Original Paper

The Effectiveness of Online Learning in the Conditions of the Covid-19 Pandemic in Senior High School

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Abstract

Pandemic covid-19 has disrupted the conventional learning process. So a solution is needed to answer these problems. Online learning is an alternative that can solve this problem. The research objective was to obtain an overview of the implementation of online learning at State Senior High School 1 Palembang, as an effort to reduce the spread of covid-19 in schools. The research subjects were students of class X IPA$_1$ until X IPA$_6$ (100 students). Data were collected by an interview via zoom cloud meeting. Data analysis was performed using interactive analysis techniques by Miles & Huberman. The results showed that: (1) students already have the basic facilities needed to take part in online learning, (2) online learning has flexibility in its implementation and can encourage independent learning and motivation to be more active in learning, and (3) distance learning encourages the emergence of social distancing behavior and minimizes the appearance of student crowds so that it is considered to reduce the potential for the spread of Covid-19 in the school environment. Weak supervision of students, unstable mobile device signal, and high quota fees are challenges in online learning. Increasing independent learning, interest and motivation, courage to present ideas and questions are other advantages of online learning.

Keywords

online learning, covid-19 pandemic, social distancing

1. Introduction

The development of information and communication technology in the Industrial 4.0 era has had a major influence on the teaching and learning process. Ease of access to technology has been used by teachers to facilitate the learning process. Access to technology can also improve the quality of

education. Since the discovery of internet technology, almost anything has been possible in the world of education. Currently students can learn not only anywhere but at the same time and anytime with the existing online learning facilities. Online learning is increasingly recognized as a way to solve education and training problems, both in developed countries and developing countries, especially Indonesia. Many people use different terms for online learning, but in principle, online learning is learning using gadgets as learning media.

Currently, not only in Indonesia, but even in various countries the Covid-19, epidemic of a disease is very worried because this epidemic of a disease which originated in the city of Wuhan, China's Ubei Province around December 2019 began to spread and even hit all corners of the world very quickly, so WHO on March 11 2020 set this epidemic of a disease as a global pandemic.

According to Hidayat (1986) effectiveness is a measure that states how far the target (quantity, quality and time) has been achieved. Where the greater the percentage of targets achieved, the higher the effectiveness. Meanwhile, Handoko (1997) explains that effectiveness is the ability to choose the right goals or the right equipment to achieve the goals set. The effectiveness level of the ability to achieve goals appropriately and well (Devung, 1988).

Steers (1985) explains that effectiveness is the range of efforts of a program as a system with certain resources and means to meet its goals and objectives without paralyzing the means and resources and without putting undue pressure on its implementation. In learning, careful planning is needed, making learning tools, choosing strategies, media, techniques, learning models, and evaluating learning, all of which are mutually sustainable. It is necessary to use effective and innovative learning models so that learning can be more varied and run smoothly. The use of the learning model is also adjusted to the material to be taught so that the suitability between the two and all components becomes appropriate.

One indicator of the effectiveness of learning is the achievement of a learning goal. Learning objectives are achieved maximally, it can be said that learning reaches its effectiveness. In addition, active student involvement shows the efficiency of learning. The teaching and learning process is said to be effective if the learning can achieve the expected goals and students can absorb the subject matter and practice it. Learning methods and strategies are now experiencing a shift leading to a shift in the educational paradigm. This affects the function of educators as facilitators, mediators and motivators in the learning process. The teacher has always been considered the center of learning, but now it has turned into students as learning itself. One of the reasons, among others, is that the rapid progress of information technology requires a paradigm shift in the learning process carried out by all students.

According to Koran (2001) E-learning is any teaching and learning that uses electronic circuits (LAN, WAN, or the internet) to convey the content of learning, interaction, or guidance. Darin E. Hartley (2011) explains that e-learning is a type of teaching and learning that allows teaching materials to be delivered to students using the internet, intranet or other computer network media. Rosenberg (2001) emphasizes that E-learning refers to the use of internet technology to deliver a series of solutions that

can increase knowledge and skills.

E-learning has shortened learning time and made study costs more economical. E-learning facilitates interaction between students with material or subject matter, students and teachers or instructors and fellow students. Students can share information with each other and can access learning materials at any time and repeatedly, with such conditions students can further strengthen their mastery of learning material. In E-learning, the teacher's role is computers and guides—electronic guides designed by contents writers, E-learning designers and computer programmers.

Learning from home is still maximized because through the online system students can take part in learning with various existing applications. As stated by Keengwe & Georgina in their research, it has been stated that technological developments provide changes to the implementation of teaching and learning (Keengwe & Georgina, 2012). Information technology can be accepted as a medium in carrying out the educational process, including helping the teaching and learning process, which also involves finding references and sources of information (Wekke & Hamid, 2013).

The Corona Covid-19 virus currently has an impact on all people and the world of education in Indonesia. This global Covid-19 pandemic can also increase student stress in addition to reducing students' thinking power as well as disrupted eating patterns so learning will be hampered (Beisser & Gillespie, 2021). Up to 300 million students have been disrupted by teaching and learning activities in schools because of this pandemic, which was recognized by UNESCO on Thursday (5/3). The public is encouraged to carry out activities outside the home with activities inside the home or social distancing to prevent the spread of the Corona Virus.

Since the implementation of social distancing has had an impact on education. Minister of Education and Culture (Mendikbud) Nadiem Makarim supports the local government policy to allow students to study from home because the spread of this virus is increasingly worrying. Using lessons learned from the Covid-19 pandemic will serve us well in how we address our need to be prepared for future emergencies (Wilson & Ankrum, 2021)

The delivery of material through online can be interactive so that learning participants can interact with computer as their learning media. As one example of students using learning using gadgets as learning media or establishing relationships (browsing, chatting, video calling) through electronic media, in this case, computers and the internet will later get more effective and better learning outcomes than conventional learning.

The use of instructional media in the teaching and learning process is an effort to increase the effectiveness and quality of the learning process which in turn can improve the quality of student learning outcomes. The use of instructional media in the teaching and learning process has several benefits including: (1) teaching will attract students' attention so that it can foster student learning motivation, (2) the teaching material will be clearer so that students can understand and master the teaching objectives well, (3) teaching methods will be more varied, (4) students will interact more in

learning activities because they do not only listen to teacher explanations but also other activities such as observing, demonstrating and others.

With research on the effectiveness of online learning in the conditions of the Covid-19 pandemic in senior high schools, the problems that exist in class X IPA1 - X IPA6 students in State Senior High School 1 Palembang, South Sumatera, namely the effectiveness of online learning can be improved even better in teaching. and the use of learning media through online learning.

Based on the description above, a study was conducted with the title "The Effectiveness of Online Learning in the Conditions of the Covid-19 Pandemic in High Schools". This study aims to determine the effectiveness of online learning during the Covid-19 pandemic.

2. Method

2.1 Research Methods

This type of research is qualitative research. The purpose of this study was to describe online learning held at State Senior High School 1 Palembang, Indonesia as an effort to suppress the chain of Covid-19 spread in the school environment. Online learning referred to in this research is learning that uses learning media that can be accessed using internet services. The research was conducted by first conducting surveying students regarding the application of online learning. The survey is distributed using a Google form given to students via WhatsApp messages. There are 100 subjects who have responded to the distributed survey. The results of the survey were then grouped into three categories of student responses: (1) Agree with the application of online learning; (2) Disagree with the application of online learning; (3) Doubt about the implementation of online learning.

2.2 Research Subject

The research subjects were students of class X IPA1 - X IPA6 students in State Senior High School 1 Palembang who had carried out online learning and were grouped based on the response of the research subject. 100 research subjects were obtained from class X IPA1 - X IPA6.

2.3 Data Collection Technique

Data collection was carried out through interviews via zoom cloud meetings or distributing questionnaires to Google form. The aspects that are asked in the interview are: (1) the facilities and infrastructure owned by the students to carry out online learning; (2) student responses regarding the effectiveness of online learning; (3) implementation of online learning in breaking the chain of spreading Covid-19 in the school environment.

2.4 Data Analysis Technique

Analysis of research data was carried out using the analysis model of Miles and Huberman (1994) which consists of three stages, namely data reduction, data display, and conclusion drawing and verification.
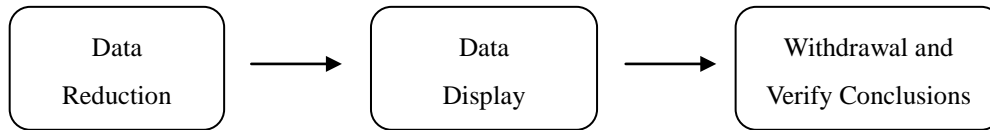
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┌──────────────┐        ┌──────────────┐        ┌──────────────────┐
│     Data     │   →    │     Data     │   →    │  Withdrawal and  │
│   Reduction  │        │    Display   │        │ Verify Conclusions│
└──────────────┘        └──────────────┘        └──────────────────┘
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Figure 1. Stages of Research Data Analysis

Analysis of research data, the data reduction stage is the stage of collecting all the information needed from the interview results and then grouping the data. The data display stage is the exposure of data that is needed in research and which does not need to be discarded. The withdrawal and conclusion verification stage is the stage of interpreting research data to draw conclusions based on the phenomena obtained (Miles & Huberman, 1994).

3. Research Results

Researchers conducted interviews with research subjects related to their experiences about online effectiveness in learning. The result was 44 out of 100 respondents felt that online learning was more effective and 56 respondents stated that face-to-face learning was felt to be more effective. They feel that the application of online learning that they get is only focused on giving assignments, the ratio of giving material is very small. In addition, access to questions is not as extensive as during face-to-face learning, both asking questions of teachers and friends.

Tabel 1. The Results of Effectiveness of Online Learning in the Conditions of the Covid-19 Pandemic

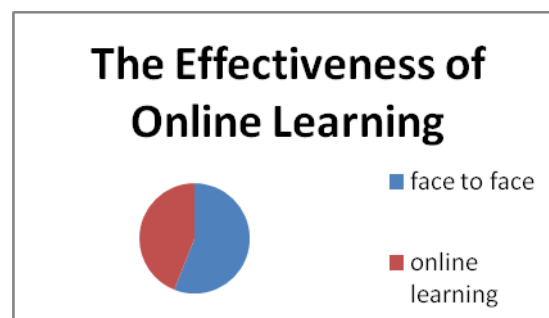| The Effectiveness of Online Learning	The Results
Face-to-face learning is more effective	56%
Online learning is more effective	44%

Figure 2. The Effectiveness of Online Learning

Based on the results of research on the delivery of teaching in Online Learning, it shows that 12% of respondents answered very well with their understanding, 18% of respondents answered well, 15% of

respondents answered sufficiently, then 55% of respondents answered lack of understanding. This proves that during online learning, the teaching delivered by the teacher cannot be understood as a whole by students. This can occur because the delivery of teaching is not good in using learning media, and cannot interact directly with student complaints. This is natural because generally each subject only takes one hour every week.

Tabel 2. Teaching Results on Online Learning

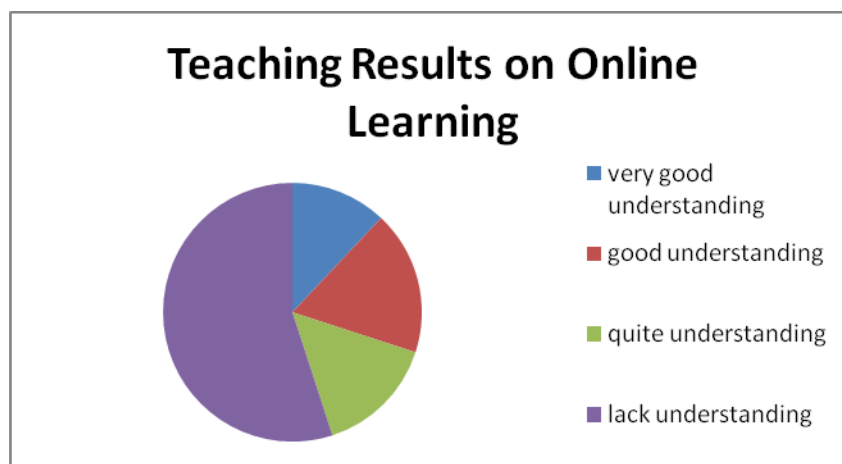| Teaching Results on Online Learning	The Results
Very good understanding	12%
Good understanding	18 %
Quite understanding	15 %
Lack understanding	55%

Figure 3. Teaching Results on Online Learning

4. Discussion

Researchers conducted interviews with research subjects related to their experiences about online effectiveness in learning. The result was 44 out of 100 respondents felt that online learning was more effective and 56 respondents stated that face-to-face learning was felt to be more effective. They feel that the application of online learning that they get is only focused on giving assignments, the ratio of giving material is very small. In addition, access to questions is not as extensive as during face-to-face learning, both asking questions of teachers and friends.

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Researchers conducted interviews with research subjects regarding their experiences about the advantages and disadvantages of online-based learning. The experiences students feel about the advantages and disadvantages of online are very varied.

The advantages; Students feel more relaxed and happy, have more time at home with their families, have more time to rest and relax, and students do not have to wear full uniforms and come to school early.

Disadvantages; Students feel wasteful because the quota runs out quickly, it is more difficult to understand the material presented by the teacher, sad because the pocket money they get is reduced, and students feel that social activities with their friends are hampered.

Researchers conducted interviews with research subjects regarding their experiences about the atmosphere they felt during online-based learning. The result was 44 respondents stated that online learning was not fun; they felt several obstacles such as signal interference during learning. Meanwhile, 56 other respondents stated that online learning was more enjoyable; they felt that online learning was more efficient to implement.

Researchers conducted interviews with research subjects regarding their experiences regarding improvements that should be made during online application so that online-based learning can be better.

The suggestions that the respondents gave were varied, such as:

Explanation of learning materials:

Students expect teachers to continue to provide explanations for learning materials. Students recommend explaining the material through video, they feel the material is easy to accept and understand.

Follow the trend of technological advances:

Students hope that teachers will be able to follow the trend of technological advances, namely by utilizing applications/social media that are being liked by students so that students feel more enthusiastic, enthusiastic, and not easily bored. Students recommend that occasional learning can be done with Google Cloud/Zoom, Telegram, Google Classroom, WhatsApp Group, they feel happy and when conducting a question and answer session they feel made easier.

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