

# Effectiveness of Whatsapp in Improving Student Learning Interests During The Covid-19 Pandemic

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**Abstract**—*The existence of Covid-19 Pandemic become a challenge for teachers, where the teachers were forced to apply Online learning. Various kinds of online learning media were tried and used. One of Vocational High School (SMK) in Sidoarjo also applies online learning using WhatsApp on the subject of Digital System class X during the Covid-19 Pandemic. This study aims to look at the Effectiveness of Whatsapp in increasing student interest in Digital System Subjects during the Covid-19 Pandemic. This research uses descriptive qualitative research with survey method. The population of this study were 33 students of class X who had completed the digital system subjects during Covid-19 Pandemic. The instrument used was a questionnaire. The data collection technique was carried out by distributing online questionnaires through Google Form to 33 students of class X who had completed the digital system course during Covid-19 Pandemic. The analytical method used was an interactive model of Mile and Huberman with 4 stages, including collecting data, formulating data, presenting data and drawing conclusions. The result of this research shows a negative response. It can be seen from the results of the study that students prefer to have face-to-face learning than online learning. Moreover, there are several obstacles experienced by students during the learning process using WhatsApp*

**Keywords**— *Learning, WhatsApp, Pandemic Covid-19*

## I. INTRODUCTION

Covid-19 pandemic (Corona Virus Diseases-19) is a virus that firstly spread in Wuhan China. The virus transmission happened quickly around the world. Many inhabitants of the world were infected and some of them die. So that governments around the world implement a number of policies in preventing Covid-19 transmission. Indonesian government implement a large-scale social distancing policy related to work activities, business, offices, education, religion, economy or other social activities through PP No. 21 of 2020.

The spread of the virus is very rapid and takes many victims, resulting in many activities in various countries hampered because of it, not least the world of education[1]. Previously, teaching and learning activity in class was done face to face. It becomes online because of this Covid-19 Pandemic[2]. With the existence of this pandemic, it becomes a challenge for a teacher, where the teacher is forced to apply online learning[3]. Indonesia's education system is not ready yet to apply online learning. It can be

seen from the mental unpreparedness and the inhibition of facilities and infrastructure in implementing online learning.

During the Covid-19 Pandemic, teacher and student interactions were carried out digitally[4]. Online learning does not mean that it can be applied just like that, but whether it is successful or not in the learning process depends on the desire of students to learn [5]. The success of the learning process can be seen from the reciprocity of the teacher and students in a relationship, such as behavior, attitudes and interests in implementing and indicating an interest in the learning process. An interest in implementing the learning process is a sign of interest[6].

Interest is an intrinsic motivation that is used as a learning force to move a person in full awareness and feel or bring a feeling of interest in a certain activity without saying anything[7]. While the interest in the learning process can be interpreted as a love of attention and a sense of interest in students by showing the desire of students or student participation in receiving subject matter well and attention and be done actively or seriously in responding to ongoing subject matter[8]. Meanwhile, according to Purwanto interest is a factor that influences a person's business, with a strong interest can lead to seriousness, persistence and not easily discouraged in carrying out challenges and obstacles[9]. If students have a high interest in learning, then these students will quickly and easily understand the material.

Understanding of student material depends on the media used by the teacher. During the Covid-19 Pandemic various online learning media were tried and used. Online learning processes that can be used as online media include, Google Classroom, Schology, Google Form, WhatsApp and other media[10]. This can be seen from the results of research conducted by Yensy that the Mathematics Statistics Course in the Mathematics Education Study Program Department of Mathematics and Natural Sciences Faculty of Bengkulu University using WhatsApp Group media is quite effective that viewed from student learning outcomes. Student learning outcomes after lectures using WA Group are higher than student learning outcomes before lectures using WA Group[11]. One of the Vocational Schools in Sidoarjo in the subject of Digital System class X has implemented learning using WhatsApp. Where WhatsApp is an instant messaging application that needs to use internet data packages when it wants to send receive messages or various media such as

sound, video and images and documents[12]. WhatsApp is available in software including: Blackberry OS, Apple iOS, Microsoft Windows Phone, Google Android. WhatsApp Inc. created in 2009 [13] by Jan Koum and Brian Acton, both of Yahoo [14]. According to Bouhnik, et al (2014) the WhatsApp feature has the ability to improve communication within a group[15].

WhatsApp can also increase accessibility, encourage collaboration, and increase motivation in the education system[16], [17]. Where WhatsApp has many benefits for students in increasing active learning or discussion. With WhatsApp students and teachers can more easily interact in sharing academic information[18]. Echheverria emphasized that through WhatsApp, students feel satisfied and like this application. Not only that, WhatsApp also has a positive impact on students by showing increased student learning performance in developing student communication through discussion forums and information sharing [19]. One example of a discussion via WhatsApp conducted by teachers and students when the learning process in Digital System Subjects can be seen in Fig. 1.

The use of WhatsApp was very helpful during the Covid-19 Pandemic period, which required the learning process to be done online. For this reason, WhatsApp is used as a solution for learning activities during the Covid-19 Pandemic. The teacher chooses learning media using WhatsApp for the learning process. Because this digital system subject teacher considers that by using WhatsApp students can more easily access it, it doesn't even require a lot of internet package quotas when doing the online learning process. However, Digital System Subjects have never used WhatsApp during the learning process, for this research was conducted to see the effectiveness of WhatsApp in increasing student interest during the Covid-19 Pandemic.

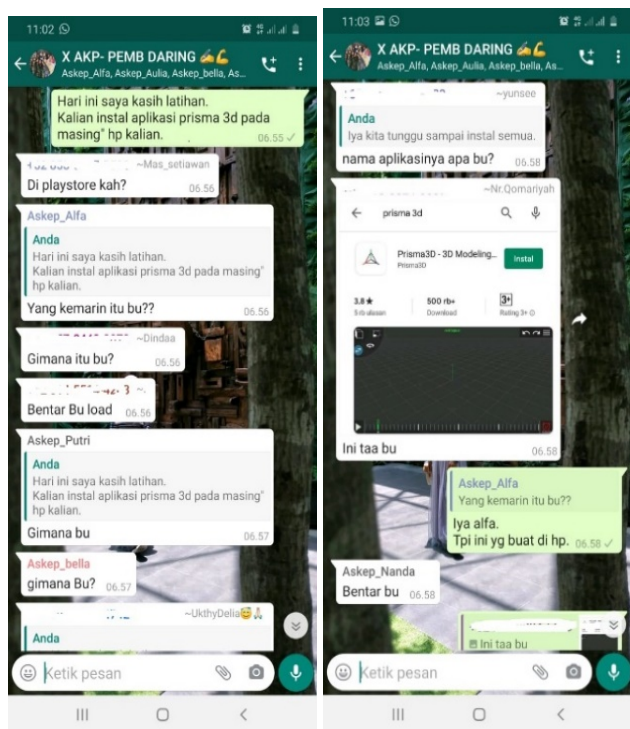


Fig. 1. Example of the Learning Process in Digital System Subjects via WhatsApp

II. METHOD

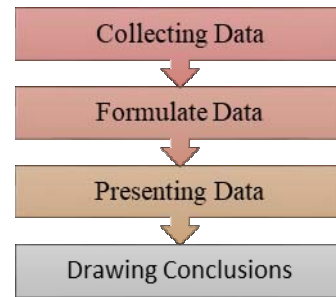


Fig. 2. Flow of descriptive analysis with an interactive model of Mile and Hubermen

This study uses descriptive qualitative research with survey methods[20]. This research is expected to find out the effectiveness of WhatsApp in increasing student interest during the Covid-19 Pandemic. The population of this study consisted of 33 Grade X students who had completed the Digital System Subject during Covid-19 Pandemic. The population was selected using a saturated sampling technique, where all students who had finished attending the digital system subjects during Pandemic Covid-19.

The data collection instrument used a questionnaire containing several questions to find out the effectiveness of WhatsApp in increasing student interest in learning during the Covid-19 Pandemic. The importance of the questionnaire for survey research determines the success of research related to data quality (primary data). As for the questionnaire questions, among others: 1) What learning model did you interest in Digital System Subjects during the Covid-19 Pandemic ?, 2) What obstacles did you experience in Digital System Subjects when using WhatsApp during the Covid-19 Pandemic?, 3) How was the understanding of material on Digital System Subjects using WhatsApp during the Covid-19 Pandemic ?, 4) Did you not take lessons in Digital System Subjects using WhatsApp more than 3 times during the Covid-19 Pandemic?, 5) How is student understanding of WhatsApp during the learning process on digital system subjects during the Covid-19 Pandemic.

The questionnaire was distributed based on the circumstances that occurred in the field by looking at the interaction between the teacher and students when learning through WhatsApp during the Covid-19 Pandemic. The data collection technique was carried out by distributing questionnaires online through Google Form to 33 students of class X who had completed the digital system during Pandami Covid-19. The analytical method uses descriptive analysis with an interactive model of Mile and Hubermen with 4 stages, namely data collection, data formulation or data reduction, data presentation, and drawing conclusions[21]

III. ANALYSE AND DISCUSSION

This research resulted in the effectiveness of WhatsApp in increasing student interest in learning during the Covid-19 Pandemic, which is to get a different gift from each student. In this case the research was carried out by distributing questionnaires online through Google Form, to 33 students who had completed the digital system subjects during Pandemic Covid-19 as well as documentation through literature studies in order to support the results of the

questionnaires. What could be seen from this research are 1) the learning model that students are interested in, 2) the constraints of students when the learning process in Digital System Subjects using WhatsApp during the Covid-19 Pandemic, 3) the understanding of material when learning in the Digital System Subjects using WhatsApp during the Covid Pandemic 19, 4) the activeness of students when learning in the Digital system Subjects using WhatsApp during the Covid Pandemic 19, and 5) students' understanding of WhatsApp during the learning process in the Digital System Subjects during the Covid Pandemic 19. The results of the presentation of data can be explained, among others.

A. Learning Model

The learning model used in in teaching and learning activities is expected to be in accordance with the learning objectives so that teaching and learning activities take place effectively and efficiently. One of the most important factors in the learning process is to determine the learning model. If the learning model is used on target, it is probable that students easily accept and understand the subject matter delivered and learning activities is expected to be in accordance with the learning objectives so that teaching and learning activities take place effectively and efficiently. One of the most important factors in the learning process is to determine the learning model. If the learning model is used on target, it is probable that students easily accept and understand the subject matter delivered [22].

During the Covid-19 Pandemic, this online learning model became one of the solutions to overcome difficulties such as time, location and cost due to social distancing rules[23]. But from the results of the questionnaire in Fig. 3 it can be seen that 69.7% of students prefer the conventional learning model to the Online learning model. That is because the face-to-face learning model can be easier to apply and easy to be accepted by students especially with Digital Systems subjects requiring direct or face-to-face practic.

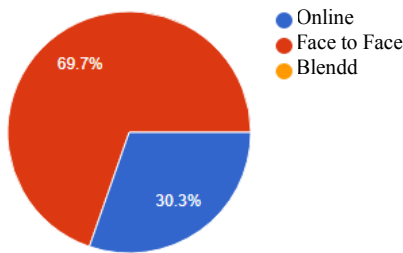


Fig. 3. Learning Model Questionnaire Results that are Interested in Students

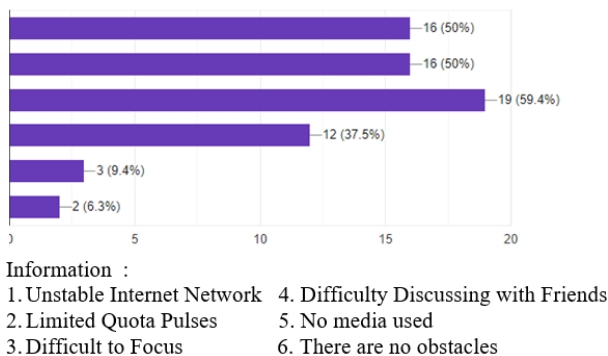


Fig. 4. Obstacle Questionnaire Results Experienced Students

B. Obstacles

At present the education system is faced with situations that require teachers and students to conduct social distancing, which is a major obstacle. According to Rahmawati Almost all teachers use distance learning (not face to face). Direct and indirect teacher and student interactions, for example by chatting through an internet connection (direct) or by sending emails (indirectly) to simply collect assignments[24]

But with social distancing there are obstacles experienced by students, Based on the results of the questionnaire for the constraints of students using WhatsApp in the learning process of the Digital System during the Covid-19 Pandemic, where 33 students have more than one obstacle. The results of the questionnaire shown in Fig. 4 state that from a population of 33 students, it was found that : 1) 16 students experienced unstable internet networks, 2) 16 students experienced limited data connection quota, 3) 19 students had difficulty focusing on learning, 4)12 students experienced obstacles in discussing with friends, 5) 3 students do not have the media used in learning, and 6) 2 students who had not experienced any obstacles consisting of 2 students..

C. Understanding Material

The existence of social distancing makes students determine the spirit of learning in students themselves. Students are charged to be independent in understanding the material. The teacher only submits or shares material files to WhatsApp, students are told to learn and understand the material themselves after it. If there are difficulties, students are allowed to ask via the WhatsApp. Although they are welcome to ask questions, in reality there are still many students who do not dare to ask directly to the teacher.

The independence of these students makes students' understanding different. The results of the questionnaire in Fig. 5 state that of the 33 students in understanding the material, the highest percentage of 39.4% of students felt the theory was easily understood but could not understand the practicum. While there are practicum Digital Systems subjects that make students think directly, for that teachers must be able to stimulate students so that students' way of thinking is able to understand correctly when doing practicum, because the process of thinking cannot be obtained by online learning.

D. Activeness

Student activity can be seen from their presence during the learning process. During the Covid-19 Pandemic, student attendance can be seen when students follow the learning process using WhatsApp as well as from students' active response to material shared by digital system subject teachers.

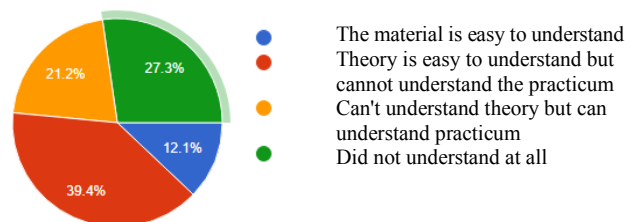


Fig. 5. Results of Questionnaire for Understanding Material



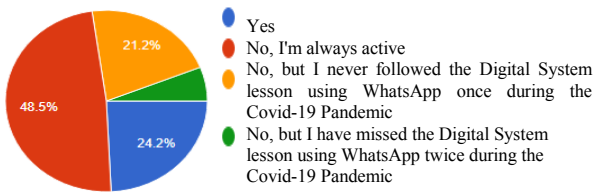


Fig. 6. Student activity in participating in learning

From Fig. 6 the results of the questionnaire showed that out of 33 there were 48.5% students who were always actively following the subjects of the digital system. This activeness can also be seen from the presence of students when the teacher of the Digital Systems subject. Attendance is done by students sending their personal data via WhatsApp privately. After that students are considered to have been present in the Digital Systems subjects during Online learning amid the Covid-19 Pandemic.

#### E. WhatsApp Understanding

WhatsApp is very easy to use, most students use this application for learning or other purposes [12]. A simple display can be accessed by people of all ages [25]. And WhatsApp also has several features that are more accessible for teachers and students to use to improve understanding [15]

But the results of the questionnaire in Fig. 7 show that when the learning process using WhatsApp, from 33 students understanding of WhatsApp got 39.4% results. It means that students find a bit difficult to understand the learning process when using whatsapp during Pandemic Covid-19. Even though using WhatsApp students can discuss with the teacher by sending the results of solving the exercises according to the material if they want to know the mistakes. Students can also ask questions related to the exercise questions. Problems to be asked can be sent to the whatsapp group by first taking a picture or photo of the results of the exercise questions. Pictures or photos sent can be seen by all group members via smartphone. So that other students can try to solve or answer the problem before it is solved or answered by the teacher [26]

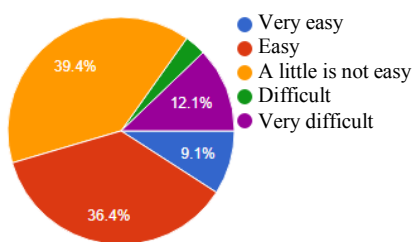


Fig. 7. Understanding of WhatsApp Use

#### IV. CONCLUSION

Based on the results of research that the effectiveness of Whatsapp in increasing student interest during the Covid-19 Pandemic shows a negative response. Where students prefer face-to-face learning rather than learning using WhatsApp, face-to-face learning is easier to implement and easy to be accepted by students especially with Digital Systems subjects that require hands-on or face-to-face practice.

Whatsapp's effectiveness in increasing students' interest in learning during the Covid-19 Pandemic especially in digital systems subjects has several obstacles including:

many students experience unstable internet networks, limited internet quotas and students have difficulty focusing in learning during the Covid-19 Pandemic and there were 3 students who did not have the media to use in learning during the Covid-19 Pandemic.

Even in understanding the material students find it difficult, because students are charged to be independent in understanding the material. Whereas the teacher only shares material files on WhatsApp. If there are difficulties students are allowed to ask via the WhatsApp. But in reality only a few students who dare to ask the teacher, as a result students who do not ask the student does not understand the material.

But despite the existence of the Covid-19 Pandemic, the use of WhatsApp in the learning process especially in digital system subjects does not prevent students from following the learning process. Where students are always active in following the learning process. Attendance is done by students sending their personal data via WhatsApp privately. After that students are considered to have been present in the Digital Systems subjects during Online learning amid the Covid-19 Pandemic

Whereas in understanding WhatsApp, students feel it is not easy when the learning process uses WhatsApp. Although WhatsApp is arguably an easy-to-use application, when WhatsApp is used in the learning process 39.4% of students feel a little uneasy in understanding the learning process when using whatsapp during the Covid-19 Pandemic. For this reason, Covid-19 Pandemic should not use WhatsApp as a learning process, especially in digital systems subjects. Because it results in less effectiveness of learning as well as a lack of student interest in learning in the learning process especially in digital systems subjects.

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