Student Perceptions of Video-Sharing Websites as Learning Media in Environmental Science and Disaster Mitigation Course

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***Abstract*—This study aims to describe students' perceptions of the use of video sharing web-based learning media in environmental science and disaster mitigation courses. This type of research is descriptive research using quantitative and qualitative methods. The instrument used is a student perception questionnaire. The subjects of this study were students of the University of Riau who took environmental science courses as many as 4 classes with a total of 90 students. The results of the research show (1) can increase motivation and interest in learning very well and well. (2) students' understanding of the material presented is quite good and the adequacy of the material provided in the video sharing web-based learning media is in a fairly good category; (3) the advantages of web sharing video learning are so many that it adds to the student learning experience; (4) Video-sharing websites helps in online discussions; (5) Video-sharing websites in learning can be continued. Based on the results of this study, it can be concluded that students have a positive perception in the use of learning videos through youtube-based videos, so that these learning videos can be used to facilitate the learning process in environmental science courses and disaster mitigation.**

Keywords—student's perception, video-sharing websites, learning media

I. INTRODUCTION

The pandemic period has forced education staff, especially lecturers, to be technologically literate in learning. Mastering technology in developing online learning media for the sake of effectiveness in learning, lecturers are required to be creative in presenting material synchronously and asynchronously. Asynchronous learning means that the implementation of learning does not occur at the same time while synchronous means that the implementation of learning is at the same time. "In asynchronous learning, students can access learning materials more flexibly and can carry out learning and complete them according to the time frame that has been determined by the teacher. Learning can be in the form of giving readings, videos, simulations, educational games, quizzes, and collecting assignments. Meanwhile, in synchronous learning, teachers and students are required to access the internet at the same time. This allows direct interaction between teachers and students online. Synchronous learning is briefly described as a real but virtual class. Synchronous learning can usually be in the form of video conferencing"[1].

Educators need to innovate with learning media in order to help students in online learning, especially for students who have limitations in accessing digital learning resources [2]. Learning resources can be categorized into learning materials, equipment and facilities, people and the environment. Without learning resources, learning cannot be successful. Professional teachers must be able to create and provide learning media. The role of the media in learning is 1) Making abstract concepts concrete and facilitating certain parts that are considered important, 2) Providing a substitute for direct experience, so that it can bring objects that are difficult or dangerous to approach, 3) Providing experience in terms of observation and presenting color differences visually , and 4) Presenting information that requires motion [3].

Teaching staff can use technology to create learning media in the form of learning videos, one of which is using video sharing web-based learning videos. Learning video is a medium that strongly supports distance learning (PJJ), because it can be easily shared through video sharing sites such as youtube, google drive and applications that can be accessed via mobile phones and student laptops [4]. The use of instructional video media has advantages including, 1) Students and educators can open learning videos at any time if they want to review and update the material, 2) Students can manage their preferred way of learning, because each student has a different learning style [5]. Learning using video media is considered to be able to increase student interest in learning because it can help understand the material presented with a visualization in the form of video [6]. So that students become interested in learning more than a way of learning that only shows pictures and words in books [7].

The use of web-based learning video sharing in learning environmental science and disaster mitigation courses is favored by students. The presentation of theoretical and

complex material makes demands that can make students understand more quickly and easily understand the material presented. However, continuous online learning activities make students easily bored and unfocused so that there is an effort to make a present or modern learning presentation by utilizing technology, especially for subjects that require broad scientific insight that is multidisciplinary in nature such as environmental science and mitigation courses. disaster. Many kinds of examples need to be presented to make it easier for students to understand the material.

One technology that is currently being hitz among students is the use of video. One of them is Video-sharing websites like youtube. The use of YouTube as an application for learning videos requires more ability than an educational staff to be able to create and adapt to the needs of students for the material to be presented. The use of Video-sharing websites holds the hope that later it will be able to make students more enthusiastic and motivated and can be used by students in learning well and continuously so that they can achieve the expected learning goals. In addition, Video-sharing websites users are also expected to be able to be further developed by both lecturers and other educators. For this reason, it is necessary to know how students perceive the Video-sharing websites learning media in environmental science and disaster mitigation courses.

II. METODOLOGY

The research was conducted on the campus of Riau University. The sampling technique used is purposeful sampling, which is a technique for researchers to determine and draw samples under certain considerations [8]. The population is all Riau University students who have participated in environmental science and disaster reduction lectures, and the sample is 90 students who have participated in up to 4 classes in environmental science and disaster reduction courses. This type of research is descriptive research with quantitative and qualitative methods. The quantitative method is to investigate students' views on learning media through online video sharing, while the qualitative method is to conduct a descriptive analysis of the questionnaire. Questionnaires include closed questionnaires and open questionnaires. The open questionnaire aims to provide students with answers or freedom to answer, usually in the form of questions, and students can write their own answers in the form of descriptions [9]. The data analysis technique used in this study is qualitative analysis, including data collection, data simplification, data presentation and drawing conclusions [10]. The data is analyzed according to the following formula:

$$\frac{number\ of\ students\ answered\ yes/no}{total\ number\ of\ students}\ x\ 100\% \qquad (1)$$

Categories of data analysis results are presented in Table I.

TABLE I. CATEGORIES OF STUDENTS' PERCEPTION ANALYSIS RESULT USING VIRTUAL LAB MEDIA [11]

Percentage	Categories
86 – 100%	Very good
76 – 85%	Good
60 – 75%	enough
55-59 %	not enough
≤ 54%	not much

III. RESULT AND DISCUSSION

The results of the student perception of video-sharing websites as learning media in environmental science and disaster mitigation course. Then we categorize their responds into the following categories Fig. 1.

A. Motivation and interest in learning

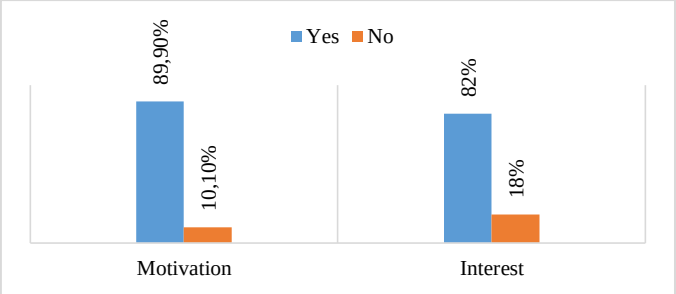

Fig. 1. *Motivation and interest in learning*

From the diagram, it can be seen that the use of video sharing web-based learning media with the youtube application can increase motivation and interest in learning very well and well. This is in accordance with research by Sukarni which revealed that the purpose of learning YouTube as a learning medium is to create conditions and an atmosphere of learning that is interesting, fun and interactive [12]. Learning videos on YouTube can be used for interactive learning in the classroom, both for students and teachers themselves through online and offline presentations. The advantages of YouTube as a learning medium are:

1. The potential is that YouTube is the most popular site in the internet world today that is able to provide edit value to education.
2. Practical, YouTube is easy to use and can be followed by all groups including students and teachers.
3. Informative, namely YouTube provides information about the development of education, technology, culture, and others
4. Interactive, namely YouTube facilitates us to discuss or do questions and answers and even review a learning video.
5. Shearable, namely YouTube has HTML link facilities, Embed learning video code that can be shared on social networks such as Facebook, Twitter and also blogs/websites.
6. Economical, YouTube is free for all people.

B. The concept of material on Video-sharing websites

Students' perceptions of the concept of material presented in video sharing web-based learning media can be seen in the diagram, from the diagram it can be seen that students' understanding of the material presented is quite good and so is the adequacy of the material provided in video sharing web-based learning media. it is categorized quite well Fig. 2.

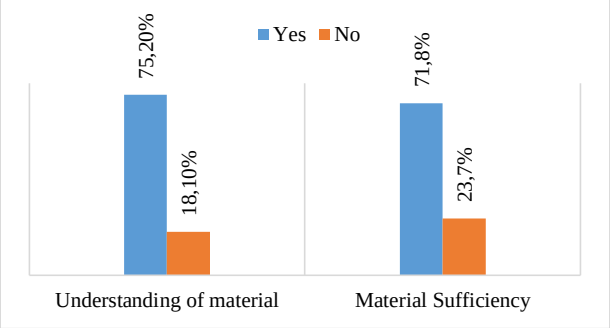

Fig. 2. *Understanding and Material Sufficiency*

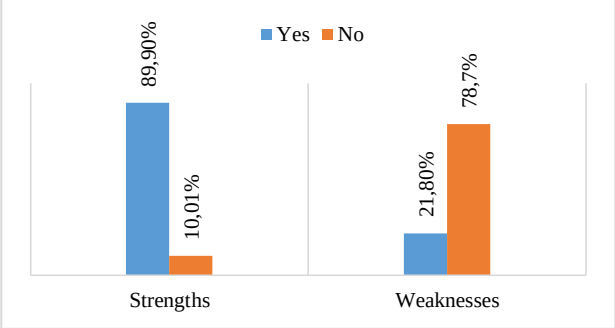

Fig. 3. Strengths and Weaknesses

As for this, it can be seen from the reasons and comments from students on web-based learning media, video sharing can make it easier for students to absorb information and speed up understanding of the material because according to students the explanation of the material by the lecturer is very detailed, the delivery of the material is more concise with simple language used so that very easy to understand. Learning media that can be used are needed to support the teacher's tasks in order to motivate and improve student learning understanding. One of the media that can be used is the development of learning videos. Good learning media and student-oriented, can improve the quality of the learning process. That the use of learning media in the teaching and learning process can generate new desires and interests as well as motivation and stimulation of learning activities[13]. This is in line with previous research conducted by Yuh-Tyng Chen (2012), Hee Jun Choi and Scott D. Johnson (2005), Prili (2012), Novita (2009) which found that the learning motivation of students who participated in learning using media video-based is higher than students who take part in learning using text-based media. One of the highlights of learning using youtube video media is video shows in which there are text effects, moving images, sound effects containing instructional learning and animation. Animations accompanied by learning instructions that are presented can visualize abstract concepts to be more real so that students are motivated to learn. Another interesting thing that causes students' motivation to learn by using YouTube video media is higher than real media and chart media because, for some schools, YouTube video media is an interactive new media loaded with Information Technology (IT) so that it creates more curiosity. in. Youtube is a medium that can create a fun learning atmosphere so that it can increase learning motivation and ultimately increase students' understanding of concepts [14]. However, there are some students' opinions that the presentation of the material in the video is clear but there are some parts of the points that have been explained that need to be clarified again the meaning and meaning of the words from that part of the material.

C. Learning Experience with Video-sharing websites

In addition to motivating and making it easier for students to understand the material, in using Video-sharing websites there are other advantages and disadvantages that are suggested by students, this can be seen from the diagram (Fig. 3).

Based on the diagram, the advantages of Video-sharing websites in online learning are very much compared to the disadvantages of *Video-sharing website*.

The advantages of video-sharing websites according to students are:

1. It's fun because the videos presented are accompanied by interesting and unique PowerPoint animations.
2. learning with video-sharing websites with the YouTube application. Learning is easy to understand because students can play the learning video again if it is not clear enough
3. Learning with video-sharing websites with the YouTube application is flexible because it can be played anytime and anywhere
4. The existence of learning videos from YouTube will make it easier for students who are usually constrained by the network. can download and play learning videos repeatedly.
5. Because learning videos can be played repeatedly and can be slowed down for parts that are not understood.
6. The quota spent on watching videos is not too much.
7. Compared to other video conferences, learning by using Video-sharing websites is more effective because it can view material without network constraints and also with good audio. Because if the video conference is constrained by the network, students will miss the material being studied. However, if the Video-sharing websites students can access it when our network is good, and will not miss the material.
8. On Video-sharing websites with the YouTube application, lecturers can directly see case examples in the material through pictures.
9. students feel they are not required to understand the material directly, but gradually.
10. Can learn information about courses that I can't get on google or other content.

As for the drawbacks due to network barriers so that sometimes it is difficult to access video and the resolution can change so that the resulting image and sound are not optimal.

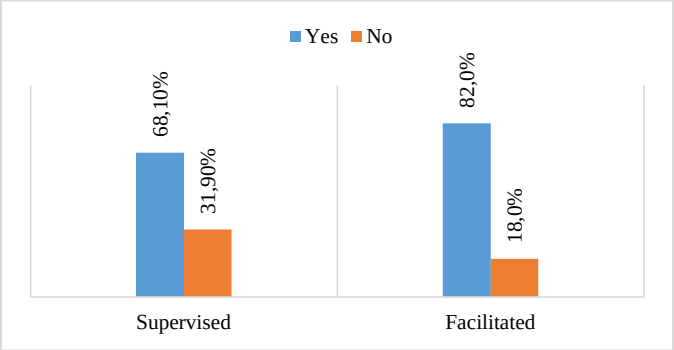

Fig. 4. *Supervised and Facilitated*

D. Video-sharing websites helps in online discussions

Video-sharing websites helps in online discussions, this can be seen from the diagram Fig. 4.

The existence of a comment column, students can interact and exchange ideas with lecturers or their friends. In addition, learning with Video-sharing websites can be used in discussions and can be supervised directly by the lecturer in a live report in the comments column and it is easy to analyze student activities because of the analytic features (graphs, numbers to see student activities).

It is easy to assess participation because there is a form of like, dislike buttons for videos so that students are enthusiastic about participating because they still feel supervised. Lecturers are also easy to check comments with the comment feature. Thus, lecturers can directly assess student activities.

E. Video-sharing websites in learning can be continued

Based on the results of the questionnaire, students agreed that online learning with Video-sharing websites could be continued. There were 91% of students agreed that this could be further developed with a new formula in accordance with the suggestions given by students and the experiences gained by students during online learning by using Video-sharing websites with the YouTube application.

CONCLUSION

As mentioned in the introduction, the purpose of this research is to determine students' views on web-based learning media video sharing in environmental science and disaster reduction courses. The results show that students have different opinions. Some of them showed positive views on the use of video sharing network learning media, such as being more motivated and interested in learning, which is consistent with previous research, which found that students support video as a learning motivation [15]. They hope to learn more by making more use of online video sharing, so as to make it easier to understand the materials in the lecture.

Given the challenges posed by the use of technology in online learning in the COVID-19 pandemic, we found some limitations of this research. First of all, we cannot directly observe how students conduct discussions and learning activities. Therefore, there is still very little guidance for students in the discussion process, and more training is needed for educators to make learning videos technically. Therefore, further research needs to require educators, especially lecturers, to monitor real-time learning activities on the YouTube channel page so that we can observe their understanding of the problem and the extent to which they can do it. And for further training to create a youtube-based video sharing network for learning.

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