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 Dopo. 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

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119

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

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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 (Arlinwibowo 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 maximalize 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 & Dempse 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

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in conjunction with Annual Conference of Management Challenges
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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.
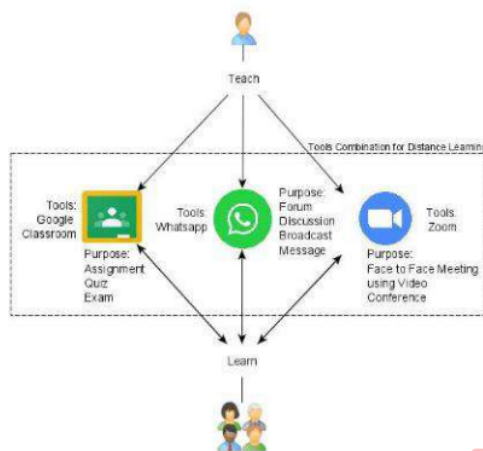

Figure 1. Tools Combination for Distance Learning (Nur et al., 2020)

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%

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Hosted by Faculty of Economics - Universitas Negeri Yogyakarta, Yogyakarta - Indonesia

122

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%
Total	**71**	**100%**

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%
Total	**71**	**100**

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%
Total	**71**	**100**

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%
Total	**71**	**100**

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.

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Table 7. Practice Tools

Practice Tools	f	%
Canva	1	1,41%
Sway	2	2,82%
Not Using Practice Tools	68	95,77%
Total	71	100

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%
Total	71	100

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.
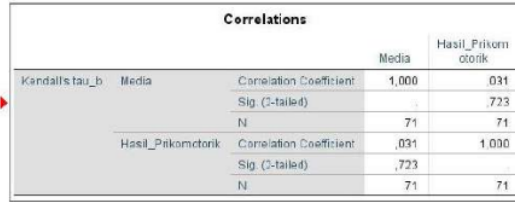

Figure 2. Output SPSS

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

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in conjunction with Annual Conference of Management Challenges
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124

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 Quzziz 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 (Shaharanee 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

International Conference of Ethics on Business, Economics, and Social Science
in conjunction with Annual Conference of Management Challenges
Hosted by Faculty of Economics - Universitas Negeri Yogyakarta, Yogyakarta - Indonesia   125

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. Adapated 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

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in conjunction with Annual Conference of Management Challenges
Hosted by Faculty of Economics - Universitas Negeri Yogyakarta, Yogyakarta - Indonesia   126

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

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in conjunction with Annual Conference of Management Challenges
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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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128

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129

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130

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131

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132

Practical Learning Media for Distance Learning Used by Teachers of OTKP Vocational High School in Central Java

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FINAL GRADE

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GENERAL COMMENTS

Instructor

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.