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Situation analysis of using the WhatsApp application in distance learning in physics subjects during the Coronavirus pandemic

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ABSTRACT

Outbreaks covid -19 is a plague that is now widespread in Indonesia. The process of learning and teaching firstly in a face-to-face is now online for this study focuses on using WhatsApp application in teaching physics at covid-19 pandemic period. The research design used is descriptive qualitative. Respondents used in this study were students and teachers of Physics Subjects at SMA Pelita Bangsa Lontar. Some of the data collection techniques include interviews and observations. The analysis technique used in this study, namely data reduction, data display, and concluding. The research result shows that learning physics firstly carried out in a conventional manner or the form of direct face to face now become completely virtual by using an application that is WhatsApp where teachers submit material and matter in this application as support in favor of defenders ran physics future covid -19 The physics material taught is in the form of material that contains physics concepts and physics formulations or physics formulas and their use and practice questions that are sent through the application. Still, from the use of the WhatsApp application, there are advantages and disadvantages. The benefits of the application WhatsApp is that students and teachers before online learning were designated Government of Pakistan mostly already download and use this application to communicate previously and most of the students and teachers are proficient in using these applications, in addition, WhatsApp also needs more diminutive quota form, access it and can send any file in pdf, word or other conditions. The lack of using the WhatsApp application is that students find it challenging to understand the material that has been shared by the teacher because indeed in the WhatsApp application, there is no face-to-face online discussion such as the g meet and zoom application so that the delivery of the material is only in video form.

Keywords: physics learning, covid-19 outbreak, WhatApp,

INTRODUCTION

Covid-19 is a virus that was first discovered at the end of December 2019 in Wuhan, China. This virus is endemic in various countries, one of which is Indonesia [1]. Indonesia is one of the countries affected by the covid-19 epidemic, so that with this condition, the government decides a policy that aims to break the chain of its spread, namely by determining policies by imposing social distancing or physical distancing to large-scale social restrictions (PSBB) throughout the territory of Indonesia. One of them, Covid-19, has a significant impact on the world of education. Traditional and routine learning that emphasizes the interaction of teachers and students in the classroom and outside the school is shifting to distance learning [2]. However, the readiness to learn online (online) set by the government is almost non-existent. The unfamiliarity of using thoroughly blended learning mechanisms and online is a significant obstacle to applying distance learning models [3]. See to school graduation, in this case. The teachers must try to create learning so that it continues, though not in school [4].

Therefore, different media used to be a solution to support the implementation of online learning. Various criteria for learning tools are considered to keep learning, including validity, practicality, and effectiveness [5]. The multiple criteria are selected examples of media m or instance-class virtual classroom using Google services Classroom, Edmodo and Schoology, and instant messaging such as WhatsApp [6]. WhatsApp is an example of an information and communication technology application on social networks widely used by various groups [7].

Whatsapp is one of the many applications in

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Indonesia that is used as a medium for learning and teaching, wherein this application students and teachers can communicate with each other via private chat or through groups. The use of WhatsApp Group will make it easier to use it to convey information quickly [8]. The WhatsApp group was chosen as one of the learning media because in terms of the number of users, functions, and how to use it, where educators can share subject matter or assignments in the form of images, pdf, ppt, doc, Xls, audio, video directly and ask for responses (answers) from group participants (students) [9] so that the use of the *WhatsApp* group application can support the process of teaching and learning activities during this pandemic.

Physics is a subject that exists at the high school level. Based on the assessment, students assume that physics is a complicated subject, which results in students not having learning motivation, even making students lazy and having an unpleasant impact on student learning outcomes [3]. This is an additional challenge for physics teachers to estimate learning tools that can motivate students to learn more physics in this pandemic—stated that there were several positive benefits from optimizing the use of WhatsApp in Physical Education Assessment courses. Discussions with fellow students or lecturers are one of the benefits of WhatsApp in lectures [10].

Therefore, WhatsApp in physics learning can be used as a flexible media solution for education. A right but the use of WhatsA pp some situations should be analyzed therein. So that this study was made to investigate several cases in the use of the WhatsApp application in teaching and learning activities in physics during the Covid-19 pandemic.

RESEARCH METHODS

The research design used in writing this article is descriptive qualitative. The qualitative method means collecting data not in numbers but from interview texts, field notes, personal documents, and other official documents [11]. Qualitative methods emphasize phenomena and focus more on the substance of the meaning of these phenomena. Analysis of the insight of qualitative research is strongly influenced by the strength of the words and sentences used. Therefore, the focus of qualitative research is on the process and the meaning of the results. The attention of qualitative research is more focused on human elements, objects, and institutions, as well as the relationships or interactions between these elements to understand events, behaviors, and phenomena [12].

This research was conducted at SMA Pelita Bangsa Lontar, Serang Regency, Banten Province. This study focuses on using the WhatsApp application used in distance learning physics during the Covid -19 IC pandemic. The informants in this study were students and physics teachers, where 15 students from each level of the student informants were taken from classes X, XI, XII, and the teacher informants were born as many as two subject physics teachers at Pelita Negara Lontar High School.

The data collection used in this study are as follows:

a. Interview

The interview process was carried out by asking students of class X, XI, XII and physics teachers of Pelita Negara Lontar High School as informants to dig up information regarding using the WhatsApp application in learning physics during the Covid-19 pandemic where the interview was conducted online.

b. Observation

Observation is a technique of collecting data or information by observing every situation of learning and teaching physics directly in the WhatsApp application. This observation is carried out to obtain an accurate picture of an event or event to answer research questions. Some of the data analysis techniques used in this study are as follows.

c. Data reduction

Data reduction is a form of analysis that sharpens, classifies, directs, removes unnecessary, and organizes data to draw

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conclusions.

d. Data display

In this study, data is presented in the form of narrative text. The presentation of the data begins by describing the research results. After the data goes through the process, analysis and discussion will then be carried out.

e. Draw conclusions

Conclusion and verification is the final step in this research. Any conclusions drawn at the beginning are only temporary conclusions that will change from time to time when new data is obtained in subsequent data collection. Some of the conclusions obtained during the field will be verified during the research by rethinking and reviewing some of the field notes got to form confirmation of the conclusions.

RESULTS AND DISCUSSION

Based on the interviews conducted with several students and two physics teachers at Pelita Negara Lontar High School and observations regarding using the WhatsApp application as a medium for learning and teaching activities for physics subjects during the Covid-19 pandemic, the following results were obtained.

Pelita SMA students conclude that the WhatsApp application is a good application of all existing applications because these students think that this application is straightforward to use. Learning and teaching activities that take place in this application or a group contained in this WhatsApp application can support distance learning during the Covid-19 pandemic in addition to being economical in the use of quotas; this application is also straightforward to use for discussions between students and teachers either via text messages or voice messages in this application.

The advantages of this WhatsApp application are that students and teachers before online learning were determined by the government, most of them had downloaded and used this application to communicate beforehand, and most of these students and teachers were already proficient in using this application besides WhatsApp also only needed a small quota to access it. And can send any file in the form of pdf, word, or so on. The shortcomings of using the WhatsApp application, namely students find it challenging to understand the material that has been shared by the teacher because indeed in the WhatsApp application, there is no face-to-face online discussion such as the Gmeet and zoom application so that the delivery of the material is only in video form.

The constraints on the use of application WhatsApp among other students do not understand the material distributed by the teacher, especially material form of matter and the use of formulas in physics. In addition, the internet network is sometimes less friendly. Students are not optimal in learning the material shared by teachers on WhatsApp, primarily material in the form of videos; this also happens when you have to upload assignments in photos or videos.

Learners with low motivation learning tend to neglect tasks assigned by the teacher. Students have difficulty managing study time because of the many other activities that must be done at home. Of the 45 respondents, all stated that they were more comfortable studying at school than at home.

Subject teacher responses to WhatsApp use include easy to use and have features that make it easy to create student attendance lists, share material, give assignments and give grades to terms. The teacher has difficulty in explaining materials that contain physics equations. The level of student participation in replying to messages or providing responses on WhatsApp in the physics group is deficient. Many students filled out the attendance list late and turned in assignments.

Another problem encountered was that some students never filled out the attendance lists and submitted assignments. Teachers prefer face-to-face learning in class rather than online learning.

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Based on the research results above, then learning physics using WhatApp has advantages and disadvantages. Students and teachers agree that the WhatsApp application is easy to use and helps the learning process during this pandemic.

For material provision, the teacher finds it difficult to discuss material that has many physics similarities, and students find it challenging to understand the material, social studies students who get Cross-Interests in Physics lessons. This can be tricked by the teacher to send a video containing an explanation of the use of physics equations or physics formulas. The teacher explains using a blackboard or book as conventional learning, which is then sent via this WhatsApp application.

The physics learning situation on the WhatsApp application is also sometimes less conducive due to various factors. Among them, students feel bored because they have to stare at the cellphone screen, and there are many activities at home that burden the students' minds so that learning is disturbed. Besides that, most students also have to teach their younger siblings to study at home because they are learning online, cellphones that are easy to low battery and internet networks are not adequate to inhibiting the learning process and teaching students to be more interested in playing social media applications compared to learning to use the WhatsApp application, and the assumption of students' guardians who play cellphones continuously even though they are learning makes them lazy to learn.

CONCLUSION

From some of the respondents' responses about using the WhatsApp application in learning physics during the Covid-19 pandemic, the application is easy to use. Still, there are advantages and disadvantages to it. The drawback of using this application is that students do not understand the material distributed by the teacher, primarily material in the form of calculations and the use of physics formulas. In addition, the internet network is sometimes not friendly. Students are less than optimal in studying the material shared by the teacher on WhatApp, primarily material in the form of videos; this also happens when they have to upload assignments in the format of photos or videos.

The advantages of this WhatsApp application are that the government determined students and teachers before online learning, most of them had downloaded and used this application to communicate beforehand, and most of these students and teachers were already proficient in using this application besides WhatsApp also only needed a small quota to access it. And can send any file in the form of pdf, word, or so on. The shortcomings of using the WhatsApp application, namely students find it challenging to understand the material that has been shared by the teacher because indeed in the WhatsApp application, there is no face-to-face online discussion such as the Gmeet and zoom application so that the delivery of the material is only in video form.

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