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## **Analysis of Student Needs for Video Media Materials for Cooperative Learning Models in Biology Learning Strategy and Design Courses**

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### **Abstract**

In the process of the Biology Learning Strategy and Design course at the Biology Education Study Program, PGRI University of West Sumatra with the material of cooperative learning models, lecturers used learning media, one of which is video media sourced from youtube. This kind of leaning media is a tool to ease students understand the subject. The purpose of this research is to find out how much students need for cooperative learning model video media in the Biology Learning Strategy and Design course. The method research was designed with a 4D development model and only at the Define stage, namely the analysis of student needs. The results of the analysis of student needs showed in the category of very need. This means that there is a need for the development of video media on cooperative learning model materials. Based on the results of the study, it can be concluded that the students' need for video media for cooperative learning model materials is good to develop.

**Keywords:** cooperative learning model; student needs analysis; video media

### **INTRODUCTION**

The learning process is an interaction activity between teachers and students. In the process, there are several important components, including materials, methods, media, and evaluation of learning so that learning objectives are achieved effectively. To support this achievement, there are courses that discuss the learning process, namely Learning Strategies and Design courses. Biology Learning Strategy and Design is one of the compulsory courses taken by students at PGRI University, West Sumatra. In this course, students will learn, among other things, the basic principles of teaching, how to choose the right and effective learning approach, selecting and establishing methods and techniques as well as effective teaching and learning models to achieve learning objectives. According to Firmansyah (2013), learning strategies are learning activities carried out by teachers and students that aim to produce effective and efficient learning outcomes. In the implementation process, the teacher will carry out the strategies that have been designed according to the approach that will be used. In carrying out the learning strategy the teacher can determine the techniques that are considered relevant to the strategy, and the use of these techniques each teacher has tactics that may differ from one teacher to another (Firmansyah, 2013).

Based on the results of interviews that the author has conducted with lecturers who are in charge of the Biology Learning Strategy and Design course, information is obtained that in the Biology Learning Strategy and Design lecture on the learning model material, namely using the Education Unit Level Curriculum and the 2013 Curriculum. In the learning process, the lecturer using learning media, one of which is video media as teaching material. However, the video media used is only limited to taking from YouTube, which sometimes the steps are not in accordance with the learning model and have not been specifically designed. As a result, students do not understand the learning model and the steps. With that, the solution to the problems above is the need for the development of cooperative learning model video media, because with the help of video media learning materials will be easier to understand, such as being able to help students understand the steps of the cooperative learning model and students can learn independently. Good learning media can foster enthusiasm, interest and motivation to learn students, so that the material is easy to understand and student learning outcomes will be more satisfying (Kusumawardhani 2016; Galvis, 2018; Turner, 2022). Cikarang & Utami (2018) states that learning media are made and adapted to the needs of students, curriculum and competencies to be achieved by students.

To find out how much students need for video media for cooperative learning model material in the Biology Learning Strategy and Design course, an analysis of student needs can be carried out. This is in line with the opinion of Hutchinson, 1987 (in Hendriyani *et al.*, 2018) which states that in designing a lesson, there needs to be a needs analysis. Hutchinson, 1987 (in Hendriyani *et al.*, 2018) divides these needs into two, namely target needs and learning needs. An example of target needs is "Do students need something in the target situation (What the learner needs to do in the target situation)". While the example of learning needs is "Do students need something they want in learning (What the learner needs to do in order to learn)". The existence of variations in learning media in the learning process will make students motivated in learning, so as to improve student learning outcomes. One variation of learning media is the use of video media. According to Sadjati in (Gunawan, 2020), the benefits of video media in learning include, 1) video media can provide more experience for students, 2) display a real picture of the material to students, 3) the use of video media can provide opportunities for teachers to present easier material. understood by students, 4) videos can be used to show presentations of scientific studies, 5) videos can be used to show a method or tutorial on the use of a tool, 6) videos can demonstrate the skills to be used, 7) videos can show a procedure stage. . In the implementation of learning, the use of video media in the learning model material is well used so that students can see and easily understand each step of the learning model.

## METHOD

The design of this study uses a 4D development model consisting of the define, design, develop and disseminate stages developed by Thiagarajan. However, the research stage is only carried out until the define stage, namely analyzing student needs. Respondents consisted of 30 students from the class of 2019 and were taken from 3 classes who had taken the Biology Learning Strategy and Design course. In the development of video media, the instruments used in collecting data in the study were validity and practicality questionnaires. The data analysis technique used is the analysis of the validity of the learning media including the feasibility of the content, the form of the presentation, the language used, and graphics, as well as the practical analysis technique of the learning media including the ease of use, the time required for implementation, media appeal to student interest, ease of interpretation and has the same equivalent. The data obtained were processed using a modified formula from Riduwan (2013), as follows:

The criteria for the percentage of modified student learning needs from Arikunto (2013) can be seen in the following table:

**Table 1. Criteria for Analysis of Student Needs**

Achievement Level	Category
0-20%	Very Unnecessary
21%-40%	No need
41%-60%	Currently
61%-80%	Need
81% 100%	Really need

## RESULTS AND DISCUSSION

Based on the results of interviews that have been carried out by researchers with lecturers who teach Biology Learning Strategy and Design courses with learning model materials, information is obtained that in the learning process lecturers use learning media, one of which is video media as teaching materials. However, the video media used is only limited to taking from YouTube, which sometimes the steps are not in accordance with the learning model and have not been specifically designed. As a result, students do not understand the learning model and its steps. The results of the questionnaire on student needs regarding cooperative learning model video media can be seen in Table 2.

**Table 2. Results of Student Needs Questionnaire on Video Media for Cooperative Learning Model Materials**

No.	Question	Answer	Percentage
1.	Does your lecturer use learning video media in cooperative learning model materials, especially Picture and Picture, Talking Stick, Exchange Pairs and CIRC?	10	33%
2.	Is it needed learning video media on cooperative learning model material in understanding the steps of the learning model?	29	97%
3.	Do you agree that video media can help the role of lecturers in delivering cooperative learning model material with that model?	30	100%
4.	Do you agree if the video media contains an explanation of the material and pictures as the topic of the problem in completing the steps of one of the cooperative learning models?	29	97%
5.	Do you agree that the media can motivate and increase interest in learning?	29	97%
6.	Do you agree if the audio in the learning video media uses the voice of the researcher?	28	93%
7.	Do you agree if the learning video media consists of the opening cover and the title of the cooperative learning model at the beginning of the video opening?	29	97%
8.	Do you agree if the video media is added with educational instrument music as accompaniment music?	29	97%

Based on Table 2. the results of the analysis of student needs show as many as 28 students with a percentage of 93% agree that the audio in the learning video media uses the voice of the researcher. Then the results of the analysis of student needs also showed as many as 29 students with a percentage of 97% agreed that the learning video media consisted of the cover and the title of the learning model at the

beginning of the video opening. The results of the analysis of student needs showed as many as 10 students with a percentage of 33% stated that lecturers used video media in cooperative learning model materials. Purwanti (2015) stated the importance of using video media in the learning process, which can increase the desire of students to learn. The presence of video media makes it easier for students to remember because it involves the senses of sight and hearing. With video media, students will pay more attention to moving images accompanied by sound, so that it can increase students' attention to understand the content of video media.

The results of the analysis of student needs also showed that as many as 29 students with a percentage of 97% needed learning video media. Learning media is one of the determining factors for learning success, including learning videos. According to Nuzuliana *et al.*, (2015), learning video is an audio-visual tool in which there are messages and images containing the material to be studied by students and used to achieve the planned learning objectives. Correspondingly, Irwanto (2019), also stated that the learning video is something that is shown, designed, implemented, and assessed which is used as a means of learning for students, so as to achieve effective learning objectives. The results of the analysis of student needs also showed as many as 30 students with a percentage of 100% stated that the learning video media could help the teacher's role in delivering the material. With the video media, the learning process becomes more interesting and fun. If the information conveyed by the teacher is sometimes not fully understood by the students, then the learning media acts as a tool to clarify the message conveyed by the teacher in the learning process (Hardianti and Asri 2017 & Cole *et al.*, 2017). Gustinasari, M., Lufri, (2017) stated that the use of learning media can help the teacher's burden in delivering the material, so that the teacher can monitor the learning activities of students. According to Apriansyah (2020), some of the advantages of learning by using video are: showing something real and realistic, so that it can add to the learning experience of students; can attract attention and motivate students in learning; and can reduce boredom in learning. Another advantage of video is that it can be used for a long time if the video is still relevant; videos can make learning fun; can help students in understanding learning; The video can also be used by the public.

The results of the analysis of student needs also show that as many as 29 students with a percentage of 97% agree if the video media contains material explanations and pictures as the topic of the problem in completing the steps of one of the cooperative learning models. The results of the analysis of student needs also show that as many as 29 students with a percentage of 97% agree that video media can motivate and increase interest in learning. In addition to clarifying the delivery of material to students, video media is able to foster students' learning enthusiasm, so that it can generate motivation and interest in learning to improve learning outcomes. According to Muawanah & Muhid (2021) Van *et al.*, (2020), learning motivation is encouragement from students who make learning activities and provide direction in the learning process, so that learning objectives can be achieved. Correspondingly, Wibowo & Marzuki (2015) states that motivation is a condition that encourages students to be able to achieve the goals of their motives. The urge to learn that comes from within students will lead to interest in learning and good learning outcomes. According to Haryadi (2019) Interest in learning is a situation where students have a tendency to learn, so students will always be active to participate in learning and will produce good achievements. Correspondingly, Khairani *et al.*, (2019) stated that the use of video media will be more interesting, because it presents material content in the form of audio and visual which contains learning material, so that it can help students to understand the material. The novelty of this research is the development of a new product in the form of a learning video media in the form of an application made directly by the researcher, which previously in the lecturer learning process only used videos from YouTube. The results of the analysis of student needs also show that as many as 29 students with a percentage of 97% agree if video media is added with educational instrument music as accompaniment music. According to Wulansari *et al.*, (2019) the presence of musical instruments, can give a sense of calm to one's mind and can help develop one's intelligence. Kordumova & Snoek, 2015; Endang *et al.*,

(2019) also stated that the media that can improve the learning process is music media, because with music learning will be more enthusiastic, fresh minds, and create a pleasant atmosphere.

## CONCLUSION

Based on the results of student analysis, it can be concluded that students of the Biology Education Study Program at the PGRI University of West Sumatra need the development of video media for cooperative learning model materials. Based on these results, research can be continued at the design and development stage of video media for cooperative learning model materials. The author would like to thank the lecturers of the PGRI University of West Sumatra and the students of the Biology Education Study Program class of 2019 and 2020 who have been involved in helping in this research. This research can be used as an alternative as a variation of learning media by utilizing technological advances.

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