The Effectiveness Online Learning Medium in Increasing Vocational Education Student Motivation

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THE EFFECTIVENESS ONLINE LEARNING MEDIUM IN INCREASING VOCATIONAL EDUCATION STUDENT MOTIVATION

The Effectiveness Online Learning Medium in Increasing Vocational Education Student Motivation

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INFORMASI ARTIKEL

Keywords:

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Kata kunci:

Motivasi Belajar, SMK Administrasi Perkantoran, Google Classroom, PowerPoint, Pandemi Covid-19.

ABSTRACT:

The industrial era 4.0 demands changes in various aspects of life, including using the learning strategies and media. A learning strategy that suits the demands of the industrial era 4.0 is online learning using digital information technology-based. Many platforms offered to teachers for online learning, both paid and free platforms. Google Classroom is an example of a free online learning platform. Meanwhile, Office Administration Vocational School teacher usualy conduct offline learning using PowerPoint. This study aimed to find out the effectiveness of learning media of Google Classroom and PowerPoint in increasing the learning motivation of students in Office Administration Vocational School (OAVS) in the Special Region of Yogyakarta. This study used a quantitative approach, a quasi-experimental method, and a non-equivalent control group design model. The population was students of OAVS in the Special Region of Yogyakarta, covering four districts and one city. The sample was selected by cluster sampling technique based on the districts or city. Each district or city selected two schools as a sample, in which homogenous in characteristics. Data collection techniques used observation, documentation, and focus group discussion.

ABSTRAK:

Era industri 4.0 menuntut perubahan dalam berbagai aspek kehidupan, termasuk penggunaan strategi dan media pembelajaran. Strategi pembelajaran yang sesuai dengan tuntutan era industri 4.0 adalah pembelajaran online menggunakan berbasis teknologi informasi digital. Banyak platform yang ditawarkan kepada guru untuk pembelajaran online, baik platform berbayar maupun gratis. Google Classroom adalah contoh platform pembelajaran online gratis. Sedangkan guru SMK Administrasi Perkantoran biasanya melakukan pembelajaran offline dengan menggunakan PowerPoint. Penelitian ini bertujuan untuk mengetahui keefektifan media pembelajaran Google Classroom dan PowerPoint dalam meningkatkan motivasi belajar siswa SMK Administrasi Perkantoran di Daerah Istimewa Yogyakarta. Penelitian ini menggunakan pendekatan kuantitatif, metode eksperimen semu, dan model desain kelompok kontrol non-ekuivalen. Populasi dalam penelitian ini adalah siswa SMK Administrasi Perkantoran di Daerah Istimewa Yogyakarta yang meliputi empat kabupaten dan satu kota. Sampel dipilih dengan teknik *cluster sampling* berdasarkan kabupaten atau kota. Setiap kabupaten atau kota memilih dua sekolah sebagai sampel yang sifatnya homogen. Teknik pengumpulan data menggunakan observasi, dokumentasi, dan *focus group discussion*.

INTRODUCTION

Education is a field affected by the development of the industrial revolution 4.0. The educational development must be in accordance with the needs of students in entering the world of cyber-physics and internet of things (IoT). Educational institutions are required to always innovate along with advances in technology and information. Learning innovations use digital information technology facilities to improve the quality of learning (Karnegi & Iswahyudi, 2019). Learning sources that use digital information technology might be from anything, such as the internet, interactive learning media, or videos. When using

digital information technology, teachers are no longer the only source for learning, and it helps students during the learning process. Also, it helps teachers improve their teaching competence (Budiman, 2017).

Today, using digital information technology in the learning process is a must for teachers, which has the purpose of encouraging students to be more active, enrich, and ready involve in the industrial revolution (Wahyuni, 2018). The application, most teachers use simple media, such as PowerPoints that are downloaded directly from the internet. But, most of the media only contain standard content (Dwihartanti, Sutirman, & Yuliansah, 2018). Current situations also do not support the implementation of face-to-face conventional learning in the classroom. Since the announcement of the first case of COVID-19 by President Joko Widodo on Monday, 02 March 2020, in Jakarta, the learning process is shifted from offline to online by utilizing digital information technology.

Learning during the pandemic poses significant challenges, including in vocational high schools with poor support resources. Teachers with backgrounds and ages should prepare and deliver the material from home, even though they pose all the practical and technical challenges and often without proper technical support (Hodges et al. 2020). However, shifting learning into online-learning is a good and right choice during a pandemic. Online learning emphasizes pedagogical content knowledge (PCK), which deals with designing and managing the learning experiences and creating different learning environments through digital information technology.

Pedagogical content knowledge (PCK) leads to the use of interactive learning media. The media can stimulate activeness and increase the understanding and learning motivation of students (Yusuf, 2015). The application of interactive learning media will be more efficient and effective if it uses digital information technology facilities. An interactive learning media should have videos, questions, subjects, animated letters, and images, as well as the evaluations to obtain feedback that aims to measure the abilities of students (Supriyadi, 2016). All the content can be packaged in media and shared online with students through Google Classroom. Google Classroom is a free platform used in the online learning process.

PowerPoint is a face-to-face conventional learning media in the classroom. Meanwhile, Google Classroom is a learning media using digital information technology. Both learning media have the same purpose, which is to increase student motivation in the process of teaching and learning activities. Using PowerPoint and Google Classroom as the learning media, especially during the pandemic, provide a different effect on the teaching and learning

process. Therefore, the article provides an objective description related to these media in increasing the learning motivation of student during the pandemic, because motivation is viewed as an important factor in the success of teaching and learning activities (Harandi, 2015).

The article aimed to find out the effectiveness of Google Classroom and PowerPoint linked to the learning motivation of the student. The article used a qualitative approach and a quasi-experimental method with a pretest-posttest nonequivalent control group design model. The population was students of OAVS in the Special Region of Yogyakarta, covering four districts and one city. The sample was selected by cluster sampling technique, based on the districts and city. Data collection techniques were questionnaire and documentation. The answer choices on the questionnaire are divided into five levels, namely: strongly agree, agree, hesitate, disagree, and strongly disagree. The questionnaire uses content validity. The data analysis used parametric statistical analysis, namely T-test. Then, the data were analyzed descriptively to find out the level of effectiveness of the Google Classroom and PowerPoint learning media linked with the learning motivation of the student.

Internet-Based Learning Media (E-Learning)

E-Learning can be called a new way of teaching and learning. The learning process in e-learning is delivered using electronic media including using the internet, intranet, extranet, satellite broadcasts, audio / video recordings, interactive TV and CD-ROM (Govindasamy, 2001). Another opinion suggests that e-Learning is learning whose implementation is supported by technology services such as telephone, audio, videotape, satellite or computer transmission (Kusmana, 2011). In line with the above opinion, Hanum (2013) revealed that e-learning is a form of learning model that is facilitated and supported by the use of information and communication technology (ICT). The e-learning platform allows students to be able to access information via personal computers or access via mobile devices online on these technology platforms (Kattoua, Al-Lozi, & Alrowwad, 2016). Based on some of the opinions above, it can be concluded that e-learning is an online teaching and learning process using electronic-based media that is carried out using the internet, intranet, satellite broadcasts, telephones, computers and cellular devices. In the e-learning system it is known as LMS / CMS (Learning / Course Management System). Some of the well-known LMS softwares are Moodle, WebCT, Blacckboard, TopClass, Ecollege, Edmodo and Atutor. Besides LMS, internet-based learning is also known as virtual learning. Some examples of virtual classrooms are MOOCs, Bootscamps, Online Degree Program and Google Classrooms (Azhar, 2014).

Learning through e-learning media is usually carried out by blended learning or a combination of face-to-face and non-face-to-face learning through e-learning.

Google Classroom as a Learning Platform

Google Classroom is a new tool introduced to Google Apps for Education in 2014. Google Classroom is a virtual classroom that can facilitate teachers to create and organize assignments quickly, provide feedback efficiently, and communicate with students through virtual classes with ease (Jurca, 2018). The use of Google Classroom flourished after Google released a new version of Google Classroom in 2017 because private user access is allowed without having to have a Google Apps for Education account (Entherington, 2017). The increasingly massive use of Google Classroom encourages many researchers to examine more deeply about its use. Research conducted by Chang & Fisher (2001) focuses on how to validate Google Classroom as a new learning environment, namely a virtual learning environment that is very different from conventional learning environments. They proposed a new instrument called the Web-Based Learning Environment Instrument (WEBLEI). The core aspects of the new web-based learning environment are emancipatory (comfort, efficiency and autonomy), collective participation (flexibility, reflection, quality, interaction, feedback and collaboration), qualia (enjoyment, confidence, achievement, success, frustration and boredom), as well as information structure and design (content appearance, aesthetics, content validity, accuracy and content balance).

Subsequent studies have examined a lot about the effectiveness of Google Classroom in learning. Using Google Classroom can increase student satisfaction in the learning process compared to conventional learning methods, can save time and paperless, improve students' skills in solving problems (Fitriningtiyas, Umamah & Sumardi, 2019; Gunawan & Sunarman, 2017; Shaharanee, Jamil & Rodzi, 2016). Just like previous studies, research conducted by (Alim et al., 2019) also found the same thing even though there were several limitations experienced by students, especially related to the problem of facilities and internet networks which were still uneven. Its relationship with the achievement of academic performance using Google Classroom is considered to be able to improve student learning outcomes (Dewi, Zahrowati, & Sulistyawati, 2019; Su'uga, 2020).

Previous studies have presented many results about the effectiveness of Google Classroom as a learning medium. Some of the advantages of Google Classroom compared to other platforms are: very easy to create and use, all features are already available and integrated, storage with Google Drive, flexible, can be used for free,

saves internet quota, integrates with all Google services, paper less, provides feedback back directly to students (Entherington, 2017; Shampa, 2016; Keller, 2014; Lalabegyan, Martirosyan, & Sarkisyan, 2017). The use of Google Classroom is closely related to increasing student motivation. Several studies examining this were conducted by (Lalabegyan et al., 2017; Shaharanee, Jamil, & Rodzi, 2016) who found that the use of Google Classroom in the classroom can increase learning motivation. The main requirement is that the teacher must be able to design well and be interesting in the process of delivering media, assignments, quizzes and media content in Google Classroom.

Learning Motivation

The theory of motivation cannot be separated from the development of psychological theories, especially the theory proposed by Maslow (1943) regarding the Hierarchy of Needs. Then motivation theories developed rapidly. Motivation can be defined as an internal drive that can direct a person to behave towards a goal and be able to overcome feelings of dislike for something to do so (Emda, 2018; Togia, Korobili, & Malliari, 2011). In relation to learning, many concepts that examine learning motivation include (Ames, 1992; Emda, 2018; Glynn & Koball, 2006; Mubeen & Reid, 2015; Nurhasanah & Sobandi, 2019; Slameto, 2010) which states that learning motivation is an impulse from within or from outside that is received or issued consciously to direct behavior towards a goal in conditions or situations of teaching and learning interactions.

Based on the development of the theory of motivation in learning, there are several characteristics to be able to assess learning motivation. Glynn & Koball, (2006); Glynn, Brickman, Armstrong, & Taasoobshirazi, (2011); Mubeen & Reid, (2015) found that there are five variables in learning motivation, namely 1) intrinsic motivation, 2) self-efficacy, 3) self-determination, 4) career motivation and 5) grade motivation. Intrinsic motivation refers to the extent to which a person is willing to do something without any reward except for the activity. What it does has nothing to do with gifts or outside influence. Self-efficacy is closely related to the concept and self-esteem in a learning process. Self-Determination is closely related to the freedom of an individual to act because there is an urge to look for something new / new challenge. Self-Determination is closely related to self-determination and self-responsibility in the learning process. Career motivation is closely related to a person's goal setting in the learning process and the determination of personal learning goals and targets. Whereas the last one is grade motivation related to acceptance and tolerance for assessments / results / grades received (Deci & Ryan, 1985; Glynn & Koball, 2006; Mubeen & Reid, 2015). Motivation is one of the

determinants of the success of the student learning process (Levpušček & Zupančič, 2009).

PowerPoint as a Learning Media

Microsoft PowerPoint application was first developed by Bob Gaskins and Dennis Austin, in its initial edition PowerPoint was introduced as a Presenter by a company called Forethought, Inc. The first version of Presenter was released in 1887 on the Mac OS Classic operating system. After acquiring Forethought, Inch, in 1990 Microsfot launched PowerPoint in their application system. The biggest development of PowerPoint or Microsoft Office PowerPoint or PowerPoint was in 2013 when the latest version of Microsoft Office PowerPoint 2013 (PowerPoint 15) was released with an improved user interface and improved graphics capabilities (Austin, 2009; Gaskins, 1984). With a variety of qualified abilities in terms of presentations, PowerPoint later turned into a reliable learning medium. In the 1990s, universities began to make the transition from using overhead projection to PowerPoint slides (Brock & Joglekar, 2011). With the improvement of various PowerPoint features so that they have qualified capabilities so that they can help educators to prepare good, attractive and professional presentation materials (Priya, 2012; Segundo & Salazar, 2021). Research has studied a lot about the effectiveness of PowerPoint as a learning medium, some of which state that the results are effective and liked by students (Priya, 2012; Pros et al., 2014). In contrast to these results, several other studies reveal that the learning outcomes of students who use traditional methods obtain higher scores compared to learning using PowerPoint (Baker, Goodboy, Bowman, & Wright, 2018; Savoy, Proctor, & Salvendy, 2009. ; Waheeda & Murty, 2015). The use of PowerPoint as a presentation medium still has the opportunity to be studied more broadly. As was done by Brock & Joglekar (2011) about the effectiveness of using PowerPoint in learning, it can be effective according to the teaching style of educators and the use of slides that have solid content. This study also revealed that the number of slides should not be more than 20 slides with no more than 20 words. The right slide display will make students interested in the material displayed. With its strength as a visual media it can even be turned into an audiovisual media (Brodsky & Doherty, 2011; Indriani, 2019), PowerPoint should be able to become an attractive learning medium and be able to increase students' motivation to learn. Research on the relationship between the use of PowerPoint and increasing student motivation to learn has been carried out and obtained positive results. Several studies that confirm this have been carried out by (Stepp-Greany, 2002) who found that the use of powerpoints is effective in increasing motivation and understanding of concepts in learning,

has a positive effect on increasing motivation and interest in learning and provides effective experience and motivation for students (Hastings, 2000; Hill et al., 2012; Levasseur & Sawyer, 2006).

METHOD

Research Design

This research was conducted with a quantitative approach with a quasi-experimental method with a pretest-posttest nonequivalent control group design model (Wiersma & Jurs, 1995: 143) or according to Johnson & Christensen (2008: 330) called a nonequivalent comparison-group design. That way it can be seen the effectiveness of using google classroom in increasing interest, motivation and student learning outcomes.

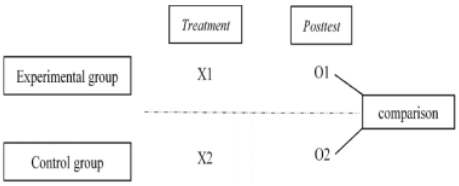

Figure 1. Research Design

Information:

X1: Using Google Classroom, X2: Using Powerpoint

O1: Posttest experimental group, O2: Posttest control group

Samples and Population

The population of this study consisted of students of class XI OAVS in the Special Region of Yogyakarta in 4 districts and 1 city with the condition that they had studied using Google Classroom media and Powerpoint media. Due to the limitations of researchers, they only took 5 vocational schools representing 3 districts and 1 municipality, namely SMK Negeri 1 Yogyakarta, SMK Negeri 1 Tempel, SMK Negeri 1 Wonosari, SMK Negeri 1 Bantul and SMK Negeri 1 Tepus. From the research population, samples were selected using random sampling technique. Respondents who filled out the questionnaire were 276 students or 79.37% of the study population.

Data Collection

The data collection techniques used in this study were questionnaires and documentation. Questionnaires are used to determine student responses related to the use of google classroom in online learning. Documentation techniques are used to see student achievement. There are two types of questionnaires used, namely closed questionnaires and open questionnaires. The closed questionnaire was to determine the responses related to the variables in this study, namely interest in learning and motivation to learn, while the questionnaire was open to obtain information about the obstacles faced in the learning process. The questionnaire uses a multilevel scale with five answer choices, namely: strongly agree, agree, doubt, disagree, and strongly disagree. The scoring of

the graded scale answers is carried out by giving weight to the quantitative values of 5, 4, 3, 2, 1 for positive statements and 1,2,3,4, 5 for negative statements.

The compilation of the questionnaire was carried out in two stages, namely: first, determining variable indicators, second, making question items, which were presented in the following table form.

Table 1. Research Questionnaire Grid

No.	Variables	Indicator
1	Student Learning Interests	a. Interest in learning b. Attention in learning c. Have the will to be directed d. Increased understanding of the subject matter e. Increased learning experience
2	Student Learning Motivation	a. Curiosity b. appreciation c. Personal goals d. Responsibility for your own destiny e. Confidence f. Anxiety about the assessment received

Source: The learning interest questionnaire by Slameto (2010) and Schiefele (1991) and the science learning motivation questionnaire by Glynn and Koballa (2006) with modifications.

Instrument Validity dan Reliability

The validity of this research instrument only uses content validity. To obtain content validity, there are several steps that must be taken. After the items of the research instrument were completed, they were arranged based on the lattice of the instruments made, then the content validity test was carried out. Content validity was carried out by rational analysis by consulting two expert judges. The expert is asked for his opinion on the instruments that have been prepared based on his empirical experience. After revising the research instrument based on input from expert judgment, the next step is to test the research instrument. The process of testing the research instrument was carried out on samples in accordance with predetermined criteria. Testing the research instrument was carried out on class X students of SMK Negeri 1 Yogyakarta. The trial questionnaire consisted of 32 question items. After testing, then the data is processed using the SPSS program.

In addition to the validity test, the research instrument was also tested for its reliability. The instrument reliability test used the Cronbach Alpha model. To interpret the results of the instrument test using the guidelines from Sugiyono (2006: 216), as follows:

Table 2. Classification of Reliability Level

Coefficient Interval	Relationship Level
0,00 – 0,19	Very low
0,20 – 0,39	Low
0,40 – 0,59	Moderat
0,60 – 0,79	Strong
0,80 – 1,00	Very strong

After the reliability test was carried out, information was obtained that the instrument used had a very strong reliability value.

Reliability Statistics

Cronbach's Alpha	N of Items
.917	33

Figure 2. Reliability Test Results

Data Analysis

Analysis of the data in this study using parametric statistical analysis, namely calculating the value of the T-test. The main requirement that must be met to calculate the T-test value is that the data collected must be quantitative data with criteria (intervals and ratios), normally distributed and homogeneous. After carrying out the normality and homogeneity test, it can be concluded that there is one assumption that does not meet the requirements, namely the data are not normally distributed. So that the data analysis technique in this study used non-parametric statistical analysis with the Mann-Whitney U test technique. The Mann-Whitney test was performed using the IBM SPSS software. Decision making was carried out with a significance level of 0.05 (5%) with the following criteria: a. If P VALUE (Asymp. Sig. 2-tailed)> 0.05 then H0 is accepted b. If P VALUE (Asymp. Sig. 2-tailed) <0.05 then H0 is rejected.

RESULT AND DISCUSSION

Result

The data analysis used non-parametric statistics with the Mann-Whitney U test technique. The process of decision-making was carried out with a significance level of 0.05 (5%) with the criteria; Ho accepted if Asymp. Sig. (2-tailed) < 0.05. Table 1 present the analysis results of the learning motivation using the Mann-Whitney U test technique.

Table 1. Output of Mann-Whitney U Test

	MOTIVATION
Mann-Whitney U	5586.000
Wilcoxon W	1.423E4
Z	-4.886
Asymp. Sig. (2-tailed)	.000

Grouping Variable: MEDIA

The data analysis showed the P-value of motivation (0.000) <0.05, so H0 was rejected. This mean, there are differences in learning motivation between learning using Google Classroom and PowerPoint.

Comparison of Media Descriptive Analysis

A descriptive analysis was carried out to find out the differences in learning motivation between learning using Google Classroom and PowerPoint. The results of the descriptive analysis were presented in table 2.

Table 2. Output of Descriptive Test

	N	Min	Max	Mean	Std. Dev
Motivation_GC	131	45	90	71,44	7,922
Motivation_PPT	131	56	90	76,82	7,319
Valid N	131				

Table 2 show that learning motivation of students using Google Classroom was 71.44, and using PowerPoint was 76.82. Learning motivation of students are using PowerPoint media is higher than students are using Google Classroom.

Comparison the Learning Motivation Level of Student

Table 3 presented the data on the comparison of the learning motivation level of the students using Google classroom and PowerPoint.

Table 3. The category of comparison the learning motivation of students

Criteria	Term	*Google Classroom*		*PowerPoint*	
		Sum	%	Sum	%
Very High	72 < X	63	48,09%	94	71,76%
High	60 < X < 72	58	44,27%	34	25,95%
Medium	48 X < 60	9	6,87%	3	2,29%
Low	36 < X < 48	1	0,76%	0	0%
Very Low	X < 36	0	0,00%	0	0%
Total		131	100%	131	100%

The learning motivation of students in the very high category, using PowerPoint was 94 students or 71.76% and Google Classroom was 48.09% or 63 students. In the high category, learning using PowerPoint was 34 students or 25.95% and Google Classroom was 58 students or 44.27%. Then, in the medium category, learning using PowerPoint was three students or 2.29% and Google Classroom was 9 students or 6.87%. There was no learning motivation of students using PowerPoint in the low category, but there was one student or 0.76% of learning motivation using Google Classroom in the low category.

Based on the description, concluded that the learning motivation of students using PowerPoint was in the very high category. Meanwhile, the learning motivation of students using Google Classroom was in the high category. Students were more motivated when learning carried out in the classroom, direct-interacting with teachers and fellow-classmates, and using PowerPoint media.

Comparison of Obstacles in the Learning Process Using Google Classroom and PowerPoint

The learning using Google Classroom and PowerPoint has its obstacles. The following figure presented the comparison of the obstacles faced by students in the learning process using these two media. Figure 1 presented the obstacles faced by students using Google Classroom learning media.

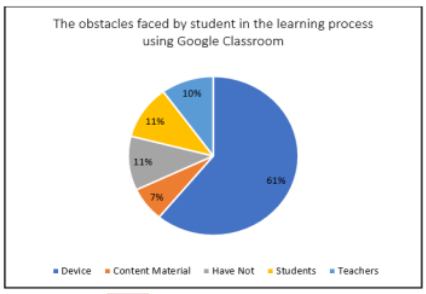

Figure 3. The obstacles faced by student in the learning process using Google Classroom

The obstacles of students using Google Classroom were; devices (such as laptops or smartphones) by 61%, students by 11%, having no obstacles by 11%, teachers by 10%, and media content by 7%. The obstacles faced by students in learning using Google Classroom were mostly related to the device. Meanwhile, the obstacles faced by students in the learning process using PowerPoint were presented in Figure 2.

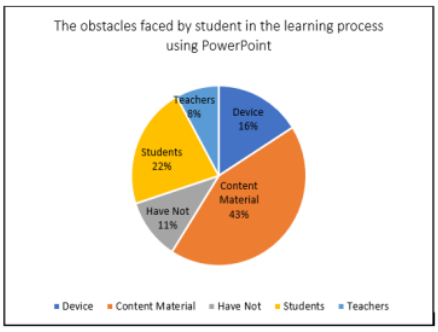

Figure 4. The obstacles faced by student in the learning process using PowerPoint

The obstacles of students using PowerPoint were; material content by 43%, students by 22%, presentation devices by 16%, having no obstacles by 11%, and teachers by 8%. The obstacles faced by students in learning using PowerPoint were mostly related to the material content.

Discussion

The Covid-19 pandemic is also affected in the educational sector, which requires the adaption of the learning process by all educational institutions from elementary to higher education levels. The adaptation of learning is from the classroom shifts to asynchronous learning. With asynchronous learning in digital format, students can learn from home and with a more flexible-time (Daniel, 2020). The learning process at OAVS in the Special Region of Yogyakarta has fully adopted distance learning by utilizing digital classes. One of the digital media used in the distance learning process is Google Classroom.

Based on the comparative test on the learning motivation of students in control and the experiment was carried out using non-parametric statistics with the Mann-Whitney U test. The test obtained the Asymp value. Sig. (2-tailed) was 0.00 <0.05 and H0 rejected. Then, there was a difference in the learning motivation of students between learning using Google Classroom and PowerPoint. The mean of learning motivation of students using Google Classroom was 71.74, and using PowerPoint was 76.82. Viewed from the level of categorization, the learning motivation of students using Google

Classroom media was at a high level. And, the learning motivation of students using PowerPoint was at a very high level.

The conclusion proves that PowerPoint-based learning media can act as a pedagogical tool to facilitate learning activities and increase the motivation of the student. Technology-based learning is superior to traditional learning. In this study, students divided into two groups, experimental and control. The pretest and posttest scores of the two groups at the beginning of the year were not significantly different. However, the experimental group obtained better scores after the treatment, with the help of PowerPoint presentations compared to the control group treated using traditional learning methods. Students and teachers were still more comfortable in conducting learning in the classroom.

Learning through Google Classroom is a way for learning during the Covid-19 pandemic. Although PowerPoint improves the motivation of the student, motivation of student using Google Classroom still obtain high category during the Covid-19 pandemic. Following research conducted by (Al-Maroof & Al-Emran, 2018) that the learning process through Google Classroom more easily affects students' behavioral intentions to be positive. In contrast, the results contradict research conducted by Syauqi K. et al. (2020), who states that online learning is not meet the expectations of the student. Students feel that online learning has not provided better experience and productivity in mastering competencies, but it can provide motivation and ease in learning. Some students state that they have easy access to resources of learning, but students are still reluctant to use them continuously in the future.

However, there were 10 people or 7.63% with medium and low levels of motivation when learning using Google Classroom. This fact is closely related to obstacles faced in learning using Google Classroom. The first obstacles in using Google Classroom were related to devices (laptops or smartphones). Second, it is related to students. The third is related to the teacher and learning media content. This finding is the following research conducted by (Iftakhar Shampa, 2016), which states that many students argue when using Google Classroom is effective and easy to use. The only problem they found was related to the loss of the uploaded files, and errors with the computer or device.

Meanwhile, learning using PowerPoint was at a high and very high level. But, in an open questionnaire recorded the obstacles faced by students in learning using PowerPoint, most of the students answered the problems related to the material content. The fact proves that most teachers were not willing to invest time in transforming text material into attractive PowerPoints. However, some teachers who are willing to invest time in making

PowerPoints were used as an alternative to display the text material, and have not used the features to enhance the learning experience because they do not want to spend a lot of time. Despite the shortcomings of PowerPoint, PowerPoint is a tool, that is not the core of pedagogy. This opinion is supported by (Penciner, 2013), by giving considerations, such as adding images and using a little text on PowerPoint can improve learning.

CONCLUSION

There were differences in student motivation between the learning using Google Classroom and PowerPoint. Students were more motivated in learning using PowerPoint than Google Classroom. Students are motivated when learning is carried out in the classroom directly, interacting directly with teachers and classmates, and using PowerPoint media, but, learning in the classroom using PowerPoint could not be done due to the COVID-19 pandemic. Meanwhile, learning using Google Classroom during the COVID-19 pandemic was less effective in increasing the motivation of the student. As an important point, learning must continue even during the COVID-19 pandemic aiming to avoid a gap year.

The results of this research have learning implications, that teachers must be able to design online learning to run effectively. Giving stimulus to students is important, so that students have strong motivation to learn, even though learning is done online.

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GRADEMARK REPORT

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GENERAL COMMENTS

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RUBRIC: SCIENCE SHORT ANSWER

CLAIM & FOCUS

State a clear claim on the scientific topic and maintain a focus on it throughout.

MEETS EXPECTATIONS	A precise claim/topic sentence is made based on the scientific topic and/or source(s). The response maintains a strong focus on developing the claim/topic sentence, thoroughly addressing the demands of the task.
APPROACHES EXPECTATIONS	A claim/topic sentence is made based on the scientific topic and/or source(s). The response may not completely address the demands of the task, or it does not maintain focus on developing it.
DOESN'T MEET EXPECTATIONS	A claim/topic sentence is vague, unclear, or missing. The response does not focus on or address the demands of the task.

EVIDENCE

Represent relevant scientific information accurately.

MEETS EXPECTATIONS	The most appropriate data and evidence are presented to support the claim/topic sentence, and all information is scientifically accurate.
APPROACHES EXPECTATIONS	Appropriate data and evidence may be presented to support the topic sentence, but it may be inadequate or contain some scientific inaccuracies.
DOESN'T MEET EXPECTATIONS	Evidence is general, inappropriate, or inadequate in support of the claim/topic sentence, or is largely inaccurate.

REASONING

Explain how evidence supports the claim/topic sentence.

MEETS EXPECTATIONS	The response demonstrates reasoning and understanding of the scientific topic and/or source(s), and sufficiently explains the relationship between claim and evidence.
APPROACHES EXPECTATIONS	Some reasoning and understanding of the scientific topic and/or source(s) are demonstrated. The response attempts to explain the relationship between claim and evidence.
DOESN'T MEET EXPECTATIONS	The response does not demonstrate reasoning and understanding of the scientific topic and/or source(s), and explanation of the relationship between claim and evidence is minimal.

ORGANIZATION

Organize your ideas in a logical sequence.

MEETS EXPECTATIONS	An effective organizational structure enhances the reader's understanding of the scientific information. The relationships between ideas are made clear with effective transitional phrases.

APPROACHES EXPECTATIONS	An organizational structure is evident, but may not be fully developed or appropriate. Transitional phrases may be used but the relationships between ideas are somewhat unclear.
DOESN'T MEET EXPECTATIONS	An organizational structure is largely absent and the relationships between ideas are unclear.

LANGUAGE

Communicate ideas clearly using vocabulary specific to the scientific topic.

MEETS EXPECTATIONS	Ideas are presented clearly, using vocabulary specific to the scientific topic. If errors in conventions are present, they do not interfere with meaning.
APPROACHES EXPECTATIONS	Ideas are mostly clear, using some vocabulary specific to the scientific topic. Some errors in conventions are present that may interfere with meaning.
DOESN'T MEET EXPECTATIONS	Ideas are not clear, using little to no vocabulary specific to the scientific topic. Several errors in conventions interfere with meaning.