



# The Effectiveness of Learning Media Used During Online Learning

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## ABSTRACTS

The purpose of this paper is to determine the effectiveness of learning media that can be used during online learning. The Covid-19 pandemic that has hit all parts of the world has affected various sectors, one of which is in the field of education. The teaching and learning process which was originally carried out face to face, has now turned into online learning at home. Learning media is one of the important components in the learning process in the absorption of material to students. By using a qualitative descriptive method, this paper describes, describes, and analyzes the effectiveness of learning media during the online learning period. The data was obtained from distributing questionnaires through Google Forms which were distributed through WhatsApp Group. The results show that WhatsApp Group is considered quite effective in delivering material during online learning by getting a percentage of 45.5%, virtual meeting applications (Zoom and Google Meet) by 27.3%, and Google Classroom by 27.3%.

## ARTICLE INFO

### Article History:

Received 31 Okt 2020

Revised 11 Nov 2020

Accepted 18 Nov 2020

Available online 19 Nov 2020

### Keyword:

Covid-19 pandemic,  
Learning media,  
Online learning

## 1. INTRODUCTION

In the learning process, activities are carried out between two parties, namely teachers and students. In conveying or transmitting messages in the form of knowledge (cognitive), skills (psychomotor), and inculcation of attitude values (affective) to students, intermediaries are needed. Intermediaries in transmitting the message include through learning media. Learning media itself is defined as an intermediary or introduction to the source of the message to the recipient of the message with the aim of being able to stimulate thoughts, feelings, attention, and willingness so as to encourage the emergence of a desire to be involved in the learning process (Abi et al., 2020).

Currently, it has been almost a year and a half that the Covid-19 pandemic has hit all over the world, and Indonesia is no exception. The first case of Covid-19 in Indonesia was first announced by the Indonesian government on March 2, 2020. Until now, the Covid-19 case has not shown any signs of abating, so it is not surprising that this pandemic has an impact on the social order in the world community. . With the increasing number of cases, various policies have been issued by the government in order to suppress the growth rate of Covid-19, including by making a policy for the Enforcement of Community Activity Restrictions (PPKM). The public is advised to carry out all activities from home to avoid crowds in public places. Government policies in suppressing the rate of Covid-19 are also implemented in the field of education, in accordance with the Circular Letter of the Ministry of Education and Culture No. 4 of 2020 concerning the Implementation of Education Policies in the Emergency Period for the Spread of Coronavirus Disease (Covid-19), which include: (a) Learning from Home through online/distance learning implemented to provide a meaningful learning experience for students, without being burdened with the demands of completing all curriculum achievements for grade promotion and graduation; (b) Learning from Home can be focused on life skills education, including regarding the Covid-19 pandemic; (c) Learning from Home learning activities and tasks may vary between students, according to their individual interests and conditions, including considering the gap in access/facilities for learning at home; (d) Evidence or products of Learning from Home activities are provided with qualitative and useful feedback from the teacher, without being required to give quantitative scores/values”.

With the issuance of this policy, schools ranging from Elementary School (ES)/equivalent, Junior High School (JHS)/equivalent, High School (SHS)/equivalent, to College are closed to prevent the spread of the Covid-19 virus. 19 through the education cluster. However, with the closure of the school's access, the teaching and learning process which was originally conducted face-to-face has now turned into online learning at home (on a network). Online learning itself is defined as learning that takes place in a network, where teachers and those being taught do not meet face-to-face (Pohan, 2020). Learning which is usually carried out in a room equipped with existing learning support facilities, now has to be carried out remotely by using and utilizing information and communication learning technology.

In accordance with a journal article written by Riasatul Habibah, et al with the title "Pemanfaatan Teknologi Media Pembelajaran di Masa Pandemi Covid-19", states that technology has an important role that is able to make the teaching and learning process more effective and able to run well in the midst of a pandemic. like this time. In this way, technology can not only be used as entertainment, but can also be used as the main support in teaching and learning activities (Habibah et al., 2020).

Based on another journal article entitled "Kreativitas Guru dalam Mempersiapkan Media Pembelajaran di Masa Pandemi" written by Sri Kadarsih also revealed that creative teachers

are teachers who are able to create new things related to the learning process, and explain if video is an alternative. that can be given by teachers in overcoming problems in delivering material in distance learning (Kadarsih, 2020).

In another journal article entitled "Media Pembelajaran Daring pada Masa Covid-19", written by Yasni Alami, said that at this time various teaching media and platforms were starting to appear that could encourage and demand professionalism of teachers' skills in carrying out teaching tasks to students. And the use of teaching media and educational platforms can be an alternative and solution in the continuity of learning activities in every educational unit in the midst of a pandemic like today (Alami, 2020).

In addition to using teaching media and educational digital platforms, video tutorials can also be used as an effective learning medium, such as in a study conducted by Hamdan Husein Batubara, et al with the article title "Penggunaan Video Tutorial Untuk Mendukung Pembelajaran Daring di Masa Pandemi Virus Corona" stated that the use of video tutorials during this pandemic is considered effective and can complement online learning media in the midst of a pandemic. So that teachers can use video tutorials as material for discussion, practice, to increase students' understanding of the material presented during online learning (Batubara & Batubara, 2020).

In another study entitled "Efektifitas Media Pembelajaran Daring di masa Pandemi Covid-19" conducted by Zulkifli N., et al., it was stated that the online learning process during a pandemic like today requires teachers to be more active in updating and improving their ability to use media. online learning. So that using interactive learning media can increase the motivation and learning outcomes of students (N. et al., 2020).

However, in reality not all teachers are able and ready to be able to take advantage of existing technology in supporting distance learning. Therefore, various efforts are needed in order to increase the effectiveness of interactive learning media so that the message that the teacher wants to convey to students can be conveyed properly, and students can catch the message well too.

This writing aims to determine the effectiveness of the learning media used during online learning. By using a qualitative descriptive method, this paper describes, describes, and analyzes the effectiveness of the learning media used during online learning by conducting a survey via Google Form to 2<sup>nd</sup> grade students of vocational school.

## 2. METHODS

By using a qualitative descriptive approach, this paper describes, describes, and analyzes the effectiveness of the learning media used during online learning by conducting a survey via Google Form to 2<sup>nd</sup> grade of vocational school students. Qualitative descriptive itself is defined as a term used in simple qualitative research for a descriptive study with an inductive flow. This inductive flow with the intention of qualitative descriptive research begins with an explanatory process or event which finally can be drawn a generalization which is a conclusion from the process or event. Data retrieval is done by distributing questions through Google Form which will then be analyzed using a descriptive model.

This research was conducted during the KKN Tematik which was held at one of Vocational School Kuningan on July 1 - July 30, 2020. The survey was conducted online using a Google Form, by filling in the questions provided. The research subjects were students of 2<sup>nd</sup> grade with the number of respondents as many as 11 students. In stages, sending the Google Form link through the WhatsApp group, with a total of 9 questions, which includes self-identity and questions containing the obstacles encountered during online learning, what

learning media are effectively used during online learning, the percentage of understanding of the material during online learning, to learning resources that are easy to understand during online learning.

### 3. RESULTS AND DISCUSSION

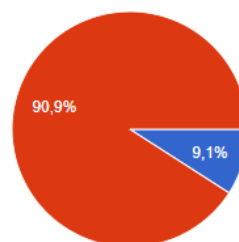
An important factor in the progress of a nation can be seen from its education system. A good education system can create good quality Human Resources (HR). However, in the past year and a half, the implementation of education has been slightly disrupted due to the Covid-19 pandemic, which requires all people to carry out activities from home, including the learning process at school. Learning that was originally carried out face-to-face in person, must turn into online learning.

Online learning has actually started to be introduced in Indonesia at the end of 2014. The Vice President of the Republic of Indonesia inaugurated the Indonesian Online Learning System (SPADA), precisely on October 15, 2014 with the aim of increasing access to quality higher education in order to face the challenges of an increasingly sophisticated world (Surahman, *et al.*, 2020). However, the concept of online learning has not been widely used in the education system in Indonesia, especially at the school level. In the end, the Covid-19 pandemic that forced the situation to be ready was not ready to streamline the learning system in Indonesia, which was carried out online.

Changes in the education system that can be said to be unplanned certainly pose challenges for various parties, both for teaching staff, students, and parents of students. The biggest challenge faced by Indonesia when learning online is most visible in the quality of teachers and infrastructure (Surahman, *et al.*, 2020). The unpreparedness of teachers in dealing with technological changes to the low ability of teachers to master technology is one of the problems faced in online learning today. Based on research conducted by Arga Satrio, *et al* in their journal article entitled " Kesiapan Guru dalam Melaksanakan Pembelajaran Daring Ditengah Wabah Covid-19" states that 70.42% of teachers feel unprepared for online learning, 14.39% feel unprepared , and only 14.78% of teachers feel ready for online learning (Prabowo *et al.*, 2020).

Online learning is certainly not easy for students to do, therefore it is necessary to have cooperation from various parties in order to create effective and efficient online learning. Online learning is still facing many obstacles in the field. It can be said that almost some students cannot participate in online learning because they are constrained by signals and internet networks. In addition, economic factors cause not all students to have smart phones which are currently the main means in the online learning process (Atsani, 2020).

The obstacles faced during online learning do not only occur with teachers. Based on the results of a survey conducted through Google Forms which were distributed to students 2<sup>nd</sup> grade at Vocational School as follows figure 1:



**Figure 1.** Students' opinions about the most effective learning method.

Based on diagram 1 above, as many as 90.9% (red) of students feel that face-to-face learning is more effective than online learning, and only 9.1% (blue) of students feel that online learning is more effective than face-to-face learning.

Based on the analysis in accordance with the data above, it proves that the face-to-face learning method is still the main choice for students. As well as the lack of readiness from all aspects of the rapidly changing education system, many students choose face-to-face learning to be more effective than online learning. Moreover, the material presented at the Vocational School level is more focused on practice than theory. So that this creates obstacles and difficulties felt by students, as shown in the figure 2 below:

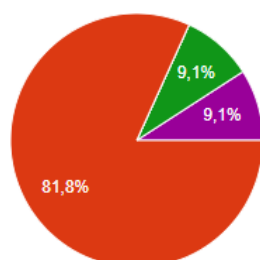


**Figure 2.** Students who have experienced difficulties or obstacles during online learning.

Based on the diagram above, it can be seen that from a total of 11 students which means 100% , revealed that they had experienced problems or difficulties during online learning. Because it is undeniable that the education system in Indonesia is not quite familiar with the online learning system, especially at the school level.

In addition, the problem that is often encountered by online learning data is the lack of knowledge about information technology by students and parents, thus making learning boring and learning assessments that should be done directly cannot be done. Learning becomes less effective because of these obstacles.

With these results, it can be said that online learning itself still has challenges that are quite severe for all parties involved in the teaching and learning process, such as teachers, students, parents and so on. The obstacles that are most often experienced by students when learning online are as follows in figure 3:



**Figure 3.** Difficulties and obstacles faced.

Based on the diagram above, the most difficult difficulties felt by students were the difficulty of absorbing/receiving the material provided by the teacher, which was 81.8% or as many as 9 students (red) , then 9.1% of teachers who were difficult to contact or 1 student (green), and quota constraints as many as 9.1% or 1 student (purple).

Based on the results, it is in line with research conducted by Evi Surahman et al, which states that quota constraints are one of the challenges experienced by education in Indonesia in online learning. In addition, based on the results of the diagram above, online learning is felt to make it difficult for students to accept the material presented by the teacher.

In the learning process, it is necessary to have a process of interaction between teachers and students. However, when learning online, not a few students revealed that they had difficulty interacting or communicating with teachers (Puspaningtyas & Dewi, 2020). The difficulty of communicating between teachers and students can hinder the process of absorbing material to students. So that in this online learning, it is necessary to have a specificity, so that students' communication skills can be trained.

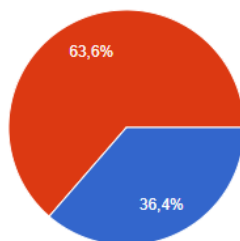
One of the learning objectives in the online learning process is to achieve student competencies known as 4Cs, namely (1) critical thinking which directs students to be able to solve problems that exist around the learner's environment, (2) creativity which can be interpreted as a teacher assisting students to be able to think creatively in seeing a problem through a variety of different points of view, (3) collaboration so that students are able and ready to be able to work with anyone. even in the future, and (4) communication, which can be interpreted as the ability of students to convey ideas, ideas, arguments, and thoughts quickly, clearly, and effectively (Jamilah, 2020).

According to Laurillard (Oktavian & Aldya, 2020), states that the learning process consists of four essential component processes, namely (1) discursive, which allows discussion between students and teachers, where each expresses his conception of some of the aspects described, and reacts. to other descriptions, (2) adaptive, where the teacher adjusts student interactions with the environment experienced by students, (3) interactive, allowing students to interact in ways that enhance their experiences, and (4) reflective, where students are able to reflect on their experiences and conform to their own conceptions and their descriptions of them.

With the Covid-19 pandemic that hit, changing the education system caused one of the essential components in the learning process to be slightly disturbed, namely the limited space for interaction. In online learning, it is very difficult for students to be able to interact both with the teacher and with the environment around them which they can use as a learning experience.

Online learning that is applied in schools has become something new that is applied in the educational environment, especially in schools. Thus, most students will feel more comfortable doing face-to-face learning compared to online learning. For smooth online learning, serious effort and adjustment are needed. In addition, it is also necessary to adapt to emotional and mental readiness, the facilities owned by each student, and also the availability of the main infrastructure in online learning related to internet connections and quotas (Hatmo, 2020).

Online learning also affects the absorption of material received by students from the teacher, which can be seen in Figure 4 belows:



**Figure 4.** The percentage of understanding of the material during online learning.

From Figure 4 above, as many as 7 students or 63.6% felt that the percentage of understanding of the material they got during this online learning reached 50-80% (red), as many as 4 students or as much as 36.4% (blue), felt that the understanding of the material did not reach 50% . And no one chooses between 81-100% percentage of understanding the material.

According to [Jamilah, \(2020\)](#), the challenge in implementing online learning for teachers is that it is difficult to make students easily understand the material presented, it is difficult to provide materials or assignments that are in accordance with the students' abilities, it is difficult to provide feedback or feedback on the work. students, it is difficult to work together and collaborate with other teachers, more time and energy are used to prepare lessons, thus spending more money for data packages or quotas. Both results are continuous, where students find it difficult to absorb the material provided by the teacher, and teachers find it difficult to make students understand easily the learning material presented.

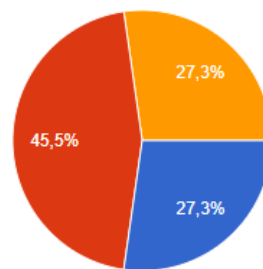
In the teaching and learning process, learning media is a very important component in conveying knowledge messages from teachers to students. In general, learning media have several functions, including (1) educational function, which is useful for being able to provide a valuable influence in the educational process, can educate students and the community to think critically, provide experience, and provide authentic functions in various fields of life, (2) Economic Function, which is useful in achieving learning objectives effectively and achieving material that can reduce the use of costs and time, (3) Social Function, which is useful for expanding relationships between students, developing understanding, and developing students' experience and intrapersonal intelligence , and (4) Cultural Functions.

In learning, teachers need to determine the media that will be used to help the process of transmitting their knowledge. There are several ways that can be used to choose which learning media is suitable for use in the learning process ([Falahudin, 2017](#)), namely (1) the media selection model, in the learning media selection process there are two ways, namely the closed selection model and the open selection model. The selection of closed models is carried out by authorized parties such as the Education Office in determining the learning media that must be used. While the open selection model, the teacher is given the freedom to determine the learning media according to the needs and (2) the reasons for choosing the media, the selection of the right learning media needs to be done in order to produce good, precise, and effective outcomes and according to the needs and conditions of

students. Therefore, the selection of learning media needs to be done through the correct procedure, because each learning media has its own advantages and disadvantages.

In choosing learning media, it is also necessary to pay attention to the criteria in the selection of learning media so that the media used can be effective, namely (1) the purpose of use, which can refer to learning objectives including the cognitive, affective, psychomotor domains, or a combination of all three, (2) target media users, by looking at the characteristics of students, (3) the characteristics of the media, by looking at the advantages and disadvantages of the learning media, (4) the time required to make the learning media that will be selected, (5) the cost, because the learning media are expensive not necessarily effective for students, therefore costs need to be taken into consideration in choosing a learning media, and (6) the availability, ease of obtaining and applying the learning media.

With the exception of online learning as it is today, many learning media and social media have emerged that can be used to support the learning process. As can be seen in the figure 5 below:



**Figure 5.** Applications used during online learning that are considered effective for students.

From the picture above, as many as 5 students or 45.5% (red) of students revealed that WhatsApp Groups were considered effective in the process of online teaching and learning activities. As many as 3 students or 27.3% (blue) of students feel that virtual meeting applications such as Google Meet and Zoom Meeting are effective applications in online learning. Also, 3 other students or as much as 27.3% (orange) said that Google Classroom was an effective application in carrying out learning.

Learning through WhatsApp Groups is considered effective because both students and teachers are considered quite familiar with the application, so that it can facilitate the process of delivering material. In addition, in WhatsApp Groups, students and teachers can have discussions about the material to be delivered. And there are various features that can be used in the WhatsApp application, such as sending pictures, videos, to voice messages. So that students can easily get information, in the form of learning material files, photos of questions, explanation videos, to teacher explanations via chat or voice messages so that students do not need to take notes (Susilowati, 2020).

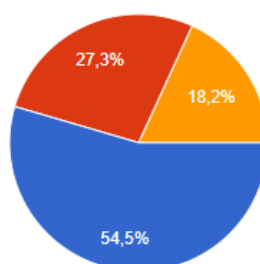
Meanwhile, virtual meeting applications such as Google Meet and Zoom are also considered quite effective in the online learning process. Zoom is a video conferencing application that has a duration of time when we have meetings with other people. However, this application is very helpful for those who want to have direct discussions using a virtual room because it has a large enough space capacity in one meeting. Using the virtual meeting application is considered quite effective for teachers, because teachers can see



directly the affective values or attitudes of students during learning activities. By using the Zoom and Google Meet applications during online learning,

Google Classroom is an application that is used in the scope of education that can facilitate ongoing learning, especially during a pandemic like today. Google Classroom can be used by everyone from different levels of education, whether elementary, junior high, high school, even up to college. Its easy-to-use operation is one of the main attractions for teachers to use Google Classroom. This application is also considered effective and efficient and not too complicated in accessing and using it to carry out the learning provided by the teacher in this online learning process. In Google Classroom, various features are also available including assignments (tasks), grading (measurement), communication, time-cost (time saving).

Learning media also affects the ease of absorption of material received by students from the teacher, which can be seen in Figure 6 below:



**Figure 6.** Learning resources that are easy to understand in absorbing material

The picture above shows as many as 6 students or 54.5% (blue) feel that with the learning video they can easily accept the material given by the teacher, as many as 3 students or as much as 27.3% (red) feel the material is easy to understand if the teacher gives or displays a power point containing a summary of material to be taught. As many as 2 students or 18.2% (orange) felt that reference books helped in understanding the material given by the teacher.

By using learning videos, students can observe well the videos displayed by the teacher or other sources such as Youtube, Instagram, other social media and others digital platform learning such as Ruangguru, so that it can provide a clear picture of the material presented. Learning videos can also stimulate students to participate actively in learning through what students see and hear. When making learning videos, it is also necessary to pay attention to the following characteristics so that the video looks interesting and not boring so that students can understand the content of the video well, including the images in the video must move and be combined with sound that is in accordance with the content presented, selection language that is easily understood by students, learning videos must be dynamic, meaning that learning videos can still be used when learning both online and offline,

Utilization of Power Point at the school level, can be used as a learning medium. Power Point is used by teachers as a tool in delivering material to students in the learning process (Muthoharoh, 2019). The use of multimedia-based learning media can also have a considerable influence on students' memory, because multimedia-based learning contains attractive visuals. So that this multimedia-based media is considered very effective in helping teachers and students to achieve learning objectives.

In online learning as it is today, technology has a very important role in the field of education (Effendi & Wahidy, 2019), including the following (1) the emergence of mass media, so that electronic media can be used as a source of knowledge and an educational center. As well as making educators or teachers not the only source of knowledge, (2) the emergence of new learning methods that can facilitate students and teachers in the learning process, and (3) the learning system does not have to be face-to-face. With the advancement of technology, the learning process does not have to be done face-to-face directly between students and teachers, but can also use technology.

The continuity of online learning is very dependent on the readiness of schools, parents, and teachers in the implementation of the teaching and learning process. Schools need to meet the needs of students during the pandemic in order to facilitate the distance learning process, as well as hone the creativity of teachers and students. One of them is by using various kinds of technology-based learning media such as websites, e-learning, online quizzes by using various supporting applications in other education. So, by using technology in the teaching and learning process every day, it will have an impact on students and teachers who are technology literate so that they are able to improve science and technology abilities (Winarsieh & Rizqiyah, 2020).

According to Gusty, *et al.*, (2020), the key to the effectiveness of online learning is how a teacher remains creative to present this online learning in a fun and easy-to-understand way for students, so that they do not feel bored and remain productive even though learning is done at home. . The application of online learning requires readiness for both parties, both from the education service provider and from the readiness of the students themselves.

In addition to teachers and schools, in this case online learning, parents also have a very important role in assisting children to support them during online learning. The role of teachers and parents is very basic in supporting the child's learning process while at home. Both parties, both teachers and parents need to collaborate in order to create a safe and comfortable learning atmosphere for children. Teachers act as compilers and providers of learning materials and evaluators of learning, while parents need to prepare learning support media and accompany children when studying at home (Dhawan, 2020). At the time of online learning as it is today, teachers are required to be creative by providing interesting and fun teaching methods and learning media, so that it will make students focus their attention on teaching and learning activities. That way, teaching and learning activities during online learning will run effectively and fun for students.

But on the side On the other hand, the application of online learning also has a good impact on students. Online learning is considered capable of increasing the independence, discipline and creativity of students. In online learning, students are required to be able to do everything independently, such as understanding the material and completing and collecting assignments independently. If this habit is done regularly, it will make students more disciplined, especially in managing time. And online learning can increase students' creativity by giving full freedom to students to find learning resources and references either through reference books, websites, social media, to the Youtube application.

#### 4. CONCLUSION

In learning, learning media is a very important component in conveying knowledge messages from teachers to students. Moreover, at the time of online learning as it is today, learning media is an important component in delivering knowledge messages from teachers to students. Currently, there are also many learning media and social media that can be used to support the learning process. The results of the writing show that WhatsApp Group is considered quite effective as a learning medium during this online learning, because both students and teachers are considered quite familiar with the application, so that it can facilitate the process of delivering material. Besides that, In WhatsApp Groups, students and teachers can have discussions about the material to be delivered. And there are various features that can be used in the WhatsApp application, such as sending pictures, videos, to voice messages. and learning videos are learning resources that are considered effective in providing convenience for students to receive learning materials.

#### 5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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