The Effectiveness of Using Learning Videos on Student Science Learning Outcomes in Digital PR Courses

Fifit Fitriansyah

1University of Bina Sarana Informatika, Central Jakarta, Indonesia 10450

Corresponding Author. E-mail:
fifit.ffy@bsi.ac.id

Abstract

Effective learning should involve many elements of learning, one of which is the use of learning media. Looking back over the past 3 years, where the Covid 19 Pandemic has spread in every sector of life, the education sector is no exception. For this reason, after the Covid-19 pandemic, the way of learning that was previously done online has changed, now it is done offline again. As a result, various adjustments to face-to-face learning patterns are needed. One of the efforts to use learning media in the form of learning videos is a solution that helps lecturers deliver learning material. By combining audio and visual elements, learning videos have the power to facilitate student learning to be more effective with its repeatable nature. The purpose of this study was to see the effectiveness of using learning videos on student learning outcomes in Digital PR courses. The research method used is quantitative descriptive analysis. The results of this study were as many as 91% of students were helped by the learning videos used. Thus, the use of learning videos is considered effective in improving student learning outcomes with an average learning mastery of 93%.

Keywords: Effectiveness, Learning Videos, Learning Outcomes.

How to cite this article:

INTRODUCTION

The era of globalization is an era where quality and quality competition. In this era, educational institutions starting from the elementary school level to tertiary institutions are expected to be able to guarantee the quality and quality of education so that the resulting human resources have excellence. Education policy is a comprehensive action related to the time it is intended for and for whom the policy is made. So that the existence of educational policies has a positive effect on all dimensions of life that are related to education itself, starting from the input process to the output process of the educational activity itself (Subayil, 2020).

Instruction is a plan of teaching & learning activities in which learning is organized. This instructional plan motivates students to learn. The aim of instruction is to make the learning process take place (İşman, 2011). In self-learning, the position of learning media is one of the essential positions in realizing optimal learning goals. Where the existence of learning media is a separate element in the latest process of delivering material by lecturers.

Since the Covid-19 pandemic in March 2019, various sectors have been affected, including the world of education. Learning that was originally carried out face-to-face changed to online (online). This is what ultimately requires lecturers to develop learning materials to be more effective, efficient so that they are right on target and obtain optimal learning results.

There are many obstacles faced by students in teaching and learning activities. The conditions of the facilities and infrastructure are not very supportive, there are too many subjects that they have to understand and study, and the conditions of the learning environment are conducive. Various kinds of obstacles can cumulatively cause learning difficulties for students. As teaching staff, teachers should be able to create conducive learning situations and conditions so as to facilitate optimal achievement of subject matter concepts, because mastery of concepts makes it easier for students to learn biology at a higher education level. Students must be able to apply the concepts learned, students are able to relate one concept to another, and be able to solve the problems they face (Puspa, 2017).

The word media is the plural of the word medium. The medium can be defined as an intermediary or introduction to communication from the sender to the recipient. Media is one component of communication, namely as a messenger from the communicator to the communicant. Based on this definition, it can be said that the learning process is a communication process (Santyasa, 2007). Media is also a tool that has the function of conveying messages. Media is the plural form of the word "medium" which comes from the Latin meaning "between". We can interpret the term media as anything that acts as an intermediary or conveys information from the sender of the message to the recipient of the message (Santyasa, 2007).

Learning media itself is a tool that functions to convey learning messages. Learning is a process of communication between learners, teachers and teaching materials. Communication will not work without the help of means of conveying messages or media, so good learning media must fulfill several conditions, one of which is to increase learner motivation so as to obtain effective learning outcomes.

Learning media itself acts as a learning resource in the learning process which is not only a medium or intermediary, but includes strategies, methods and techniques used to support the learning process. With the existence of learning resources, the needs of the learning process can be fulfilled so that learning takes place effectively (Fitriansyah, 2021).

Learning media also aims to increase students' interest, independence, effectiveness, and creativity in participating in learning activities. This aims to prepare students to enter the world of work and develop a professional attitude in students (Miftahussurur & Pramono, 2016).

The effectiveness of media is not about the teachers utilize media or not in the classroom, but it deals with how the teachers optimize the utilization of the instructional media in the classroom (Sukmahididayanti, 2015).

Therefore, in improving learning outcomes an optimal role is needed from educators who are the main actors in managing learning, especially in practice-oriented learning, where educators need to have certain competencies related to practical learning (Sutrisno & Tri Siswanto, 2016). Thus the selection of appropriate learning media will be one of the keys to optimal learning process.
In learning media, one of them is learning videos, where videos are a series of moving images that combine two elements, namely audio and visual. The existence of audio elements allows students to be able to receive learning messages through hearing, while the visual elements allow creating learning messages through visualization. Learning videos in this position function as learning media. Learning media occupies a fairly important position as a component of the learning system. Without media, communication will not occur and the learning process as a communication process will also not be able to take place optimally (Fitriansyah, 2021).

One of the efforts made to meet learning needs is through the use of learning media which acts as a tool or intermediary that supports the learning process. One of the learning media that can be used is video.

Today, video plays a significant role in education in terms of its integration into traditional classes, and be the principal delivery system of information in classes particularly in online courses as well as serving as a foundation for many blended classes (Beheshti, Taspolat, Kaya, & Sapanca, 2018).

In this context, video is a series of moving images that combines two elements, namely audio and visual. The existence of audio elements allows students to be able to receive learning messages through hearing, while the visual elements allow creating learning messages through visualization.

The video-based instruction (VBI) was used as alternative classroom teaching and learning instruction and observation processes which is common in today's educational venues in the new normal of education. However, there has been a dearth of awareness and training to help teachers critically analyze and effectively utilize video-based instruction of authentic classroom instruction for their technological and pedagogical development (Fabunan & Ventura, 2021).

Learning videos in this position function as learning media. Learning media occupies a fairly important position as a component of the learning system. Without media, communication will not occur and the learning process as a communication process will also not be able to take place optimally. Thus, the selection of video as a learning resource in the form of learning media for Digital PR eyes is felt to be relevant and effective, considering that learning requires direct examples which are sometimes difficult for educators to practice (Fitriansyah, 2021).

The selection and use of appropriate learning media needs to be supported by considering the SECTION model offered by Bates, namely: S-tudent (students), E-ase of use (easy to use), C-oast/time (cost/time), T-eaching (learning activities), Interaction (interaction), Organization (problem management), Networking (expanding the network), and Security and privacy (security and privacy) (Batubara & Batubara, 2020).

Digital PR learning is learning intended for students of the Public Relations Study Program at Bina Sarana Informatica University which discusses how a Public Relations makes a company picture in the form of a blog or website, where the tasks given are the application of E-PR.

In the learning process that prioritizes direct practice, of course, it requires a direct and independent learning space for students to apply what has been obtained theoretically. With the use of learning videos, it is expected to improve learning outcomes to be more optimal.

Self-study results are the maximum results that have been achieved by a student after experiencing the teaching and learning process in studying certain subject matter. In absolute terms, learning outcomes are not only in the form of grades, but can be in the form of changes, reasoning, discipline, skills and so on that lead to positive changes.

For this reason, in obtaining the expected learning outcomes in accordance with predetermined quality standards, it is necessary to have learning media that are in accordance with learning objectives. The purpose of this study is to get an overview of the effectiveness of using learning videos on learning outcomes in Digital PR courses for students of the Public Relations study program at Bina Sarana Informatica University, especially when learning is done online.

Learning video media is a media or tool that contains learning messages. Video as an audio-visual medium and having elements of motion will be able to attract students' attention and motivation in carrying out learning activities (Parlindungan, Mahardika, & Yulinar, 2020).

During the Covid 19 pandemic itself, where learning was carried out online either through social media Whatsapp, Telegram, Google Classroom or LMS, almost every
educator looked for various ways to organize effective learning for students. Some schools and tertiary institutions finally use learning media in the form of videos which are made in a simple way where educators present learning material through video recordings.

For this reason, the use of learning videos as a learning resource during the Covid-19 pandemic is considered very appropriate and can be continued to be used after the Covid 19 Pandemic, this is considering the principle of independent learning that can be done repeatedly and where visualization of learning videos is expected to provide an overview, directly related to learning materials, especially on materials that contain direct practice. The existence of learning videos is expected to make learning more effective so that not only the learning objectives are achieved but also the learning outcomes are increased.

Learning outcomes are changes in behavior and abilities that are obtained by students after participating in learning which can be in the form of cognitive, affective, and psychomotor abilities. Learning outcomes as a measurement of the assessment of learning activities or learning processes are expressed in symbols, letters, or sentences that tell the results that have been achieved by students in a certain period. Therefore, students should be able to obtain learning outcomes that are in accordance with established standards or according to the KKM, but in reality not all students can achieve maximum learning results (Novita, Sukmanasa, & Pratama, 2019).

Thus learning outcomes are changes in students' behavior and abilities in understanding learning which are generally in the form of grades taken through the provision of learning outcomes tests that refer to predetermined KKM standards.

METHOD

The research method used is quantitative descriptive research. Quantitative descriptive research is to describe, examine, and explain something that is studied as it is, and draw conclusions from phenomena that can be observed using numbers (Listiani, 2017). Quantitative descriptive research is research that only describes the contents of a variable in research, not intended to test a particular hypothesis (Marlina, 2020). Thus it can be seen that quantitative descriptive research is research that describes, examines and explains a phenomenon with data (numbers) as they are without intending to test a particular hypothesis (Sulistyawati, Wahyudi, & Trinurystho, 2022).

Effectiveness itself is the compatibility between the person carrying out the task and the intended target, or it can be said that effectiveness is related to the implementation of all the main tasks, achieving goals, timeliness, and the active participation of members (Mulyasa, 2004).

The sample in this study involved 30 students according to the number of students in one class who had used video learning media. The instrument used is a questionnaire which contains questions regarding various student opinions on the implementation of learning using learning video media. Instruments are deployed via Google forms.

Furthermore, in looking at the increase in learning outcomes, researchers use an assessment rubric that will be given through the pretest and posttest. This is considering that the Digital PR course is a project-oriented or work-based course.

RESULTS AND DISCUSSION

Several previous studies related to the use of video in learning can improve student learning outcomes as research belonging to Wahyu Agung Pamungkas and Henny Dewi Koeswanti concerning the Use of Video Learning Media on Learning Outcomes of Elementary School Students which has the result that learning using video media on student learning outcomes shows positive results. Learning by using video media can also increase students' motivation and interest in learning. In addition, the teaching and learning process becomes conducive, comfortable, interesting, comfortable, and enjoyable and runs effectively and efficiently. This learning video media can help students understand the subject matter well (Pamungkas & Koeswanti, 2022).

In line with the results of Wahyu et al's research, another study belonging to Aditya Rahmawari and Hanifah regarding the Application of Learning Videos to Improve Mathematics Learning Outcomes in Grade VII SMP Negeri 2 Bengkulu City obtained research results on the Application of Using learning videos to improve student learning outcomes by: (1) remember the previous material before entering the material to be studied; (2) students are given motivation before starting learning.
and (3) students are given 5-10 practice questions individually at the end of learning and obtain a significant change in learning outcomes of 8.33% and this proves that the learning videos used in learning effectively improve learning outcomes (Rahmawati & Hanifah, 2021).

While the results of this study where the use of learning videos in Digital PR courses is carried out by means of lecturers providing learning videos through the WhatsApp Group and Learning Management System (LMS). Provision of videos is carried out periodically during lectures at each meeting.

After the lecturer gives the learning videos to students, then the lecturer gives directions in the form of asking for student responses regarding the explanation of the learning videos used in the form of discussions and questions and answers. At the end of the lecture, the lecturer reminded students to study independently through the learning video. The results of the questionnaire using Digital PR learning videos are as shown in the table 1:

Table 1: Average effectiveness of using learning video:

<table>
<thead>
<tr>
<th>ASPECT</th>
<th>AVERAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to Understand Material</td>
<td>93%</td>
</tr>
<tr>
<td>Video View</td>
<td>87%</td>
</tr>
<tr>
<td>Video Contents</td>
<td>90%</td>
</tr>
<tr>
<td>Video Attractiveness</td>
<td>91%</td>
</tr>
<tr>
<td>Alternative Learning Media</td>
<td>91%</td>
</tr>
<tr>
<td>Video Effectiveness</td>
<td>95%</td>
</tr>
<tr>
<td>Overall Average</td>
<td>91%</td>
</tr>
</tbody>
</table>

Based on the results of the above acquisition of the questionnaire data obtained from the use of learning videos on students as much as 91% of learning videos are considered to clearly help the learning process.

While the learning outcomes obtained by students after using learning videos are assessed using the assessment rubric used by lecturers in classes with KKM (Minimum Completeness Criteria) that have been defined in Digital PR learning with a minimum score of 70 with Grade B. Following are student learning outcomes Based on the pre-test and post-test, the table 2 can be seen:

Table 2: Student Learning Outcomes based on Pretest and Posttest

<table>
<thead>
<tr>
<th>No</th>
<th>Respondent's Name</th>
<th>Pre Test Score</th>
<th>Completeness</th>
<th>Post Test Score</th>
<th>Completeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RT</td>
<td>70</td>
<td>Complete</td>
<td>80</td>
<td>Complete</td>
</tr>
<tr>
<td>2</td>
<td>TL</td>
<td>60</td>
<td>Uncomplete</td>
<td>80</td>
<td>Complete</td>
</tr>
<tr>
<td>3</td>
<td>GL</td>
<td>70</td>
<td>Complete</td>
<td>90</td>
<td>Complete</td>
</tr>
<tr>
<td>4</td>
<td>YM</td>
<td>60</td>
<td>Uncomplete</td>
<td>97</td>
<td>Complete</td>
</tr>
<tr>
<td>5</td>
<td>SG</td>
<td>80</td>
<td>Complete</td>
<td>100</td>
<td>Complete</td>
</tr>
<tr>
<td>6</td>
<td>BN</td>
<td>70</td>
<td>Complete</td>
<td>100</td>
<td>Complete</td>
</tr>
<tr>
<td>7</td>
<td>MN</td>
<td>70</td>
<td>Complete</td>
<td>80</td>
<td>Complete</td>
</tr>
<tr>
<td>8</td>
<td>TR</td>
<td>80</td>
<td>Complete</td>
<td>100</td>
<td>Complete</td>
</tr>
<tr>
<td>9</td>
<td>RC</td>
<td>60</td>
<td>Uncomplete</td>
<td>100</td>
<td>Complete</td>
</tr>
<tr>
<td>10</td>
<td>DT</td>
<td>70</td>
<td>Complete</td>
<td>80</td>
<td>Complete</td>
</tr>
</tbody>
</table>
Based on the learning outcomes seen from the pre-test and post-test in the field, it can be concluded that the use of learning videos in Digital PR courses is considered effective in increasing learning outcomes seen from the level of completeness which reaches 100% of the number of students who take the field test as many as 30 students with the KKM that has been set is 70. As for the percentage gain from learning outcomes with the assessment rubric if seen on average as shown in table 3

Table 3: Assessment of the Effectiveness of learning videos on Learning Outcomes (Pre-Test and Post-Test).

<table>
<thead>
<tr>
<th>No</th>
<th>Respondent's Name</th>
<th>Pre Test Score</th>
<th>Completeness</th>
<th>Post Test Score</th>
<th>Completeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>FY</td>
<td>70</td>
<td>Complete</td>
<td>80</td>
<td>Complete</td>
</tr>
<tr>
<td>12</td>
<td>CA</td>
<td>70</td>
<td>Complete</td>
<td>95</td>
<td>Complete</td>
</tr>
<tr>
<td>13</td>
<td>SM</td>
<td>70</td>
<td>Complete</td>
<td>85</td>
<td>Complete</td>
</tr>
<tr>
<td>14</td>
<td>JK</td>
<td>80</td>
<td>Complete</td>
<td>97</td>
<td>Complete</td>
</tr>
<tr>
<td>15</td>
<td>WW</td>
<td>80</td>
<td>Complete</td>
<td>85</td>
<td>Complete</td>
</tr>
<tr>
<td>16</td>
<td>MK</td>
<td>60</td>
<td>Uncomplete</td>
<td>97</td>
<td>Complete</td>
</tr>
<tr>
<td>17</td>
<td>MM</td>
<td>70</td>
<td>Complete</td>
<td>85</td>
<td>Complete</td>
</tr>
<tr>
<td>18</td>
<td>SL</td>
<td>80</td>
<td>Complete</td>
<td>100</td>
<td>Complete</td>
</tr>
<tr>
<td>19</td>
<td>ZN</td>
<td>75</td>
<td>Complete</td>
<td>80</td>
<td>Complete</td>
</tr>
<tr>
<td>20</td>
<td>VN</td>
<td>70</td>
<td>Complete</td>
<td>80</td>
<td>Complete</td>
</tr>
<tr>
<td>21</td>
<td>AR</td>
<td>80</td>
<td>Complete</td>
<td>95</td>
<td>Complete</td>
</tr>
<tr>
<td>22</td>
<td>AS</td>
<td>80</td>
<td>Complete</td>
<td>95</td>
<td>Complete</td>
</tr>
<tr>
<td>23</td>
<td>RL</td>
<td>80</td>
<td>Complete</td>
<td>90</td>
<td>Complete</td>
</tr>
<tr>
<td>24</td>
<td>ZD</td>
<td>70</td>
<td>Complete</td>
<td>95</td>
<td>Complete</td>
</tr>
<tr>
<td>25</td>
<td>SD</td>
<td>70</td>
<td>Complete</td>
<td>95</td>
<td>Complete</td>
</tr>
<tr>
<td>26</td>
<td>DS</td>
<td>60</td>
<td>Uncomplete</td>
<td>95</td>
<td>Complete</td>
</tr>
<tr>
<td>27</td>
<td>SN</td>
<td>70</td>
<td>Complete</td>
<td>95</td>
<td>Complete</td>
</tr>
<tr>
<td>28</td>
<td>FF</td>
<td>65</td>
<td>Uncomplete</td>
<td>80</td>
<td>Complete</td>
</tr>
<tr>
<td>29</td>
<td>DP</td>
<td>75</td>
<td>Complete</td>
<td>95</td>
<td>Complete</td>
</tr>
<tr>
<td>30</td>
<td>NM</td>
<td>68</td>
<td>Uncomplete</td>
<td>95</td>
<td>Complete</td>
</tr>
</tbody>
</table>

Based on the assessment table obtained using the assessment rubric of the quality of student learning outcomes when viewed from the results of the pre-test and post-test, it can be explained that the level of learning success from the results of the pre-test with an average of 68% (before using video learning) compared to the results post test that is after using Digital PR learning videos is higher as much as 91%. Thus there is an increase in learning outcomes after using learning videos with a difference of 19% to the learning outcomes obtained by students. For this reason, this shows that the effectiveness of using Digital PR learning videos has high effectiveness. If described in graphical form as below:

Figure 1: Results of the Assessment of the Effectiveness of Learning Videos Based on the Pretest and Posttest.
If you look at the results above, it is in line with the statement that learning outcomes are changes in behavior and abilities that are obtained by students after learning, in the form of cognitive, affective, and psychomotor abilities. Learning outcomes as a measurement of the assessment of learning activities or learning processes are expressed in symbols, letters, or sentences that tell the results that have been achieved by students in a certain period. Therefore, students should be able to obtain learning outcomes in accordance with established standards or according to KKM, but in reality not all students can achieve maximum learning results. This can be caused by various factors, one of which is the use of instructional media that has not been maximized (Novita et al., 2019).

However, even though high results have been found, the use of audio-visual media in the learning process also has advantages and disadvantages, such as: 1) Video adds a new dimension to learning, video presents moving images to students in addition to accompanying sound; 2) Video can display a phenomenon that is difficult to see in reality. While the weaknesses of the video are as follows: 1) Opposition, inaccurate shooting can cause the audience to doubt in interpreting the images they see. 2) Supporting Materials, video requires a projection tool to be able to display the images in it. The projection tools in question are infocus and screen; 3) Budget, making videos requires a lot of money (Daryanto, 2018).

Another practice in using videos in the instructional process is as learning tools in line with the development of information and communication technologies. This study made use of videos as technological tools that support learning. As learning tools, videos support the learning process and are used in the professional development of teachers in line with educational programs. Videos create opportunities for in-depth learning by presenting various learning data together such as images, movement and sound (Kosterelioglu, 2016).

Video is a media that can enhance the effectiveness of the delivery process of a message or information because the video is more dynamic and capable of stimulating a variety of senses such as visibility and hearing (Syaripudin, Ahmad, & Awang, 2019).

People learn better from an instructional video when the onscreen instructor draws graphics on the board while lecturing (dynamic drawing principle), the onscreen instructor shifts eye gaze between the audience and the board while lecturing (gaze guidance principle), the lesson contains prompts to engage in summarizing or explaining the material (generative activity principle), a demonstration is filmed from a first-person perspective (perspective principle), or subtitles are added to a narrated video that contains speech in the learner’s second language (subtitle principle). People do not learn better from a multimedia lesson when interesting but extraneous video is added (seductive details principle). Additional work is needed to determine the conditions under which these principles apply and the underlying learning mechanisms (Mayer, Fiorella, & Stull, 2020).

Thus, the use of learning media in the form of videos in Digital PR courses helps students in obtaining an overview of how to make corporate designs starting from planning media kits in the form of press releases, company profiles in digital form or in other words in the form of websites. For this reason, the solution that can be done to overcome these problems is to use learning media. In learning activities, learning media are needed to support the process of teaching and learning activities in the classroom (Pamungkas & Koeswanti, 2022).

Learning is important for students to build a foundation of knowledge they can utilize in their future careers. Learning via videos is considered an effective tool for many students, as the topic was well reviewed by many researchers (Wong, 2020).

With learning media students can be motivated and show an interest in understanding the material presented by the lecturer. Teaching and learning activities also require learning strategies to suit the learning objectives set by the lecturer. There are various kinds of learning strategies and media, it is hoped that lecturers can use them in teaching and learning activities in the classroom (Meyer, K., & Makransky, 2019).

Because it cannot be denied that by utilizing learning videos, the learning atmosphere is much more enjoyable, students’ understanding is much more helped to increase, considering that with videos students can repeat continuously so they can remember longer. In addition, learning is also much more effective and efficient.

Not only in the world of education, the use of learning videos is also often used in the medical world. Namely a video can be produced using relatively low-cost devices such as
smartphones and webcams. Within medical education, instructional videos have been used for a variety of purposes and can take many different forms including: 1) screencasts (e.g. recording screen interactions and applications); 2) short video lectures (e.g. interviews, talking heads, whiteboard instruction or presentation slides with voiceover) (Figure 1); 3) live lectures (e.g. lecture capture from classrooms or online webinars); 4) medical procedural videos (e.g. demonstrations and filming in clinical locations) (Luke, 2021).

Thus, the main important thing to create a conducive and enjoyable learning climate is the way educators carry out a learning activity may require a different approach and model from other learning and involve learning media that is appropriate to student learning needs (Pamuji & Wiyani, 2022).

For this reason, the use of learning videos that are adapted to student learning needs can improve learning outcomes and provide more motivation to learn compared to just using the lecture method.

CONCLUSION

Based on the results of the research above, it can be concluded that the use of learning videos in Digital PR courses is considered effective in improving learning outcomes. This can be seen from the learning completeness which is close to 100%, namely 91% complete and above the KKM value set.

With the mastery of learning possessed by students, this illustrates that learning after the Covid 19 pandemic where previously students studied online, and during the transitional period students needed a different learning method and solutions using learning media in the form of videos became an alternative in carrying out the learning process especially if the learning requires direct and serious practice as in Digital PR courses.

It can be concluded that using learning videos at Bina Sarana Informatics University in the Public Relations Study Program has gone well. The use of learning videos is considered effective and can assist lecturers in conveying learning material as a whole as well as a source of independent learning for students. Learning videos are also expected to be able to motivate student learning, especially to help students while studying after the Covid 19 pandemic.

REFERENCES


Videos. Medical Educations, (May), 2–4. https://doi.org/10.13140/RG.2.2.20274.94404


Postgraduate and Undergraduate Students.  
https://doi.org/10.35631/ijmoe.27009