

The Impact of a Scramble-Based Cooperative Learning Model Using Video Media on Student Learning Outcomes

Riswan Aradea¹, Slamet Cahyono², Rambat Nur Sasongko³, Muhammad Kristiawan⁴, Neta Dian Lestari⁵

¹ Universitas PGRI Palembang, Palembang, Indonesia; riswanaradea@gmail.com

² Universitas Bengkulu, Bengkulu, Indonesia; slamet_c@yahoo.com

³ Universitas Bengkulu, Bengkulu, Indonesia; rambatnur@yahoo.com

⁴ Universitas Bengkulu, Bengkulu, Indonesia; muhammadkristiawan@unib.ac.id

⁵ Universitas PGRI Palembang, Palembang, Indonesia; neta_obyta@yahoo.com

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ABSTRACT

The goal of this research was to see how the scramble-type cooperative learning model based on video media affected student learning outcomes in management accounting courses. The respondents in this study were undergraduate students at Palembang University, consisting of 36 students for the experimental class and 34 students for the control class. The experimental technique is employed. The test is the data-collecting instrument. According to the study's findings, 61.12 percent of students met good criteria, 19.44 percent met very good criteria, and 19.44 percent met sufficient criteria during the teaching and learning process employing a scramble-type cooperative learning model based on video media. And the experimental class's average learning results are 80.42. In traditional learning models, 73.52 percent of the criteria are sufficient, 17.65 percent are less criteria, 5.89 percent are good criteria, and 2.94 percent are less criteria. The scramble-based cooperative learning model using video media was effective for student learning outcomes.

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Corresponding Author:

Riswan Aradea

Universitas PGRI Palembang, Indonesia; riswanaradea@gmail.com

1. INTRODUCTION

To encourage students to be more involved in learning activities, lecturers must select a learning model that aligns with the 2013 curriculum. The cooperative learning model is one of the learning methods that require students to be engaged and motivated in their learning. A scrambling cooperative learning paradigm is one that promotes students being active and working together in groups. Students are urged to cooperate in groups to solve a problem presented by the speaker by employing this scramble-style cooperative learning methodology. In this scenario, it is intended that the scrambling cooperative learning paradigm would encourage student participation and increase student learning

results. Learning media, in addition to learning models, may assist lecturers in carrying out learning in the classroom.

Scramble is a methodology that encourages students to seek solutions and solve issues by presenting question and answer papers, as well as a variety of response options (Pasani, Kusumawati, & Imanisa, 2018). The Scramble technique is one of the motivating learning strategies that is said to be capable of increasing student motivation and learning achievement (Subandriyo, 2019). Scramble type cooperative learning model is a learning paradigm in which students work in small groups to answer questions that already have answers but are arranged in random order by revising the answers so that they become the proper answers (Deviana, Wiarta, & Wiyasa, 2017).

The scramble learning paradigm prioritizes increasing students' learning motivation (Kahfi et al., 2014). This model's benefits include encouraging pupils to be more active and agile, understand complex topics, and instil and develop social skills. Meanwhile, because of a lack of scramble, pupils lack critical thinking and are more likely to cheat on their friends (Kahfi et al., 2014). Technology is a tool that may be used to make learning more exciting for students, allowing them to achieve learning outcomes that meet their expectations. One of the various learning technologies is video media, which offers several advantages for learning implementation (Anshor, 2015).

Learning films are media that stimulate students' thoughts, feelings, and eagerness to learn by exhibiting audio-visual concepts or ideas, messages, and information (Wisada, Sudarma, & Yuda S, 2019). According to (Yudianto, 2017), video is an electronic medium that combines audio and visual technologies to create a dynamic and engaging display. Video may be packed in VCD and DVD formats to make it portable, easy to use, reach a large audience, and be fun to watch. Learning video media is audio and visual material that contains good learning messages, such as concepts, principles, methods, and theories (Farista & M Ali, 1967). According to (Asyafah, 2019), the model's etymological meaning is "the pattern of anything to be constructed or produced". Model, as a word, denotes representation or depiction. Model is perfect, exemplary, and excellent as an adjective. To exhibit, to show is a model verb. The model in research and development is intended to illustrate or demonstrate the workflow and significant linkages related to research.

The learning model is a strategy or pattern used to guide classroom or tutorial learning (Nurlaelah & Sakkir, 2020). One of the aspects influencing the teaching and learning process is the learning model. The learning model may assess the efficacy of learning, learning activities, and student learning outcomes (Salam, 2019).

Cooperative learning is a learning style that encourages students to be more active in their learning by guiding them to collaborate to gain a correct comprehension of the subject matter (Mubarat, 2016). The Cooperative Learning approach employs a number of strategies. Teachers, on the other hand, are not required to use a single technique. Teachers in the Cooperative Learning approach can pick and alter their own strategies based on the classroom setting (Mubtadiin, 2021).

Learning media is an indivisible component that has already been included in the learning techniques employed (Kuswanto & Radiansah, 2018). Different varieties of learning media exist; in general, media is defined by three basic elements: sound, visual, and motion (Luh & Ekayani, 2021). The following are the advantages of using learning media as a tool in the learning process: 1) teaching is more appealing to pupils, which promotes learning motivation; 2) instructional materials will have a clearer meaning, allowing pupils to better grasp them and master teaching objectives; 3) the learning techniques are diverse, not just verbal communication through the teacher's spoken words; pupils are not bored, and the teacher is not exhausted, and 4) students engage in additional learning activities because they do more than just listen to instructor explanations (Teni Nurrita, 2018).

Another benefit of using video media in the trial is that it might encourage or bind students to play more and raise students' attention to the delivery of content (Mulyono, A., B., Abidin, Z., & Husna, 2019). Based on (Puspaningrum, Djunaidy, & Vinarti, 2013), courses are critical activities in the Information Systems Department's teaching and learning process. All students and lecturers who teach

participate in the teaching and learning process. Thus, the course schedule must be able to accommodate the interests of both lecturers and students.

According to Arfan Ikhsan (2013), management accounting is a financial report generated to produce helpful information for the company's internal parties or management to assist in decision-making; the information might take the shape of policies that are not publicized for external parties. Management accounting is the use of suitable procedures and concepts in the processing of historical economic data that may be projected from a business unit to help management prepare plans for sensible economic goals (Sigilipu, 2013).

The result of Lestari's (2017) study states that learning outcomes are a final evaluation of the process and acknowledgement of work done repeatedly. It is the consequences of a reciprocal process between educators and students in the learning process that may be quantified by student learning successes (Sari et al., 2021).

According to our preliminary findings at University in Palembang, lecturers play an essential role in delivering learning materials using traditional methods, the majority of which are supplied through lectures. Students will be more interested in the lecturer's topic if the learning model is paired with learning media. The novelty in this paper, the learning media and lecturers may more easily impart content to students, and students will be more engaged in the topic being taught, resulting in improved learning outcomes. This paper contributes to educators using video in instructional material that keeps students engaged in their studies. Video media may use to teach the content before the scrambling activity begins. A video is a moving image that includes sound.

2. METHODS

The research technique is described as a scientific approach to gathering data for specific aims and applications. This is an experimental study utilizing a quantitative methodology. The researcher employs this study approach in order to examine the learning results of the scramble-based cooperative learning paradigm. In this study, the population and sample were 40 students of the University in Palembang in the fourth semester, with one experimental class and one control class randomly selected with the same ability (Simple random sampling), independent of strata in the population.

The test was used to collect data for this study. The test is a multiple-choice one. This study employs chi-squared as a preconditioning test for data normality and the F test for data homogeneity. Parametric statistics are used for hypothesis testing.

3. FINDINGS AND DISCUSSION

The results obtained from the research have to be supported by sufficient data. The research results and the discovery must be the answers or the research hypothesis stated previously in the introduction part.

3.1. Observation Analysis

To observe student activities during the learning process, observational data analysis was performed. The experimental class students' activity frequency distribution is as follows.

Table 1. Distribution of Experimental Class Student Observation Frequency

Number	Interval Scoring %	Frequency	Percentage	Declaration
1.	85 – 100	6	16,67 %	Very Active
2.	69 – 84	25	69,44 %	Active
3.	53 – 68	5	13,89%	Fair
4.	37 – 52	-	-	Less
5.	< 36	-	-	Very less Aktif
Total		36	100 %	Active
Average		78,29		

The activities of control class pupils during the learning process was observed using observational data analysis. The control class pupils' activity frequency distribution is as follows.

Table 2. Distribution of Control Class Student Observation Frequency

Number	Interval Scoring %	Frequency	Percentage	Declaration
1.	85 – 100	1	2,95%	Very Active
2.	69 – 84	11	32,35%	Active
3.	53 – 68	17	50%	Fair
4.	37 – 52	5	14,7%	Less
5.	< 36	-	-	Very less Aktif
Total		34	100%	Fair
Average		65,62		

3.2. Learning Outcomes Analysis

The frequency distribution of experimental class student learning results can be observed in the table below, based on the data analysis of student learning outcomes of 4th-semester students in an experimental class during teaching and learning.

Table 3. The Frequency Distribution of Student Learning Outcomes in Experimental Classes

In Experimental Classes				
Number	Interval Scoring %	Frequency	Percentage	Declaration
1.	86-100	7	19,44%	Very Good
2.	71-85	22	61,12%	Good
3.	56-70	7	19,44%	Fair
4.	41-55	-	-	Less
5.	≤ 40	-	-	Very Less
Total		36	100%	Fair
Average		80,42		

The frequency distribution of control class student learning results can be observed in the table below, based on the data analysis of student learning outcomes of 4th-semester students as the control class throughout teaching and learning activities.

Table 4 The Frequency Distribution of Student Learning Outcomes in the Control Class

in the Control Class				
Number	Interval Scoring %	Frequency	Percentage	Declaration
1	86-100	-	-	Very Good
2	71-85	2	5,89%	Good
3	56-70	25	73,52%	Fair
4	41-55	6	17,65%	Less
5	≤ 40	1	2,94%	Very Less
	Total	34	100%	
	Average		62,94	Good

The influence of a scramble-type cooperative learning model based on video media on student learning outcomes in management accounting courses at the University of PGRI Palembang was investigated in this study. The goal of this research was to examine student learning results in management accounting classes at PGRI Palembang University using a scramble-type cooperative learning paradigm based on video media. The sample in this study comprised two 4A semester students, 36 students in the 4B semester as the experimental class, and 34 students in the 4 semesters as the control class. The experimental class was treated with a scramble-type cooperative learning model based on video media, whereas the control class was handled with a traditional or lecture learning

model. Before beginning the research, the researcher created a Lesson Plan for both the experimental and control classes. Following the teaching of the national income content, a final exam will be conducted to assess student learning results in both the experimental and control classes.

In this work, a scramble-type cooperative learning model based on video was employed in the experimental class, while a conventional learning model was used in the control class. This study employs observation in order to observe student action in the classroom when understanding and receiving national income content provided throughout learning activities.

In this study, teaching and learning activities are implemented using a scramble-type cooperative learning model based on video media for the experimental class and a lecture and question and answer learning model for the control class. In this study, students were given a test on the subject of national income at the last meeting, with a total of 20 multiple-choice test questions drawn from four management accounting books for the class XI 2013 curriculum. This exam was designed to observe and assess students' capacity to accept subject content by assigning group assignments that are utilized in class.

In this study, observations in the experimental class employing a scramble-type cooperative learning model based on video media on the "Very Active" criteria reached 16.67 percent with a total of 6 students, while on the "Active" criteria achieved 69.44 percent with a total of 25 students. While the condition of "Fair Active" received a percentage of 13.89 percent with a total of 5 students, the criteria of "Less Active" and "Very Less Active" had no students. On the "Active" criterion, the average student involvement in the experimental class was 78.29. Observations in the control class using traditional learning models on the "Very Active" criteria yielded a percentage of 2.95 percent with 1 student. With a total of 11 pupils, the "Active" requirement received a percentage of 32.35 percent. With a total of 17 pupils, it achieves a percentage of 50% in the "Fair Active" requirement. With a total of 5 pupils, the criteria for "Less Active" achieved a percentage of 14.7 percent. Meanwhile, no students meet the "Very Less Active" requirement. On the "Fair Active" criterion, the average activeness of pupils in the control group is 65.62.

In terms of learning outcomes, it can be seen that in the teaching and learning process using a scramble type cooperative learning model based on video media, the largest percentage of students (61.12 percent) get learning outcomes on good criteria, followed by very good criteria (19.44 percent), and no students get learning outcomes on less and very less. And the experimental class's average learning results are 80.42. While teaching and learning activities using traditional learning models or lectures, it turns out that the largest percentage of students get learning outcomes on sufficient criteria (73.52 percent), followed by less criteria (17.65 percent), good criteria (5.89 percent), very poor criteria (2.94 percent), and no students get learning outcomes on very good criteria.

The normalcy test in the control and experimental classes, specifically with the decision-making criteria, is as follows in this study.

If $\chi^2_{hit} < \chi^2_{tab}$ the data were then properly distributed.

If $\chi^2_{hit} \geq \chi^2_{tab}$ the data were then not spread normally.

As a result, the normalcy test can be completed $\chi^2_{hit} = 3,71 < \chi^2_{tab} \alpha 0,05, 6-1 = 11,070$, It is determined that the data in the experimental class is regularly distributed. For the control class $\chi^2_{hit} = 1,189 < \chi^2_{tab} \alpha 0,05, 6-1 = 11,070$, the data are found to be regularly distributed.

In terms of homogeneity, it may be concluded that $F_{calculate} = 1,30 < F_{table} 1,77$ then accept H_0 and reject H_a , the data were then homogenous.

In this work, the calculation of hypothesis testing is obtained $t_{calculate} = 13,04 >$ from $t_{table} = 1,995$ means reject H_0 and accept H_a the research hypothesis then states that there is a significant effect of the scramble type cooperative learning model based on video on student learning outcomes in management accounting courses at the Universitas PGRI Palembang, which is accepted with a 50% influence, with the remaining 50% influenced by other factors.

What we found in this paper was supported by (Artiningsih, Riyanto, & -, 2019), they state that the learning model scramble type cooperative with image media influences the motivation and learning

outcomes of students in elementary school. Then (Sala, 2020) concluded in his research that the scramble learning model could improve learning outcomes. The last (Syafriana, Yamin, & Ulfa, 2008) state that there is a significant influence of the scramble-type cooperative model on students' learning achievement.

4. CONCLUSION

This paper concludes that there is a significant effect of the scramble-type cooperative learning model based on the video on student learning outcomes in management accounting courses at the University in Palembang. This paper implies using scramble in teaching where we could have good learning outcomes. This study is only limited to the scramble-type cooperative learning model based on the video. For the next researcher, we hope they will correlate to Augmented Reality and Virtual Reality.

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