the profits obtained by the company. The higher the Debt to Equity Ratio, the higher the use of liabilities as a source of company funding. then the interest expense rate will also increase, this will reduce the company's profits. The higher the Debt to Equity Ratio, the higher the use of liabilities as a source of company funding. then the interest expense rate will also increase, this will reduce the company's profits.

The higher the Debt to Equity Ratio, the higher the use of liabilities as a source of company funding.

Research conducted by researchers obtained the results of the calculation of the multiple correlation of Working Capital Turnover and Debt to Equity Ratio to Return On Assets is 0.59. Based on the results of the coefficient of determination of 33%, the contribution given by Working Capital Turnover and Debt to Equity Ratio to Return On Assets is 33%, while the remaining 67% is influenced by other factors not examined.

The results of this study are in line with research conducted by (Jerrey Rusli, nd)<sup>[7]</sup>. In the journal entitled "The Effect of Working Capital Turnover and Debt To Equity Ratio on Return On Assets at Pt.Kalbe Farma Tbk from 2003 - 2015". This study concludes that: The effect of Working Capital Turnover and Debt To Equity Ratio simultaneously on Return On Assets, with a prob value of  $F$   $0.000000 < 0.05$ . The result of the determination coefficient test is adjusted R square of 0.6854, this means that the contribution of the Working Capital Turnover and Debt To Equity Ratio variables in influencing the Return On Assets variable is 68.54% and the remaining 31.46% is the contribution of other factors. Such as total asset turnover. 3. From the results of statistical tests using the Eviews 9 regression equation  $Y = 5.478608 + 0.040798 X1 - 0.041449 X2$ . Based on the results of testing the independent variables together on the dependent variable (F test) it is said that Working Capital Turnover and Debt To Equity Ratio have an effect on Return On Assets. The results of this study are in line with the results examined by Amdani and Desnirita (2015) that Working Capital Turnover and Debt To Equity Ratio have an effect on Return On Assets.

## V. CONCLUSION

Based on the calculations and analysis results that have been carried out by researchers during research and discussion regarding the effect of Working Capital Turnover and Debt to Equity Ratio on Return On Assets in Telecommunication Companies listed on the IDX, the researchers can draw the following conclusions:

- The average development of Return On Assets for the six-year period from 2014-2019 is 1.34%.
- The average development of Working Capital Turnover for the six-year period from 2014-2019 is 1.71 times.
- The average development of the Debt To Equity Ratio for the six-year period from 2014-2019 is 1.72 %.
- Based on the analysis calculation, it is obtained that the single correlation calculation of Working Capital Turnover on Return On Assets is  $r = -0.44$  which means that the contribution of Working Capital Turnover has a negative effect on Return On Assets. Based on the results of the coefficient of determination of 19%, the contribution given by Working Capital Turnover to Return On Assets is 19%, while the remaining 81% is influenced by other factors not examined.
- Based on the analysis calculation, the results of the calculation of the single correlation Debt to Equity Ratio to Return On Assets are  $r = 0.58$ , which means that the contribution of the Debt to Equity Ratio has a positive effect on Return On Assets. Based on the results of the

coefficient of determination of 34%, the contribution given by the Debt to Equity Ratio to Return On Assets is 34%, while the remaining 66% is influenced by other factors not examined.

- F. Based on the analysis calculation, the results of the calculation of the multiple correlation of Working Capital Turnover and Debt to Equity Ratio to Return On Assets are  $r = 0.59$ , which means that the contribution of Working Capital Turnover and Debt to Equity Ratio to Return On Assets has a low influence with a positive relationship direction. Based on the results of the coefficient of determination of 33%, the contribution given by Working Capital Turnover and Debt to Equity Ratio to Return On Assets is 33%, while the remaining 67% is influenced by other factors not examined.

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# Tourism Promotion Strategy Department of Tourism, Culture, Youth And Sports of Klaten Regency

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**ABSTRACT** - Klaten is located between two cultural cities where the tourism sector is growing very rapidly and has become the major destination for tourist destinations, namely Yogyakarta and Surakarta. Many cultures were passed down and developed in Klaten. Then, Klaten becomes a strategic place for tourists to visit Yogyakarta, and either will go to Surakarta or from Surakarta to Yogyakarta. This study aimed to determine the tourism promotion strategy, a case study in the Department of Tourism, Culture, Youth and Sports of Klaten Regency. The research was descriptive research with a qualitative approach. The key informants were the Head of the Tourism Office of Klaten Regency and supporting informants, namely the staff of tourism marketing tasks and counterpart officers. The data collection techniques were observation, interview, and documentation techniques. The data analysis techniques were data reduction, data presentation, and concluding. The data validity used sources and methods of triangulation techniques. The results showed that tourism promotion strategies, especially in the Office of Tourism, Culture, Youth and Sports of Klaten Regency were: 1) identifying community needs through counterparts and the community can suggest to the Office of Tourism, Culture, Youth and Sports of Klaten Regency, 2) identifying the market, such as responding to community trends, selfie photo spots, and religious tourism, 3) opening opportunities for Cooperation, such as with tourism bureaus through destination visit packages, and a memorandum of understanding (MOU), which is guided by regional regulations, and 4) optimizing the use of promotional media through print, electronic, and internet.

**Keyword:** Promotion Strategy, Tourism, Klaten

## I. INTRODUCTION

Tourism is an alternative to earn regional and foreign exchange income (Wilson et al. 2001). During the first semester of 2018, the Ministry of Tourism (Kemenpar) recorded that the foreign exchange generated from the tourism sector reached 9 billion US dollars. Since the government established tourism as the leading sector, its growth looks advanced and significant. Although the tourism sector is very promising, this sector has enormous challenges. The target of foreign tourist visits could not be achieved until the end of 2018. From 17 million people as the target, there are only 16.2 million foreign tourists. Tourism development and improving the quality of facilities and infrastructure are important in the regions to support tourism development (Ministry of Tourism's strategic plan 2015-2019).

The vision of the Government of Klaten Regency is to make Klaten Regency as a tourist destination that has noble artistic and cultural values to develop its region, which is advanced independently and competitively (Klaten Tourism Office, 2018). A mission is formulated to achieve the vision, namely, to maintain and preserve regional arts and create competitive tourism objects and facilities. The Department of Tourism, Culture, Youth, and Sports of Klaten Regency designed a strategy to improve the quality and competitiveness of tourism objects in Klaten Regency.

Klaten Regency is a unique city. The city is located between two cultural cities where the tourism sector is growing very rapidly and has become the main tourist destination, namely Yogyakarta and Surakarta. Many cultures were passed down and developed in the Klaten area. As a tourist destination, Klaten offers a variety of natural, culinary, religious, and artificial tourism beauties. An icon in Klaten regency is the very clean water as it comes from *umbul* or springs.

Tourists can take pictures with fish underwater. Religious tourism objects are K.A Pandanaran and K.A Gribig as places of pilgrimage that are still sacred (Fuchs 2004). While artificial tours such as Ketjeh Resto, tourists can eat a variety of freshwater dishes while ketjeh (water playing) in a shallow river. Also, there is an area for horse riding and archery.

Based on the pre-survey, the number of tourists that visitor Klaten increase year to year, but it decreased in 2017. A significant increase cannot be separated from the success of one of the new tourism objects. However, the emergence of new tourism objects has not been able to maintain the increasing rate of visits. This fact is indicated by the community already feeling bored with the old types of tourism objects. Then, the management of other types of tourism objects becomes an alternative to avoid the feel of boredom.

The finding indicates that there is no equal distribution of the number of tourist visits. It may be caused by several factors, including the lack of access to transportation to a tourist attraction, no or lack of directions to a tourist attraction, road access does not support large buses, and some tourist attractions do not have a bus parking lot.

Another factor is the low number of visitors from outside the area. The results of interviews with the Head of Marketing Division, most of the visitors were from the people of Klaten and its surroundings. The collaboration of the Office of Tourism, Culture, Youth, and Sports of Klaten Regency with a travel agency aims to boost the tourism village promotion system.

Promotional activities to tourism objects in Klaten Regency started from disseminating information to the public through leaflets, billboards, radio broadcasts, television, and the internet, but these activities were not yet intense. The use of internet media needs more attention to increase visitors from outside Klaten Regency. Several social media accounts of the Office of Tourism, Culture, Youth, and Sports of Klaten Regency have not provided much information about tourism in Klaten Regency. The cases illustrate that the tourism promotion strategy has not been intense. Therefore, it needs to research on how tourism promotion strategies are implemented at the Office Tourism, Culture, Youth, and Sports Klaten Regency that aims to develop analysis, providing alternative solutions, and policies-making in tourism promotion efforts.

## II. LITERATUR REVIEW

James J. Spillane (1991) defines tourism as "The activity of traveling with the aim of getting pleasure, seeking satisfaction, knowing something, improving health, enjoying sports or rest, carrying

out tasks, making pilgrimages, etc., is not an activity that has just been done by humans in present time.". The tourism sector is one of the elements of regional autonomy development and having the authority to manage its region (Law Number 23 of 2014 concerning Regional Government). Tourism plays an important role in expanding, equalizing business opportunities, encouraging regional development, creating jobs, and increasing national income to improve the welfare and prosperity of the people for awareness of love for the homeland (Macleod and By, 2007).

Promotional activities will be successful when an organization implements a promotional strategy (Wilson et al. 2001). The purposes of promotion are, first, changing behavior means that the seller will always create a good impression or encourage the purchase of an item being promoted. Second, notifying; it means informing that there are goods that are being promoted; Third, persuading, mean persuasive, and persuading to have a long-term influence on buyer behavior. And, reminding means that the company is trying to retain its buyers (Indriyo Gitosudarmo, 2008). Promotion is one of the determining factors for success in a marketing program. Regardless of the quality of a product, if consumers have never heard the product information and are not sure about the product, they will not buy or use it. The promotion has stages to ensure the promotional activities run effectively. The stages are 1) setting goals, 2) identifying the target market, 3) designing messages, 4) setting a budget, 5) choosing communication channels, 6) determining the media, 7) measuring results, 8) managing the promotion process in an integrated manner. Tourism and promotion have a relationship because a good and appropriate promotion strategy will have a good influence on the tourism sector in attracting visitors. Government policies and economic stability will affect the existence of tourism development (Vogt dan Andereck 2000; Causevic dan Lynch 2013) This will have an impact on the number of tourist visits.

## III. METHOD

This study was a descriptive study with a qualitative approach. The research aimed to explore facts about tourism promotion strategies at the Department of Tourism, Culture, Youth, and Sports of Klaten Regency. The research subject, as the key informant was the Head of the Tourism Division. And, the supporting informant was the Tourism Marketing Officer and the Counterpart Officer. The selection of informants was based on people who were considered capable of providing complete and relevant information. The data collection techniques were observation, interviews, and documentation. Observations were carried out with non-participants

because the researchers only observed and were not directly involved in the activities of the relevant agencies. Observations were made by observing activities related to promotions and other activities carried out at the office of Tourism, Culture, Youth, and Sports Klaten Regency. These observations were made during collecting the data. The observation observed included: the condition of the office building, tourism objects, and the completeness of promotional media and employee performance.

Data collection techniques were through structured interviews. The type of question was open-ended to obtain answers from informants widely which was very useful as a basis for further research. Interviews were conducted repeatedly with different informants with increasingly focused questions. The instruments included tourism promotion strategies, supporting factors, inhibiting factors, and steps in overcoming the obstacles.

Documentation was conducted by collecting data to be studied and reviewed. This method was used to collect data related to the history of the organization, organizational structure, main tasks, and functions of employees.

The technical data analysis (Sugiyono, 2013) consisted of 3 steps. First, data reduction. The process of data reduction was to summarize, choose the main things and focus on the important things. Data from interviews, observations, and documentation were simplified and presented by selecting relevant data to answer research problems. Second, data presentation. Efforts to compile information obtained from the data reduction were then presented in a systematic and easy-to-understand report. Third, Concluding, the conclusion drawing was carried out by looking at the results of data reduction and referring to the problem formulation and the research objectives. The compiled data was then connected and compared with one another so that it is easy to conclude the answer to each problem formulation.

Triangulation of sources and methods was used to determine the validity of the data. This technique was conducted by comparing data from interviews between one informant and other informants, as well as between the results of interviews, observations, and documentation. The data was valid when there is the suitability of information between a respondent and another respondent and the suitability of information between the results of interviews, observations, and documentation.

#### IV. RESULT AND DISCUSSION

Tourism promotion strategies need planning and management to provide optimal contributions to local governments and the environment (Liu et al. 2003). The tourism promotion strategies carried out by Klaten Regency include:

#### 1. Identify the Need of Community

The strategy was carried out by conducting data searches by officers in charge of counterparts. Moreover, the community can argue their wishes or complaints by directly visit the office of Tourism, Culture, Youth, and Sports of Klaten Regency. The procedure was felt comfortable by the community. The needs of the community were tour guide training, Pokdarwis (Tourism Awareness Group), and homestay development.

Data from community inputs were identified based on groups and their needs. The results of the processing were in the form of infographics, tourist maps, and calendars. In line with the statement (Kotler & Keller, 2012), the basis of promotional design was to identify the audience. Through the previous strategy, the data can be identified by the number of visitors who vary from year to year based on tourism objects, hotel data, and tourism object data.

#### 2. Identify the Target Market

Market identification was important in formulating a strategy or activity. Identification makes it easier to plan a program or activity. The next step was to give priority to events or trends that were currently in the community. As a developing community trend was selfie photos, they have built a selfie photo spot for young people who like a good landscape. For the needs of parents, they prefer religious or leisure tourism, namely by building tours relaxation with small fish in the pond. By changing the existing behavior, a person will feel more interested and try new things which means it will also present a new atmosphere in tourism (Basu Swastha and Irawan, 1990).

Promotion from another aspect was held yearly events or carnivals which were attended by thousands of local and foreign people by inviting national guest stars. Each tourist attraction in Klaten has a different number of visitors. The two objects with the most visitors have different market shares. The tourism object is the umbul tour as a tour to relieve fatigue and religious tourism in the form of spiritual tourism to the tomb.

#### 3. Increase the Cooperation

If the cooperation and partnership between Dinpar and all parties go well, all the goals will be achieved properly. Dinpar establishes a collaboration or partnership to expand relations and facilitate the formation of an agreement or cooperation (Stokes and Jago 2007).

The Department of Tourism, Culture, Youth, and Sports of Klaten Regency cooperates with various parties, especially the community, investors, schools, Village-Owned Enterprises (BUMDes), Association of Travel Companies (ASITA), Indonesian Tour Guide Association

(HPI), and might open collaborations with other agencies who want to promote tourism in Klaten.

The cooperation went well, especially with the community, such as free training for tour guides by bringing in mentors from HPI. In addition to promoting tourism objects managed by the government, also pay attention to the tourism objects managed by BUMDes and working together in exhibitions and providing prizes. Both are mutually beneficial because they are large contributors to Regional Original Income (PAD).

Meanwhile, cooperation with external parties must use a Memorandum of Understanding (MOU). MOU is a letter of agreement that contains an agreement between individuals or organizations that must be carried out by both parties without exception. The MOU is important because it plays as a rule issued by the regional government through a regional regulation (Perda). It contains tasks and functions, budgeting, profit sharing, and rules that must be met by both parties (Stokes and Jago 2007). Based on the observations, it is also clear that Dinpar has just completed the free tour guide training. The Cooperation will create a new tourism object that will enliven tourism in the Klaten area.

#### **d. Optimizing the Use of Media**

The Tourism Office in Klaten disseminates the information to the public through the media. The dissemination of information aims to facilitate the dissemination of messages and information and reduce barriers to communication. The media is needed because the media can facilitate the spreading of the news and minimize barriers that often occur in communication.

Media, in general, can be grouped into printed media, electronic media, and outdoor media. In some cases, officers can choose more than one in using the same type of media by considering how effective the media is. The ideal use of media should use a combination of several media. This is so that the message conveyed is right on the target market. Public Relations of the Department of Tourism, Culture, Youth, and Sports of Klaten Regency uses several media (Basu Swastha and Irawan, 1990). This aims to attract visitors to know and decide to travel in Klaten. The first media were websites and online media (Wilson et al. 2001).

The Department of Tourism, Culture, Youth, and Sports of Klaten Regency considering all the data has decided to make booklets compared to similar printed media, such as leaflets, brochures, and so on. The reason was the booklet cover all the information. Also, the delivery of information can explain the attractions in Klaten accompanied by supporting pictures.

Electronic media such as television was used as a means of promotion. The Department of Tourism, Culture, Youth, and Sports of Klaten Regency presented the tourism objects, either to local and national television news. Although it is rarely broadcast, at least, the tourism potential in Klaten was known by the wider community. Then, the people would know and explore more. For radio broadcasts due to the limited range of radio waves, the target is more aimed at local communities. From the two electronic media, the office of Tourism, Culture, Youth and Sports Office in Klaten Regency is still promoting using the internet by building a website, but it has been vacuumed. Throughout 2019, it only updated the tourism calendar schedule in Klaten, and after a few months, the website could not even be accessed and not found on the Google search engine. It is because the website has stopped temporarily and moved to social media such as Facebook, Twitter, and Instagram. However, only Instagram is still updating information due to the limited number of officers within the Office.

The choice of media is very influential in the number of tourist visitors. Apart from online media, Dinpar also used printed media to market tourism in Klaten. Dinpar printed or got a printing allotment from the government once a year. Dinpar always updates the contents in the booklet because every year many new tourist objects appear and need to be disseminated to the wider community.

Tourism promotion includes marketing activities that encourage purchase by consumers such as demonstrations, performances, or exhibitions. The exhibition is an activity of presenting cultural objects or collections so that they can be appreciated by the wider community. Dinpar exhibitions may be in the form of submitting a delegation from Dinpar to attend an event by presenting videos and pictures and tourism ambassadors. With budget fees obtained from the government every year, the Klaten Regency held the Klaten Lurik Festival. This event has been held for the fifth and was able to attract the interest of the people who witnessed it as an inspiration for fashion creations made from lurik fabric. Lurik cloth is a simple small line patterned cloth that is characteristic of the Klaten area. It is usually held to commemorate the anniversary of Klaten Regency as well as enliven Indonesian Independence Day. Continuously of the event agenda is expected to achieve the objectives of the promotion (Joppe 1996).

The events are expected to be a bridge to promote culture as well as the fabric industry in the Klaten area. Meanwhile, the Department of Tourism, Culture, Youth, and Sports of Klaten Regency also held an exhibition in the form of indoor sharing shows or presentations about

tourism and culture in Klaten with an intensity of about five to nine times a year (Stokes and Jago 2007).

## V. CONCLUSION

The development of tourism promotion in the Klaten regency was carried out with various strategies. The cultural approach becomes an icon to attract tourists. A different thing is served to tourists through local legends. The role of the community is an important element in the involvement of tourism development. The government is very open to cooperation. Collaboration is possible for mutual synergies between local communities, local governments, and other institutions who want to be investors.

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# Practical Learning Media for Distance Learning Used by Teachers of OTKP Vocational High School in Central Java

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**Abstract**—During the covid-19 pandemic, the learning process is carried out through distance learning at all levels of education. The implementation of Distance learning in Vocational High School is different from other levels of education as contains a practical curriculum. Distance learning must provide technical skills following the need of the vocational curriculum. The implementation has faced many obstacles, such as internet access, unfamiliarity with distance learning, and the poor ability of teachers in utilizing ICT. The study aimed to find out whether the learning media, used by teachers of Office Automation and Governance (OTKP) for distance learning in the COVID-19 pandemic, is the right way in teaching direct skills related to office competencies. This study used an ex post facto design. The population was teachers of OTKP Vocational High School in Central Java. The sample selection technique used a random sampling area that two teachers were selected representing regency and city. Then, 71 teachers had chosen as the target sample.

The study used a questionnaire. The close questionnaire used the Likert scale. The inferential statistical analysis was used for the main data analysis, and completed with descriptive and qualitative data analysis. A hypothesis test was carried out using non-parametric statistics, namely the Kendall Tau correlation test. The conclusions were 1) there was no relationship between the use of learning media for distance learning and learning outcomes, 2) Teachers of OTKP Vocational High School in Central Java used the instructional media for distance learning practices, including google classroom, google, WhatsApp, and google form as learning assessment media, and 3) Distance learning was not effectively carried out in OTKP Vocational High School in Central Java as it has not been able to provide adequate practical experience.

**Keywords**—*Instructional Media, Distance Learning, Practical Distance Learning, Vocational Education*

## I. INTRODUCTION

The restriction on community activities (PPKM) is a government policy since the beginning of the pandemic. The policy has a broad impact, such as the shutdown of the schools throughout Java. The shutdown school applies from the basic education level to higher education. The teaching and learning activities switched from face-to-face to distance learning (Arlinwibowo et al., 2020; Herliandry et al., 2020; Ministry of Education and Culture, 2020). The policy is an emergency solution to ensure the learning

process continues during pandemic conditions (Diningrat et al., 2020).

Distance learning is an information and communication technology (ICT)-based learning that leads to help to achieve effective learning (Cronje, 2020; Dax et al., 2017; Mayer, 2019; Zulfikar et al., 2019). Many studies examine the effectiveness of distance learning, especially in increasing learning engagement, learning outcomes, learning motivation, classroom activity, and understanding the learning (Barbara et al., 2013; Cronje, 2020; Herliandry et al., 2020; Mulyanti et al., 2020; Zulfikar et al., 2019).

In Indonesia, distance learning began to be studied and developed starting in 2012. The idea of implementation the distance learning was only limited to implementation at the higher education level. As stated by (Hardhono, 2012) on the possibility of facilitating collaboration of distance learning in Indonesia. The design of distance learning in higher education was carried out by (Nugroho, 2012) that made a learning website at the State University of Semarang. Then, the research examines the effect of learning through e-learning was conducted by (Nisa, 2012), who stated that learning through e-learning had no significant effect. Meanwhile, research on distance learning at the secondary and basic education levels was started in 2015 by (Kurniawan, 2015) that research the e-learning development for learning at SMA Karang Doyo. The development of distance learning is growing at the higher education level due to the facilities and resources support, especially from the Ministry, such as the existing online learning system (SPADA RI), while the opposite condition at the secondary education level still needs to be improved as many challenges occur (FISKOM. UI), (2018).

The implementation of distance learning during the pandemic is a formidable challenge for all levels of education, especially the secondary education level. Rapid policies related to switching the face-to-face to distance learning, completed by limited infrastructure and low level of readiness, may make the policy experiencing barriers, including signal problems, not ready students, teachers who are not used to it, and others (Anak, 2020; Arlinwibowo et al., 2020; Diningrat et al., 2020; Herliandry et al., 2020; Rusmiati et al., 2020). For higher education institutions, distance learning is not a new way but has become one of the standards of learning policy. For example, in 2019, Yogyakarta State University (UNY) regulates the process of implementing distance learning on academic regulations that are conducted in blended learning or full-online learning (UNY, 2019).

Three components in the concept of distance learning are learning models, instructional strategies and learning



media. The components will be interrelated with each other to create a new learning environment (Atsani, 2020; Gordon & Vos, 2001). Learning media is an important component in the implementation of distance learning. Learning media or referred to by (Reiser & Dempsey, 2002) as multimedia and a combination of two or more media can channel messages, stimulate students' thoughts, feelings, and willingness so that they can encourage the creation of a learning process in students.

Using the right learning media is a factor affecting the success of the implementation of distance learning. In the digital era, the media for distance learning is a technology and information-based media or ICR-based media (Atsani, 2020; Huda et al., 2017; Mayer, 2019). Implementing ICT-based learning media make students and teachers carrying out learning from anywhere and anytime without any limitation (Andriani, 2015; Cronje, 2020; Horvitz, 2007). According to (Cronje, 2020), the concept of blended learning includes several technologies, for example, books for tutorials, videos and teachers for direct teaching via teleconference, spreadsheets for construction methods, discussion tools in learning management system (LMS) for discussion, and website to get experience.

In distance learning, a teacher must master and have sufficient ability in utilizing ICT as the main learning media. For a teacher, information technology-based learning media is professional competency in the industrial revolution era (Barsah et al., 2020; Wahyuni, 2018). In the era of big data and industrial revolution, ICT become a technological competency for educators as part of the development of innovative learning and following the era (Huda et al., 2017; Zhu et al., 2013).

The use of ICT in the learning process is not a new thing in Indonesia. And, it has been discussed by several studies, including (Dwihartanti & Gafur, 2014) (Mahdum et al., 2019) (Puspitasari et al., 2018) (Syamsuar & Reflianto, 2019) which learning have used ICT, such as flash media, website, PowerPoint, education CD/DVD, movies, online games, online quizzes, blogs, etc. In addition, ICT capabilities are also required in the implementation of the K-13 curriculum which has been improved in 2018 (Mahdum et al., 2019).

Although the ICT ability is needed in the digital era and is one of the professional abilities of teachers, but, many teachers still do not have this kind of ability. The statement is supported by results of the Teacher Competency Test (UKG) in 2020, that the UKG average value of teacher professional competence is 54.77, below the established standard (Ministry of Education and Culture, 2019). Other findings, teachers did not have good skills in using ICT, both learning before the pandemic (Mahdum et al., 2019) and during the pandemic is still a big challenge and barrier for teachers (Arlinwibowo et al., 2020; Rusmiati et al., 2020; Shah, 2020). Moreover, it completes with the poor digital competence of students and inadequate pedagogical practices (Lynch, 2020).

The learning media for distance learning have different characteristics from face-to-face learning. In general, PowerPoint media is often used in face-to-face learning (Dwihartanti et al., 2021; Jalil et al., 2016; Rachmat & Winata, 2019). For distance learning, using learning media is very dominant, not only as a means of conveying material

but also as a learning resource, a place to discuss material, to the assessment. Many types of online learning media include Edmodo, Google Classroom, Google Meet, WhatsApp, YouTube, Ruang Guru, or Zoom Meeting (Atsani, 2020) (Nur et al., 2020). Media also have different functions. (Pjanić et al., 2013) use a combination of learning media provided by Google, such as presentation, communication, presenting pages, collaboration, learning resources, and assessment.

The learning media selection is based on several factors, namely the appropriateness of learning media with learning objectives, learning materials, and characteristics of students (Azhar, 2011). Based on the previous explanation, the learning media for distance learning is divided into video conference media, communication/discussion media, media for presenting learning content/ management, and media for learning assessment. The media should continue to be used and collaborated in one unit. The selection of learning media must be based on learning objectives, ability to use, the ability of acceptance by students, learning materials, availability, and flexibility of media (Azhar, 2011; Hamid et al., 2020).

The learning media for distance learning is very dependent on the internet. So, the main reason to select media is following the characteristics of students. The barrier and challenge in Distance learning are the internet facilities. Findings by (Bozkurt et al., 2020) find out the obstacles in implementing distance learning in 31 countries is inequality of internet access and tools or devices to support distance learning. Also, the barrier occurs in implementing distance learning in Indonesia, such as internet access and device owned by students in accessing learning media or learning resources (Arlinwibowo et al., 2020; Atsani, 2020; Handarini & Wulandari, 2020; Mustakim, 2020 ).

Vocational High School (SMK) is a secondary level of education that focuses on preparing graduates into a skilled or sub-professional staff in a particular field of work (Maysitoh & Agung, 2018; Widiyanto, 2018). The definition is following the concept of vocational education which prepares students to master or possess skills (Paylova, 2009). Learning at Vocational High School is more practical competence than theory (Ari, 2015). Therefore, it is a challenge for teachers to carry out online learning. A finding by (Khusni et al., 2020), online learning has not provided yet experience and productivity in mastery competencies. The finding is similar to Mulyanti et al., (2020), that the practicum material conveyed in distance learning is only 51.5% by the industry needs. Thus, it will have a negative effect on students, such as not achieving the established competencies after graduation. The big impact will give the number of unemployment as unskilled graduates required by the industry (Syah, 2020).

The study aimed to find out whether the learning media, used by teachers of Office Automation and Governance (OTKP) for distance learning in the COVID-19 pandemic, is the right way in teaching direct skills related to office competencies.

## II. LITERATURE STUDY

### A. Distance Learning

Almost all levels of education in all countries implemented distance learning during the COVID-19 pandemic. The term distance learning may use the term online learning, distance learning, emergency learning, electronic-based learning/e-learning. Distance Education or Distance learning is an education in which students and teacher are not in one place and uses various learning resources through the application of educational or learning technology principles (Arinwibowo et al., 2020).

Distance learning is a combination of learning by utilizing technology, pedagogy, and even, includes the assignment of tasks or work. The implementation of blended learning must use a combination of theory, methods, and technology to maximize learning in certain contexts (Andriani, 2015; Cronje, 2020). The concept of distance learning also states by Diningrat et al. (2020), that define as an emergency online teaching that requires a variety of learning technology in the process of conveying material, knowledge, and content. And, the learning technology is used to communicate between teachers and students so that learning activities can continue to run to achieve the goals. Based on the previous opinions, concluded that distance learning is an educational process utilizing technology and the teacher and student are not in one place in the process of conveying material, content, and knowledge, without reducing the quality of learning related to pedagogy to achieve the goals.

Online learning consists of three parts, namely about what, how the learning process, and why online learning is carried out. First, about what is focused on the topic or material will convey to students. The material may be oral or direct using audio recording media or using printed media, graphics, diagrams, photos, animations, or videos. The material must follow the learning objectives. 2) how relates to how students will learn the material through computers, tablets, smartphones, or virtual reality. How also relates to the application, such as e-learning portal, video conference, or instant messages application. 3) why relate to instructional objectives and more focus on seeing what specific changes of knowledge will be experienced by students (Mayer, 2019).

## B. Vocational Education

Vocational education is formal education held at the secondary education level. The implementation of vocational education is carried out by Vocational High Schools (SMK). The purpose of vocational education is to prepare graduates to directly work as skilled/sub-professional workers through mastering certain skills (Maysitoh & Agung, 2018; Paylova, 2009; Widiyanto, 2018).

Office Automation and Governance (OTKP) is one of the majors in Vocational High School. OTKP Vocational School aims to produce middle-class workers who have competencies in the field of administration who are competitive, responsible, technology-skill, and

character. Therefore, a clear and competitive curriculum must contain the process of preparing graduates. The curriculum at OTKP Vocational School has a goal that includes four aspects of competence, including (1) aspects of spiritual attitude competence, (2) social attitudes, (3) knowledge, and (4) skills. These aspects of competence are achieved through intracurricular, co-curricular, and extracurricular learning processes (Vocational High School Curriculum, 2018). Considering the skills building, the characteristic of the vocational curriculum is in the aspects of knowledge and skills which are referred to as core competencies in the vocational.

OTKP Vocational School has subjects to achieve the goal and teach graduates as skilled workers in the field of administration. The subject group at the OTKP Vocational School consists of basic expertise, basic skills programs, and competency skills. The group subjects of basic expertise are simulation and digital communication, business economics, general administration, and science. The group subjects of the basic expertise program are office technology, correspondence, and archives. The subjects of the skill competency group are automation and personnel governance, automation and infrastructure management, automation and financial governance, and automation and public relations and protocol (Vocational High School Curriculum, 2018).

The subject consists of core competencies of knowledge and skills so that learning is a combination of theory and practice. Therefore, it needs to design the right learning media to facilitate the practical learning process for students in OTKP Vocational Schools during the pandemic.

## C. Instructional Learning

The word media are from the Latin word "medius" which means "middle", "intermediary" or "introduction". (Reiser & Dempsey, 2002) in his book states that the term multimedia is a combination of two or more media that can transmit messages and stimulate the thoughts, feelings, and willingness of students. In the end, it can encourage the learning process. Nowadays, multimedia usually refers to contemporary software that contains a combination of text, graphics, animation, video, or audio (Reiser & Dempsey 2002). The conclusion, media can be human, material, or all events that can build conditions and help students to gain knowledge, skills, or attitudes. In short, media may be the form of graphic, photographic, or electronic tools that are used in the process of capturing and reconstructing received information visually or verbally (Azhar, 2011).

The function of educational media is to enhance the learning process aiming to improve the learning outcomes. [40] states benefit using educational media in the teaching and learning process, including 1) learning becomes more attractive to foster learning motivation, 2) Clarify the

learning material to be more easily understood by students, 3) Has a high supporting factor in making varied learning methods, and 4) foster the activeness of students because they involved into the teaching and learning process. (Sadiman, 2002) states, educational media has benefits: 1) clarify the content of the material using pictures or videos, 2) overcome the limitations of space, time, and human senses, 3) variation learning media increase the activeness and motivation of students, 4) be a means of independent learning based on students' interests, and 5) provide the same perception to various types of student characteristics.

In the process of distance learning, media groups have different functions. (Pjanić et al., 2013) use a combination of learning media provided by Google which is divided into several different functions:

1. Media for the material presentation is a google hangout
2. Media for communication, both written and voice is Gmail
3. Media to present the page is google site and blogger.
4. Media for collaboration is Google documents and google+
5. Media for storing learning materials and resources is Google Drive.
6. Media for distributing and developing an application is Google applications
7. Media for learning assessment, quizzes, and surveys is the Google form.

Suggestions on the use of learning tools were also stated by (Nur et al., 2020), that 3 learning tools for distance learning are:

1. Google classroom uses as a media-based learning management system. Through Google Classroom, the teacher can give assignments, quizzes, or exams.
2. Whatsapp uses as a means of communication between teachers and students, providing broadcast messages and forums.
3. Zoom Meetings use for virtual meetings via video conference. The concept of learning tools is presented in Figure 1.

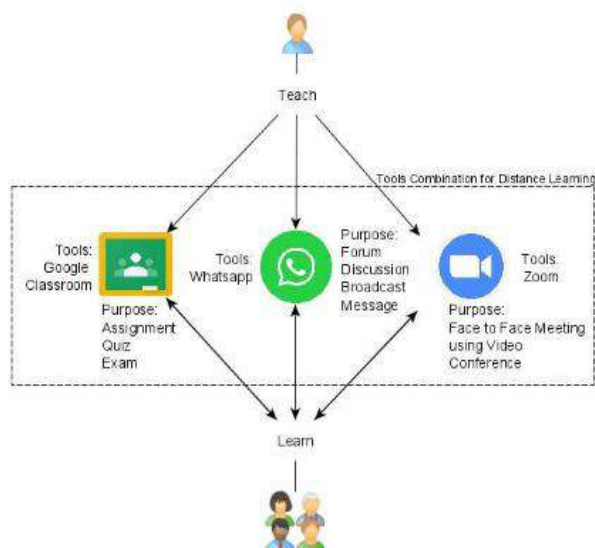


Figure 1. Tools Combination for Distance Learning (Nur et al., 2020)

Based on the definition and description of distance learning, vocational education, and learning media, concluded that three variables are a combination unit in emergency learning during the COVID-19 pandemic. Media is an important component as a means to convey material or practice for students of OTKP vocational school in distance learning. The process of selection, planning, implementation, and evaluation must consider the objectives of vocational learning which emphasizes the importance of mastering and possessing a competency.

### III. RESEARCH METHOD

The study used an ex post facto design. The population were teachers of the Office Automation and Governance Vocational High School (SMK OTKP) in Central Java Province, which consisted of 29 regencies and 6 cities. The sample selection technique used a random sampling area that two teachers were selected representing regency and city. Then, 71 teachers had chosen as the target sample.

The study used questionnaires and interviews. The questionnaire was a direct questionnaire with a close and open answer. The close questionnaire used the Likert scale. Questionnaires were used to collect data related to teachers' perceptions of the use of media for distance learning. The inferential statistical analysis was used for the main data analysis, and completed with descriptive and qualitative data analysis. Inferential statistics were used to analyze the sample data. The inferential statistical analysis consisted of prerequisite tests including normality and linearity tests, simple correlation analysis, and hypothesis testing. The prerequisite test showed the data was not normally distributed so that the hypothesis test was carried out using non-parametric statistics, namely the Kendall Tau correlation test.

### IV. RESULT

The findings will be presented in 3 parts, 1) the utilization of instructional media for distance learning, 2) the type of instructional media for distance learning, and 3) hypothesis test.

#### A. Overview of Subjects

The overview of the subjects taught by teachers of OTKP vocational high school in Central Java is presented in table 1.

Subjects	f	%
Automation and public relations and protocol	13	18,31%
Office technology	12	16,90%
Automation and infrastructure management	11	15,49%
Correspondence	10	14,08%

Subjects	f	%
Automation and financial governance	9	12,68%
Archives	8	11,27%
Automation and personnel governance	5	7,04%
Digital Communication Simulation	1	1,41%
Creative Products and Entrepreneurship	1	1,41%
General Administration	1	1,41%

Based on table 1, most of the teachers (respondents) taught basic subjects of expertise and competency skills. And, it contains core competencies of knowledge and competency skills. In addition, it also obtained data about the practical learning assessment instrument, conducted by teachers. Data on practical learning assessment instruments conducted by teachers of OTKP vocational high school in Central Java are presented in table 2.

**Table 2. Assessment Instrument**

Practical Assessment Instrument	f	%
Assignments	29	40,85%
Test of Work Performance	28	39,44%
Portfolio	5	7,04%
Observation	3	4,23%
Activeness	1	1,41%
Self-Assessment	1	1,41%
Multiple-Choice	1	1,41%
Not mention the instrument	3	4,23%
<b>Total</b>	<b>71</b>	<b>100%</b>

Source: Processed Primary Data (2021)

Based on table 2, most of the practical assessment instruments are assignments and performance tests. Moreover, some teachers have not mentioned the instruments used in distance learning.

**B. The Utilization of Instructional Media for Distance Learning**

The research results about instructional media used by Teacher in learning during the covid-19 pandemic are presented in Table 3.

**Table 3. The Quality of Learning Media**

Variable	Mean	Criteria
Appropriateness of the media and learning objectives	4,54	Very Good
Appropriateness of the media and learning material	4,54	Very Good
Appropriateness of the media and characteristics of students	3,94	Good
The ease to use the learning media	4,74	Very Good

Source: Processed Primary Data (2021)

Table 3 shows that the teachers have well-designed the learning media. All aspects of learning media are in very good and good criteria.

**C. The Type of Instructional Learning**

The research results about instructional media used by Teacher in learning during the covid-19 pandemic are presented in table 4. The LMS used for distance learning is presented in table 4.

**Table 4. Tools of Learning Management System**

Learning Management System	f	%
Google Classroom	38	53,52%
Microsoft 365	7	9,86%
Schoology	3	4,23%
Moodle	2	2,82%
Sekolah.id	1	1,41%
School Website	1	1,41%
Not Using LMS	19	26,76%
<b>Total</b>	<b>71</b>	<b>100</b>

Source: Processed Primary Data (2021)

Based on the data in table 3, Google Classroom is the most LMS used by teachers in Central Java in distance learning activities, which consisted of 38 teachers or 53.52%. On the other hand, 19 teachers, or 26.76% have not used LMS in distance learning.

**Table 5. Application of Video Conference**

Video Conference	f	%
Google Meet	11	15,49%
Zoom Meeting	10	14,08%
Microsoft Teams	10	14,08%
Not Using video conference	40	56,34%
<b>Total</b>	<b>71</b>	<b>100</b>

Source: Processed Primary Data (2021)

Based on table 5, Google Meet is the most application used by teachers in Central Java in distance learning activities, which consisted of 11 teachers or 15.49%. Then, Zoom Meeting and Microsoft Teams with 11 teachers or 14.08%. Meanwhile, 40 teachers or 56.34% do not use video conference applications.

**Table 6. Communication Media**

Communication Media	f	%
Whatsapp	45	63,38%
Telegram	2	2,82%
Email	1	1,41%
Not Using Communication Media	23	32,39%
<b>Total</b>	<b>71</b>	<b>100</b>

Source: Processed Primary Data (2021)

Table 6 show that WhatsApp is the most used communication media aspect by teachers in distance learning. And, 23 teachers or 32.39% do not use communication media applications in distance learning.

**Table 7. Practice Tools**

Practice Tools	f	%
Canva	1	1,41%
Sway	2	2,82%
Not Using Practice Tools	68	95,77%
<b>Total</b>	<b>71</b>	<b>100</b>

Source: Processed Primary Data (2021)

Table 7 shows, that only 3 teachers or 4.23% use practice tools. Meanwhile, 68 teachers or 95.77% do not use practical tools.

**Table 8. Assesment Tools**

Assesment Tools	f	%
Google Form	35	49,30%
Quiziz	11	15,49%
Kahoot	6	8,45%
Microsoft Office 365	2	2,82%
Whattapp	1	1,41%
Not Using Assessment Media	16	22,54%
<b>Total</b>	<b>71</b>	<b>100</b>

Based on table 8, 35 teachers or 49.30% use Google Form for assessment tools. Meanwhile, 16 teachers do not use the assessment tools on distance learning.

**D. Hypothesis Test**

This section describes the hypothesis test. Before the hypothesis test, it obtained descriptive data about learning outcomes, especially the psychomotor aspects, which are presented in Table 9.

**Table 9. Results of Descriptive Statistic**

Results of Descriptive Statistic	
Mean	78,94
Standard Error	0,91
Median	80
Mode	80
Standar Deviation	7,65
Minimum	60
Maximum	95
Count	71

Based on table 9, the mean value of psychomotor learning outcomes was 78.94. The minimum value was 60. The maximum value was 95. And the standard deviation was 7.65. After the descriptive statistical test, the next step is to test the research hypothesis.

The research hypothesis test used non-parametric statistics, namely the Kendall Tau correlation test because the data are not normally distributed. The output of the Kendall Tau correlation test using SPSS 12 software is presented in figure 2.

Correlations			
		Media	Hasil_Prikomotorik
Kendall's tau_b	Media	Correlation Coefficient	1,000
		Sig. (2-tailed)	,031
		N	71
Hasil_Prikomotorik	Media	Correlation Coefficient	,031
		Sig. (2-tailed)	,723
		N	71

**Figure 2. Output SPSS**

Based on figure 2, the Kendall rank correlation coefficient was 0.31. The value of sig. (2-tailed) obtained a critical level of 0.723. Value of sig. (2-tailed) > 0.05, then H0 is accepted. So, there was no significant relationship between the use of media for distance learning and learning outcomes of psychomotor aspects.

**V. DISCUSSION**

The learning process in Vocational High School is different compared to other secondary education levels. With its various characteristic, the learning process in Vocational High Schools must build students to have technical skills according to fields of expertise. This concept must continue and be a standard during distance learning. In particular, the OTKP Vocational High School with expertise in the office sector should provide practical skills to students. However, the hypothesis test showed no significant relationship between the use of media for distance learning and learning outcomes of psychomotor. This finding is in contrast to the descriptive results of the teacher's perception toward the criteria of media selection for distance learning where the average result is very good and good, and the mean of learning outcomes of psychomotor aspect was above the Standard of 78.94.

The result does not surprising because, before the pandemic, a survey and evaluation had been conducted on the implementation of distance learning in vocational school, conducted by (Khurniawan & Alkibzi, 2019) and facilitated by the Director of PSMK, Ministry of Education and Culture. The conclusion state that distance learning is not properly applied in vocational high school and no prove a guarantee of distance learning in vocational high school able to achieve graduate competence according to Permendikbud Number 34 of 2018. Supported by Khusni et al. (2020), students, during distance learning in the pandemic, felt had not obtained better experience and productivity in mastering technical competencies.

Aiming to explain in detail these findings, the article divides the discussion into parts, namely Appropriateness of the media and learning objectives, Appropriateness of the media and learning material, Appropriateness of the media and characteristics of students, and The ease to use the learning media.

**A. Appropriateness of the media and learning objectives**

OTKP Vocational School has subjects to achieve the goal and teach graduates as skilled workers in the field of administration. The subject group at the OTKP Vocational School consists of basic expertise, basic skills programs, and

competency skills. The study showed that all the subjects taught by the respondents were a group of expertise competencies and basic skills programs. Therefore, teachers need to adjust the learning media following the learning objectives because learning media is absolute and important in distance learning. Learning media for distance learning is used to convey learning materials to students (Atsani, 2020). The results of the level of appropriateness of the use of learning media with learning objectives was a very good level. This finding is in contrast with the hypothesis test. Several things affect the finding, including.

**First**, in distance learning, there is a need for learning media especially practical learning, that must be used by teachers in learning, namely LMS, practice media, and learning assessment. The research showed practical media of Canva and Sway may be used by students to build office skills. Both programs are used to practice the subject of office technology related to making presentation media. Apart from these media, there are no other practical media used by teachers of OTKP Vocational High School in Central Java. The results of the open questionnaire obtained information that aims to fulfill the student's scores, students were given a substitute task for practice instead of practicing directly. In fact, many practical media can be accessed online by students, for example, OMEKA for the practice of managing electronic archives (Abi & Hakim, 2016), google spreadsheets for financial management practices (Faridah & Rochmawati, 2019), blogs for the practice of making news and google documents, and Grammarly for the practice of English correspondence (Setiawan et al., 2020). Many online applications can be used as a means of student practice to build skills, especially in the office sector. However, teachers are still not aware of and use the media.

**Second**, the process of implementation of the K13 curriculum, especially in the assessment process, emphasizes the use of authentic assessment. The use of authentic assessment in vocational high school is very urgent due to graduates are required to have knowledge, skills, and behavior of the problem-solving process in the professional world. With these demands, the authentic assessment process becomes less than optimal for measuring aspects of skills due to various barriers during the distance learning process. The Ministry of Education and Culture (2020) has provided guidelines of formative and summative assessments for learning assessment in distance learning.

In the assessment process of student learning outcomes at distance learning, media must be following the objectives of practical learning. The study showed that most of the learning assessment instruments were assignments, performance tests, and portfolios. Then, most of the teachers used google form and quizzes as assessment media.

The use of google form as a medium for learning assessment has been widely studied. The effectiveness of the google form in online learning assessment was assessed by (Nofitasari & Ahsani, 2020; Santoso, 2019; Septiawan, 2020) stated that google form was very easy, simple, and effective, especially for online learning. Moreover, Google Forms is also favored by Generation Z, who on average now are in senior and high school levels. Not only at the high school, but google Forms may also use easily at the elementary level (Assalaamy & Aziz, 2021; Nofitasari & Ahsani, 2020). But, this result is in contrast to (Chaiyo &

Nokham, 2017; Lestari & Aulia, 2018), that students prefer the use of Kahoot and Quizziz as learning assessment media as it is more interactive and has many effects compared to a google form. The google forms can also facilitate students to upload their portfolios, but cannot facilitate direct performance tests, and only through video recordings of the performance.

#### B. Appropriateness of the media and learning material

A learning media for distance learning is right when the media is following the learning material. The learning material in the practical learning process may use general material, practical worksheets, and tutorials. To facilitate the conveying of materials, discussions or forums, and explanations related to material, teachers can use LMS, communication media, and video conferences. The study shows the level of appropriateness of the media and learning materials is at a very good level. But, this finding is in contrast with the hypothesis test. Several factors affect this finding, including.

**First**, in distance learning, students need to download materials, worksheets, or practice demonstration videos, therefore, it needs a tool to facilitate as a learning resource. LMS is a server-side software system built to provide a framework to enable the functions over the internet (Kulshrestha & Kant, 2013). The advantage of LMS has many features. Many LMS applications are used by teachers, including Google Classroom, Schoology, Moodle, Sekolah.id, or Microsoft 365 which each application has advantages.

Google classroom is an LMS that is mostly used by teachers in Indonesia. The fact is based on a survey conducted by (Child, 2020), that 65.1% of distance learning is conducted through google classroom. The use of google classroom in distance learning is facilitated by the integration of other tools, such as storage on google drive, creating forms using google forms, or communication facilities using email. Many studies discuss the use of google classroom in increasing the effectiveness of learning. The following are the results from research on the use of google classroom to improve learning effectiveness, including:

1. Google classroom improve students' reading and writing performance (Albashtawi & Al Bataineh, 2020)
2. Google classroom improve the implementation of learning and support the improvement of students' problem-solving skills (Gunawan, 2017)
3. Google Classroom increases students' participation and learning and improves the dynamics of class (Heggart & Yoo, 2018)
4. Learning through google classroom is not boring and trains independent learning (Gupta & Pathania, 2021)
5. Learning through Google Classroom is easier to access, use, be interactive and communicative (Shaharaneet et al., 2016)

The findings strengthen the position of Google Classroom as the favorite LMS used by teachers in implementing distance learning. However, there are some weaknesses of Google Classroom, such as the display of the

Google Classroom interface is considered as not friendly for teachers (Abid Azhar & Iqbal, 2018) and difficulty in time management between Google Classroom and administrative because teacher spend time in designing content in google classroom (Hikmatiar et al., 2020). Moreover, Google Classroom requires internet-connected devices which is one of the issues in implementing distance learning due to poor internet access in Indonesia (Anak, 2020). But the role of LMS is only as a complex learning resource for students, not as a medium for practice related to skills, especially the OTKP.

**Second**, in the process of presenting practical material, the teacher facilitates students who ask questions with the media which can serve as a discussion forum related to the barrier and difficulties in the process of understanding the practical material. As communication is one of the most vital things in the implementation of distance learning, especially asynchronous learning because the concept of it is the teachers and students are not in the same place (Smaldino & Lowther, 2008). Therefore, the selection of the right communication media greatly affects the effectiveness of distance learning. In practice-based learning, practical activities are carried out as a forum for discussion regarding the barriers experienced by students in practical activities. The research showed WhatsApp as the most widely used for communication. Whatsapp is an instant messaging application using internet quota that helps users to communicate, share photos, videos, documents, voice, to send locations either through private or group messages (Hartanto, 2010). Whatsapp group is a feature provided by WhatsApp and widely used by teachers in distance learning. In a group, it can send messages such as text, videos, sound recordings, files, or link pages. With the various facilities, WhatsApp can be a single complete media for online learning.

As an instant messaging application, it is enough to surprise that WhatsApp is used by teachers for learning, meanwhile, the application is not designed for the learning process (Nur et al., 2020). Previous studies on the use of Whatsapp in learning activities were first conducted in universities. In 2013, (Rambe & Bere, 2013) examined the use of Whatsapp in learning in universities and showed that WhatsApp increases the active participation of students and lecturers. Then, in 2016 (Lubis et al., 2021) experimented with the use of Whatsapp in class. The results showed the experimental group obtained better scores than the control group. And, the student gave positive responses to the use of Whatapp in learning. In Indonesia during the COVID-19 pandemic, many studies have examined the effectiveness of using Whatsapp in distance learning, such as (Bensulong et al., 2021; Lubis et al., 2021; Sadat, 2020) which showed positive results.

**Third**, it has terms asynchronous and synchronous in the concept of distance learning. The details of the concept are presented in the learning setting quadrant in Figure 2.



Figure 2. Adaped from (Staley et al., 2007)(Chaeruman, 2019)

The basic concept of distance learning is online learning that uses virtual synchronous, collaborative asynchronous, or independent asynchronous. The need for learning media in distance learning follows the design made by the teacher. The big concept of distance learning in Indonesia refers to old habits because of the rapid transition from face-to-face learning to distance learning (Arlinwibowo et al., 2020) which requires face-to-face meetings between teachers and students. The face-to-face process on distance learning or virtual synchronous in the distance learning quadrant is done using a video conference application. The research showed the video conference application that is widely used by teachers is Google Meet. And, it followed with Zoom Meeting and Microsoft 365 with an insignificant number. Virtual synchronous activities are carried out as a means of communication, and practical explanations or demonstrations of practical activities.

The high use of Google Meet is following the high use of learning tools provided by Google, such as Google Classroom. Using google classroom, teachers can create a link to google meet directly on the LMS page so that it will make easy access due to it is an integrated way. However, the fact of the study showed that most teachers do not use video conferences in distance learning. This fact is in contrast to the concept of distance learning which places virtual face-to-face in learning concepts. Especially distance learning in vocational high school which prioritizes the building of student skills, here, teachers should explain the procedures for practice, discussion, and solving problems. The teacher's roles in distance learning, especially in broader practical activities, are a facilitator, collaborator, mentor, coach, director, and peer for students (Anugrahana, 2020; Kusmana, 2011; Nopiyanto et al., 2020). Therefore, the distance learning process that is not controlled, supervised, and managed properly by the teacher, might not be able to build technical skills within students.

C. Appropriateness of the media and characteristics of students

A challenge of distance learning during a pandemic is to use of learning media according to the characteristics of the student. Most of the students of OTKP vocational high

school are generation Z, while the teachers are the boomer's generation or generation X. The gap generational must become a considerable factor in developing learning innovations because the main focus of learning is the students, who are mostly Generation Z, can learn optimally according to the characteristics.

Generation Z is a generation that likes to socialize, express themselves, is mobile, global-minded, communicates using digital media, and likes visual things. Generation Z also prefers practical or instant and multitasking. Moreover, the focus of Generation Z students is only about 8 minutes, so they will not be able to focus on studying for a long-time in class (Suganda, 2018). Generation Z has a habit of switching from one device to communicate or switching from one application to another. The characteristic is caused by the ease of today's technology. For example, they can move files from a smartphone to a personal computer (PC) or laptop quickly, or switch the focus from a laptop to a smartphone quickly (Wibawanto, 2016).

The study showed a good level of appropriateness of the learning media and student characteristics. In contrast, the finding is a contrast to the hypothesis test. Several factors affect this finding, including.

**First**, the practical media are only limited to Canva and Sway. Moreover, most of the teachers of OTKP vocational high school do not use practical learning media. Student learning outcomes that above the KKM, are mostly the result of an assessment of substitute assignments, working on theoretical questions, portfolios, observations, activities, or self-assessments, that does not based on performance tests using practical learning media.

**Second**. Not only the learning methods for Generation Z, but the device support, network problems and family background also become a big challenge in the distance learning, especially practical learning (Anak, 2020; Arlinwibowo et al., 2020; Bozkurt et al., 2020; Diningrat et al., 2020; Herliandry et al., 2020; Rusmiati et al., 2020). Meanwhile all learning media to support practical activities requires an internet network.

**Third**, all practical media used by teachers are free-version media. And, teachers can perform only very few media improvisations. This confirms that teachers have limited abilities in developing learning media. In short, distance learning is only limited to habitual activities and does not fully meet the needs of students to achieve the competencies, especially in the OTKP field, due to the limitations of teachers in choosing, utilizing, and developing learning media (Arlinwibowo et al., 2020; Lynch, 2020; Mahdum et al., 2019; Rusmiati et al., 2020; Shah, 2020).

#### D. The ease to use the learning media

The last selection criteria for learning media is the ease of use of learning media. The main principle of learning media is how students can easily use the media following the learning objectives. The study showed a very good level of ease to use the media. The factor, when viewed from the supporting media for distance learning, most of the media used are familiar media with the characteristic of easy operation, especially for Generation Z students.

##### 1. Google classroom

It is the most LMS widely used in distance learning in Indonesia (Anak, 2020). Some of the advantages of Google classroom are its convenience and stability, ease for students to upload assignments, and saving-time to access materials (Abid Azhar & Iqbal, 2018; Hikmatiar et al., 2020; Nur et al., 2020; Titan et al., 2018).

##### 2. Google meet

The high use of Google Meet is following the high use of learning tools provided by Google, that is Google Classroom. Using google classroom, teachers can create a google meet link on the LMS page so that it will make easy access as it is integrated. learning through Google Meet can use both mobile and desktop devices. The advantages are free, easy to use, and HD quality videos (Aisyah & Sari, 2021).

##### 3. Whatsapp

Whatsapp is a popular applications in Indonesia that occupies social often used for users aged 16-64 years (Hootsuite & We Are Social, 2021). The Whatsapp application is already integrated on every smartphone based on Android and IOS.

##### 4. Canva

Canva is a graphic design platform used to create social media graphics, presentations, posters, documents, and other visual content. The application also provides a variety of design examples. However, the designing practice must be accessed using a computer or laptop and considered as Canva's weakness.

##### 5. Google form

The use of google form as a medium for learning assessment has been widely studied. The effectiveness of the google form in online learning assessment was assessed by (Nofitasari & Ahsani, 2020; Santoso, 2019; Septiawan, 2020) stated that google form was very easy, simple, and effective, especially for online learning. Moreover, Google Forms is also favored by Generation Z, who on average now are in senior and high school levels. Not only at the high school, but google Forms may also use easily at the elementary level (Assalaamy & Aziz, 2021; Nofitasari & Ahsani, 2020).

Most of the media are easy to use by students who are Generation Z. But, the media can only be used properly using a computer for practical learning. As the result, students who do not have computer devices, surely, will have difficulty in making designs using smartphones.

## VI. CONCLUSIONS AND SUGGESTIONS

### A. Conclusions

Based on the results and discussion, the conclusions were:

1. There was no relationship between the use of learning media for distance learning and learning outcomes



because most Teachers of OTKP vocational high schools in Central Java do not use media in practical learning.

2. The media to support the distance learning used by teachers of OTKP vocational high school in Central Java are Google Classroom as LMS-media based, Google Meet as video conference media, Whatsapp as communication media, canva as practical media, and google form as learning assessment media.
3. Distance learning was not effectively carried out in OTKP Vocational Schools in Central Java as it has not been able to provide adequate practical experience.

**B. Suggestions**

Vocational High School (SMK) is a secondary level of education that focuses on preparing graduates into a skilled

or sub-professional staff in a particular field of work (Maysitoh & Agung, 2018; Widiyanto, 2018). The definition is following the concept of vocational education which prepares students to master or possess skills (Paylova, 2009). Learning at Vocational High School is more practical competence than theory (Ari, 2015). Therefore, it is a challenge for teachers to carry out online learning. A finding by (Khusni et al., 2020), online learning has not provided yet experience and productivity in mastery competencies. The finding is similar to Mulyanti et al., (2020), that the practicum material conveyed in distance learning is only 51.5% by the industry needs. Thus, it will have a negative effect on students, such as not achieving the established competencies after graduation. The big impact will give the number of unemployment as unskilled graduates required by the industry (Syah, 2020).

**Table 10. Reference Tools For Distance Learning**

No	Media Type/Learning Source	Function	Reference
1	Learning Management System	Uses for a learning resource for sharing materials, learning videos, discussion forums, and evaluations	Google classroom
2	Communication Media	Uses for a discussion forum between teachers and students	Whatsapp
3	Video Conference Media	Use as virtual synchronous media	Google Meet
4	Practical Media	Uses as a place for students to practice according to the subject	1. Canva/ sway use to present a design 2. OMEKA use for archival practice 3. The blog uses for the practice of making a weblog 4. Spreadsheet use for practice of making the petty cash 5. Google doc use for practice of document 6. Grammarly use for the practice of English correspondence
5	Learning Assessment Media	Used as a means of assessing students after the learning process	Google Form

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