EXAMINING THE EFFECTIVENESS OF WHATSAPP IN FACILITATING ONLINE LEARNING

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Abstract: This research is to explore how educational institutions innovate teaching and learning methodologies, by emphasizing the use of technology, especially WhatsApp, as a media for educational facilitation during the Covid-19 pandemic. This research uses qualitative methods, with observation and questionnaires to collect data. A total of 232 respondents participated, most of whom consisted of high school students throughout Kuningan Regency. Research findings reveal that online learning has emerged as a powerful model in enhancing the teaching and learning experience at various stages of education, from early childhood to higher education institutions. WhatsApp has been highlighted as a prevalent application, enabling teachers and students to navigate the challenges posed by the pandemic in the educational domain. Based on the findings, the study concludes that continuous inventive strategies are essential in teaching to adapt to changing scenarios and effectively respond to classroom needs. Furthermore, the integration of technology, like WhatsApp, in educational practices proves to be a valuable asset in overcoming the pandemic-induced challenges in education.
Keywords: *Online learning; WhatsApp; educational technology*

INTRODUCTION

The Corona virus pandemic has changed all parts of human activity, including strategies in the teaching and learning process (Dong et al., 2020). More than 190 countries in the world get suffering in many activities of life (Hussein et al., 2020). This situation forces the institution to find many new methods or strategies of teaching and learning in order to give more excellent education services, even though the unpredictable situation occurs. And of course, the teaching model is a very prominent thing to determine in the 21st century (Kilbane & Milman, 2014). And this condition makes teachers have the creativity to find an approach or a better learning system as a smart education system. Online learning has a better choice to use in this era. It is called the emergency situation of online learning (Patricia Aguilera-Hermida, 2020). This tends to the reason that the teaching and learning process should not only give physical but also psychological safety in the learning community (Mishra et al., 2020). Online learning or distance learning is a solution for learning without face to face or live meeting in the class (Hastowohadi et al., 2020). Social distancing or physical distancing is a reason that online learning should be practiced (Kapasia et al., 2020). This condition is an unpredictable case (Mishra et al., 2020). It forces teachers to leave the former teaching and learning platform. Both teachers and students are forced to undergo the new digital academic experience (Mishra et al., 2020). Digital learning experience means a new class situation that they never find before. So, they have to adapt to the new atmosphere in a virtual class. In every level of education, online learning has different practices. Educators or teachers try to find alternative information and technology tools in teaching and learning, there are teleconferencing, digital open books, online examination, and interaction in virtual environments (Hastowohadi et al., 2020).

Most practices indicate the simple use of enhancement applications. This is meant as using social media applications in supporting the teaching and learning practices. The popular application of it is WhatsApp. WhatsApp is an application that can be used as social media for sharing information and communication. For making simple communication, creating a group is easily made, sharing text, audio, and video messages (Batra, 2016). Simple communication and interaction can occur with mobile technologies supporting (Barhoumi, 2020). Teaching and learning activities have been changed into the online and simple application by means of a mobile application. This application is simple in use and practice. It is to investigate how many features the students use in their learning either in formal or informal (Nagaletchimee, 2015). Not only informal but also informal situations, WhatsApp can be used to converse, exchange information, photographs, videos, screenshots of homework, and so on (Costa-Sánchez & Guerrero-Pico, 2020). Whatsapp is one of the mobile applications that can be used for education (Salem M. Alqahtani et al., 2018). The students can study and converse either with their instructors or with peers. And today, this simple application becomes popular for supporting learning and teaching activity, and of course, it offers a low cost of usage (Dan Bouhnik & Mor Deshen, 2014). Everyone can use without a high budget.

Long before the covid19 pandemic, online learning had started and developed from the end of 2009 (F. Martin, T. Sun, 2020). The peak of online learning development occurred in 2020 until now. The development of this online learning model is inseparable from the strong influence of the issue of the Industrial Revolution 4.0 where all lines of life are introduced to all-digital services. We have not yet understood more deeply about the industrial revolution 4.0, we are faced with the 5.0 industrial revolution. All the terms regarding the industrial revolution are always close to the term disruption. And today we get to know what is called VUCA, Volitaility, Uncertain, Complexity and Ambiguous (Baran & Woznyj, 2021). In a situation where we are new to know that we don't understand, uncertainty, difficulty, and change suddenly become characteristics of life today (Latha & Prabu Christopher, 2020).

Of course, in the learning model, we know computer-based learning, internet-based learning, distance learning, mobile-based learning, Massive Open Online Courses Julia, Peter, & Marco (2021), Learning Management System, and the adoption of social media which are intended to support both synchronous and asynchronous learning models (Muñoz et al., 2017). All changes to this learning model were forced due to the emergence of the coronavirus disease 19 outbreak. Covid19 has forced us to change everything, including in the context of education. Today's online learning has been carried out for more than one year for various levels of education all over the world including Indonesia. Online learning in question is learning using networks, applications, and systems that facilitate the delivery of teaching materials. So, online learning is a solution in responding to the transition to the learning atmosphere, the characteristics of students, and the target learning outcomes of the cognitive, affective, and psychomotor domain. Online learning in learning which is popular among all circles today is the adaptation of social media applications for use in the learning process. This application is an application that can support learning starting from input learning planning, implementing learning, and learning evaluation. These features can be text, video, and audio or all three can be used simultaneously. However, the current understanding of teachers and students is more about using applications that can support or facilitate the learning process in the classroom.

The research we conducted more specifically investigated the effectiveness of online learning, types of online applications used in schools, WhatsApp features that are often used in learning, WhatsApp features that can support learning, features in the WhatsApp application for use in learning, the use of WhatsApp during the Covid pandemic 19 in learning, explaining the features available on WhatsApp, and explaining how big the opportunities are regarding online learning in the future.

METHOD

This research uses a qualitative approach with observation instruments and questionnaires. The questionnaire was distributed by 232 respondents who represented high schools or all Kuningan districts. The questionnaire was created using the google form application and distributed via WhatsApp. The number of items in this questionnaire consists of 10 questions. The questions are classified into three main categories. The first category relates to the General Knowledge of Online learning. The second category relates to kinds of applications for supporting learning and the third category deals with Learning Model perspectives that are suitable

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for use in the future.

Data analysis using the google form application which provides an overview of the percentage of respondents on each question. Types of questions are open-ended so that each respondent can choose according to the available answers.

The next instrument uses observations of student activities during learning to be analyzed using the following formula:

$$\text{Assess student activities} = \frac{\text{Score Obtained}}{\text{Total Score}} \times 100$$

Student activity scores are obtained from the average of student activity scores at the first and second meetings. Each student will receive a predicate based on student activity scores in the following categories:

Table 1. *Student activity predicate category*

Value	Predicate
81 – 100	Active
61 – 80	Enough Active
36 – 60	Less Active
0 – 35	Not Active

Source: (Kholiq, 2015)

RESULTS AND DISCUSSION

The result of this research is the response of all responders in answering the ten questions. Here are the following results of those. *The first question* is what the students think about online learning. The results are 18,8% answering that online learning is social media learning, 28,6% is learning through cellular phone, 46,2% is learning through the internet, and 6,4 % is learning through learning applications. The result is in the following table.

Table 2. *Online learning understanding*

Statement	%
Social media learning	18,8
Learning through cellular phone	28,6
Learning through internet	46,2
Learning through application	6,4

The understanding of online learning at Students of Senior High School has a different perception. Online learning is understood as the learning experience or learning activities related to networking, cellular phone, or applications. The question is shared with the students to know about the online learning perspectives. There is 18,8% that online learning is social media learning, 28,6% learning through cellular phone, 46,2% learning through internet, and 6,4% learning through application.

Understanding online learning is perceived as learning via the internet. This can be seen by the majority of respondents stating that online learning is learning that is done through a network. So, any school activity using the network is online learning. The viewpoint of online learning among students is not fully understood. What is surprising is that learning through applications is the lowest percentage, which is only 6.4%. They consider that applications do not always provide learning and are online.

The understanding of online learning via the internet is a common perception felt by middle-class students when they are learning. Learning carried out with the help of internet networks is understood as online learning. This understanding is a fundamental experience that all activities based on internet networks are called online learning. So, learning using both synchronous and asynchronous learning applications is still something that is still not understood. In fact, online learning is actually application-assisted learning with learning support features from semester learning plans, learning processes to learning evaluations.

The second question is about the types of applications used in schools. The data shows that there are 87.1% choose WhatsApp, 12.9% choose Learning Management System or LMS. Meanwhile, none of the respondents answered using Instagram or Facebook. This is in accordance with the following table:

Table 3. *Kinds of learning application used*

Name of application	%
Whatsapp	87,1
Learning Management System	12,9
Facebook	0
Instagram	0

Along with the respondent's understanding of question number 1, the second perspective about the application used in learning at their school is WhatsApp. Whatsapp was chosen by most respondents and followed by the Learning Management System, with a very far range. From the data above, it can be seen that the dominance of the use of WhatsApp in learning is very large. Whatsapp is no longer a social media for communicating but has become a technological device that supports learning with all its ease of use. Whatsapp is also included in a simple application to use in communication. This has a reason because by simply installing the application, automatically the owner of another

number that has installed this application will automatically appear on the user's cellular phone. Thus, both of them can communicate easily directly through the use of these applications. *The third question* is related to the WhatsApp feature that is often used in learning. as illustrated in the following table:

Table 4. *Whatsapp features*

Feature	%
Text	79,1
Video	15,8
Audio	5,1

The result of the fourth question is that the text feature used in supporting learning is 79.1%, 15.8% for video, and 5.1% for audio. The features in the WhatsApp application really support users in operating it easily. Popular features are audio, video, and text. These three popular features are dominantly used in communication. The highest rating in the use of the three features is text. The use of text features in learning because it relates to the sharing of learning material by teachers to students. The teacher prefers to provide teaching materials and assignments using text, both direct text, and file insertions. Only a few teachers or teachers use the audio feature in learning.

The fifth question is related to the WhatsApp feature that can support learning. This question means that the types of subjects given at school can be supported or not by the existing WhatsApp feature. The following table describes the results of the questionnaire.

Table 5. *Perception of WhatsApp features for learning*

Answer	%
Yes	40,2
No	59,8

The fourth question is about the perception of application features of WhatsApp that can be used in learning. There is 59,8% that answers no and 40,2% that answers yes. Most responders declare that not all subjects or lessons can be clearly explained with WhatsApp features. From the data above, we see that the features in WhatsApp do not always provide solutions for teaching all subjects. This is indicated by the perception that 59.8% of respondents stated that not all features support the understanding of all subjects. This reason shows that there are differences in the character of each subject that must use different learning models, learning strategies, learning techniques. So, not always the features in WhatsApp can support understanding of subjects.

The sixth question is the suitability of features in the WhatsApp application for use in learning. This learning category is a type of exact, social, and language subjects. These three categories are majors in senior high schools and the equivalent in Kuningan District. The following is the percentage that can be seen in table 6.

Table 6. *Suitability of Whatsapp for supporting learning*

Lesson Category	%
Exact	10,3
Social	27,9
Language	61,8

The fifth question is a kind of subject that can be supported with WhatsApp. There are three categories of lessons the students learn. They are exact science, social, and language major. Whatsapp is the most suitable used for a language lessons. There is 61,8% for a language lesson, 27,9% for social, and only 10,3% for exact science. This result is related to the research of the suitability of WhatsApp in supporting language competence (Motteram et al., 2020).

Types of language courses occupy the highest choice position. Most language competencies can be supported by the WhatsApp application. This reasoning can be supported by text features that can support reading and writing comprehension, while audio features can support speaking and listening competencies. So, subjects related to language are the most strategic to be supported by the WhatsApp application. Meanwhile, exact competence is in the most difficult position or less supported by this application.

The seventh question relates to the use of WhatsApp during the Covid19 pandemic. The use of WhatsApp application during the Covid19 pandemic is an effective choice or not. Following the results of the questionnaire from the sixth question is described in table 7 below.

Table 7. *Whatsapp as supporting learning system*

Statement	%
Effective	49,8
Not effective	43,4
Very effective	6,8

Question number seven is talking about the WhatsApp using in supporting learning in pandemic covid19. 49,8% responders state that WhatsApp is effective, 43,4% is not effective and

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6,8% is very effective. Learning in the Covid19 pandemic era has differences in the previous learning process. Online-based learning is the main choice. How social distancing is, physical distancing must be maintained. So, online learning is the main choice. From tracing data to respondents, the effectiveness of learning using WhatsApp can be alternative learning that is simple and easy to use by both teachers and students.

The eighth question explains the features that are in WhatsApp. In using WhatsApp, educators and teachers provide guidance and direction in operating the application. Whatsapp is an application used in social media. However, this application can also be used as a support system in learning and teaching. So, the features in WhatsApp can be adapted for learning. The results of the questionnaire can be seen in the following table.

Table 8. *The teachers' guidance in using WhatsApp features*

Statement	%
Giving guidance	85%
Not giving guidance	15%

Based on question number 8, the guidance of teachers in using WhatsApp features is given or not to students. There are 85% of responders answering yes and 15% answering no. This case indicates that using WhatsApp for the learning needs guidance or direction from teachers in order to know for the students to use WhatsApp as their needs for supporting learning understanding.

The nineth question explains how big the opportunities related to online learning can be in the future. This is related to the effectiveness of learning if it is carried out online. As many as 68.5% of respondents answered ineffective, while 31.5% of respondents answered effectively. The following is also explained by the table.

Table 9. *The effectiveness of online learning in the future*

Statement	%
Not effective	68,5
Effective	31,5

Students' perceptions in number eight-show unpreparedness and even boredom when learning is continuous in the network. Nearly 70 percent of students want face-to-face learning. They do not agree if face-to-face learning continues in the future. Question number 9 explains the tendency of the learning model to be chosen by students between online, offline, or blended. 61.3% of respondents stated that offline is preferred by students, while 31.1% of respondents answered blended learning and only 7.7% of respondents answered that learning in the future could be online. As described in the following table.

Table 10. *Learning model in the future*

Statement	%
Online learning	31,1
Offline learning	61,3
Blended learning	7,7

In line with the answer to question number 10, the learning model desired by students is offline. This face-to-face the learning model is ineffective and is not favored by many respondents to continue in the future. The Covid19 pandemic, which has changed the academic structure at all levels, has a negative impact on the psychological condition of student learning. Thus, they really want to immediately return to normal conditions where learning can be carried out in a normal way; no masks, no social distancing, no physical distancing.

Observation results obtained from student activities during learning can be seen in the following table:

Table 11. *Student activity data*

Category	The Number of Students	Percentage
Active	118	52,6%
Enough Active	85	36,6%
Less Active	29	12,5%

Based on Table 11, it is found that the average assessment of student activity at the first and second meetings is. There are 118 students in the active student category, 85 moderately active students, and 29 students in the less active category. Based on the analysis of student activity data, it can be concluded that 89.2% of student learning activities with application assisted by the WhatsApp application are in the active and moderately active categories.

WhatsApp can be an option as an application for learning because it is often used to send materials, assignments and other information. According to Holisin, I., & Mursyidah (2020) WhatsApp is an application that is often used for discussions during learning during the Covid-19 pandemic. The reason is, the WhatsApp application is very easy to access by all students and they are very familiar with using this application. Based on the data obtained, online

learning using WhatsApp is effective. Student responses responded quickly. WhatsApp is also an application that does not require a lot of internet quota. Due to the Covid-19 pandemic, WhatsApp has been included in the list of applications that can be accessed with a learning quota from the Ministry of Education and Culture.

The results of this research are different from Safytri's research which stated that there was a decrease in student learning activities when flipped classroom learning assisted by WhatsApp groups was implemented. In the second cycle, the student activity category was in the quite low category. This is because when studying at home students are hampered by internet networks (Safytri, 2020).

CONCLUSION

Online learning which is carried out today is an option in compulsion. Understanding online learning itself is still a basic understanding of internet network-based learning. So that WhatsApp is one of the most popular applications used for learning and teaching at the high school level and equivalent. The choice of the WhatsApp application is user-friendly; availability of text sharing features, audio, video, and easy communication in groups. However, the learning model in the future is an offline learning model with all interaction activities that are more interesting without limits, direct explanations, more directed classroom management, and holistic assessment patterns.

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