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Project Based-Learning and Creativity : Is the Application of Project-Based Learning Can Increase Student Creativity in Making Learning Videos?

Yahya Eko Nopiyanto [1)*], Arwin [2)]
[1) and 2)] University of Bengkulu
E-mail : [1)] yahyaekonopiyanto@unib.ac.id , [2)] arwinpjkr@unib.ac.id

ABSTRACT

Student creativity is one of the skills needed by students to succeed in a learning process. however, unfortunately, it is still often ignored by lecturers when in the learning process. Therefore, one of the efforts to increase student creativity is to apply the right learning model. In this study, the goal to be achieved is to increase the creativity of physical education students in making learning videos. The method applied is classroom action research. Based on the results of observations in cycle 1, it is known that students get an average score of 65%, and in cycle 2 of 82,5%. the results of the product assessment showed that in the first cycle the students got an average score of 70 and in the second cycle 82,5. It can be concluded that the application of project-based learning can increase student creativity in making learning videos in athletic learning courses.

Keywords : creativity; physical education; project

INTRODUCTION

Athletic learning is a compulsory subject that must be taken by all physical education students, especially for students in the physical education study program at the University of Bengkulu. One of the ultimate goals of this course is to produce innovative products individually or in groups. The product in question is the development of learning videos. The resulting product will be evaluated through a skills assessment using practical tests or projects. To be able to produce a product from athletic learning, students are required to have creativity in making and presenting the product. Creativity is the ability to find ideas, interpret and express ideas, and efforts to create something better than the previous results (Mrayyan, 2016).

In the 21st-century education era, students should be required to have high creativity through the application of innovative learning models so that they have the provision of skills when entering the world of work after graduating from college (Hairunisa *et al*., 2019). Therefore, physical education lecturers should have innovations to increase students' creativity to learn through the application of learning models. However, based on observations in the athletic learning process, it is known that in general lecturers still dominate the learning process, lecturers use lecture and demonstration methods, lecturers provide assignments and exercises, students are less enthusiastic in participating in learning, students are less involved in the athletic learning process so that students' creative thinking skills less than optimal, cognitive and attitude aspects are still neglected. The negative effect of these problems is that there is no increase in

Correspondence : Yahya Eko Nopiyanto, University of Bengkulu
E-mail : yahyaekonopiyanto@unib.ac.id

the creativity of physical education students.

The negative effect of these problems is that there is no increase in the creativity of physical education students. Therefore, it is necessary to apply the right learning model to increase the creativity and learning motivation of physical education students in athletic learning. One learning model that is suitable for use in the 21st century is Project Based Learning (Bell, 2010). The Project Based Learning (PjBL) learning model is a teaching and learning process that involves students actively in solving problems and providing opportunities for them to better express their creativity through a product (Ummah *et al*., 2019). Through PjBL students can collaborate in understanding concepts and knowledge before making products and integrating several disciplines to create projects and being able to improve creative thinking (Hanif *et al*., 2019).

Given the advantages of implementing PjBL, the researchers took the initiative to apply the PjBL learning model to physical education students participating in athletic learning. The specific purpose of this research is to increase students' creativity in making video learning.

RESEARCH METHOD

The research method used is classroom action research, namely reflective research carried out cyclically by teachers/prospective teachers in the classroom starting from the stages of planning, action, observation, and reflection to solve problems and try new things for quality improvement learning (Khasinah, 2013). So, classroom action research in this paper is research conducted by lecturers in athletic learning classes by applying PjBL to increase creativity and learning outcomes of physical education students. This study consisted of two cycles, each cycle consisting of four meetings. The procedures in this study consist of planning, action, observation, and reflection. This research has been carried out on students in the Physical Education Study Program, at the University of Bengkulu from August to October 2022. The subjects that will be involved in this classroom action research are all physical education students who take part in athletic learning with a total of 50 students. Collecting data in this classroom action research will use observation techniques, questionnaires, interviews, and product assessment. The instruments used in this study were observation, questionnaires, and interviews. The research instruments are presented in the table below.

Table 1
Observation Guide

No.	Indicator	Description	Result
1	Diligent in learning	Students show a diligent attitude toward learning.	
2	Tenacious in the face of learning difficulties	Students show an unyielding attitude in the face of learning	

		difficulties.
3	Attention in learning	Students pay attention to the explanations of group friends and lecture lecturers.
4	Achievement in learning	Students get good learning outcomes with a minimum score of 78.

Table 2
Interview Guide

No.	Question	Answer
1	What are the obstacles you feel in participating in athletic learning using PjBL?	
2	Are you more motivated to learn with the PjBL learning model?	
3	Does athletic learning use of PjBL lead you to study creatively?	
4	Does learning athletics use PjBL lead you to solve problems from a different perspective?	
5	Does athletic learning use PjBL lead you can produce many answers in solving athletic learning problems?	

Table 3
Product Assessment

No.	Criteria	Answer
1	Students can present complete learning materials in videos.	
2	Students can explain the material accurately.	
3	Students can present learning materials coherently.	
4	Students can use supporting facilities to present material in learning videos.	
5	Students can motivate student learning through learning videos.	

RESULTS AND DISCUSSION

The implementation of the research begins by explaining the learning objectives using the PjBL method, dividing randomly and heterogeneous groups, guiding students to find ideas for making projects, compiling a project work schedule, and making projects that have been determined together in groups.

In implementing the project, the researcher is tasked with observing the course of the learning process. Observations were made based on the observation guidelines set by the researcher. The results of observations

during the research process can be seen in table 4. Based on table 4, it can be seen that cycle 1 shows a low value compared to the results in cycle 2. In the first indicator, which is diligence in learning, only 60% can follow the lesson well. On the second indicator, which is tenacious in facing difficulties, only 70% can overcome difficulties in learning well. in the learning process in cycle 1, it seems that students have not fully focused their attention on learning. It can be seen in the third indicator only as much as 64% show optimal attention. Student achievement in the cycle still shows a low percentage, which is only 66% who can get a score of 78 or more.

To find out the cause of the low scores obtained by students in cycle 1, the study conducted interviews with representatives of students who got low scores. From the results of the interviews, it can be concluded that students still experience obstacles in learning, are less motivated, less creative, and find it difficult to find solutions to the problems encountered in learning.

It seems that various problems faced by students in cycle 1 have an impact on students' creativity in making learning videos. Based on table 4 it can be seen that the results of student product assessments in cycle 1 and cycle 2. these results indicate that in cycle 1 the results of the assessment are still in a low percentage with a product average value of 70.

There are several obstacles faced by students during the implementation of cycle 1, including students who are not familiar with the applied learning model, have not mastered the basic techniques in athletic learning, and lack concentration in following the lessons or instructions given. To ascertain the problems in cycle 1, the researchers conducted interviews with students who had the lowest scores on the observations. The first question was given to the respondent with the initials AB stated that "*at the beginning of the implementation of learning in cycle 1 they did not understand the learning objectives and needed more time to adapt to the PjBL learning model*".

In cycle 1 the level of student motivation in learning is also not as expected. so that it triggers low scores in cycle 1. interviews were also conducted to find out about the level of student motivation in learning. still with the same respondent "AB" *stated that he did not have high motivation because he still had difficulty finding ideas in project preparation"*.

The third question was also asked to find the reason why the results in cycle 1 were not optimal. Does athletic learning use of PjBL lead you to study creatively? Respondent "AB" stated that *my creativity in learning is only limited to making learning videos, but the learning videos still have many shortcomings.*

On the same occasion, the researcher also asked respondent AB about does learning athletics using PjBL lead you to solve problems from a different perspective. Respondent "AB" stated *that the lack of learning references that I use causes me not to have many alternatives to solve the problems I face in learning and project completion.*

The last question does athletic learning using PjBL lead you can produce many answers in solving athletic learning problems. Respondent

stated that *"I get various alternatives to solve the problems I face but find it difficult to implement".*

Various obstacles experienced by students in the implementation of cycle 1 required researchers to reflect. Reflection is done by discussing with colleagues to find various solutions so that the implementation in cycle 2 will be better. From the results of the discussion, various alternatives were produced including explaining the learning objectives in more detail and clarity, providing various references needed by students to find ideas and completing projects, assisting students intensively in completing projects and providing motivation to students who have low scores.

These various alternatives were applied well in cycle 2 to produce various improvements in cycle 2. This can be seen from the results of observations in cycle 2 and the results of product assessment in cycle 2. Table 4 and Table 5 show that in cycle 2 there is an increase in score on each indicator in this study.

The success of this research is because the PjBL method is project-based learning that involves students working on a product individually or in groups which is carried out collaboratively within a certain time, and the product is presented in front of the class (Kusumaningrum & Djukri, 2016). A similar opinion also states that PjBL is a learning process that develops skills in solving and producing projects (Sumarni *et al*., 2016). PjBL learning can bridge students to increase creativity in making products designed in the learning process (Kurniawan, 2017; Zakiah & Fajriadi, 2020). Based on the results of the study, it can be concluded that PjBL can increase students' creativity and learning motivation (Safaruddin *et al*., 2020).

In general, PjBL consists of three steps, namely: planning, creating, and processing (Titu, 2015). The stage planning includes designing and preparing projects, selecting project-related information, making predictions, and making investigative designs. The second stage is creating, at this stage students develop project ideas, combine ideas that arise in groups and build projects. This second stage includes development and documentation activities for students to produce innovative learning video products which will later be presented in class. The third stage is processing which includes project presentation and evaluation. In the project presentation, there will be actual communication of creations or findings from group investigations, while at the evaluation stage there will be a reflection on project results, analysis, and evaluation of learning processes.

The stages that physical education students go through the application of PjBL can give birth to creativity in producing products. Creativity is a cognitive activity that produces a new view of a form of a problem and is not limited to pragmatic results or uses (Rohaeti *et al*., 2019). Another opinion states that creativity is a person's ability which in everyday life is associated with special achievements in creating new things or something that already exists into new concepts, finding ways in solving problems that cannot be found by most people, creating new ideas that have never existed and see the various possibilities that will occur (Fakhriyani,

2016; Wu & Wu, 2020). By increasing creativity, students can develop their ideas so that they can produce useful products (Wahyuni & Husein, 2019).

Student creativity will be formed by providing problems that must be solved and communicating the problem-solving process so that creative ideas are formed (Chen *et al*., 2022). Creativity can also be seen in the resulting project work products, namely learning videos. Creativity is also shown from answers to solutions to problems. Creativity trains students to be able to take attitudes and decisions in solving problems in detail (Zhou, 2012). Smoothness in working on projects can be seen when students can do assignments according to the planned activity schedule. The flexibility of students is seen in discussions and in preparing instruments for project activity plans, and creative ideas.

Table 4
The Result of Observation

No.	Indicator	Description	Cycle I	Cycle II
1	Diligent in learning	Students show a diligent attitude toward learning.	60%	80%
2	Tenacious in the face of learning difficulties	Students show an unyielding attitude in the face of learning difficulties.	70%	84%
3	Attention in learning	Students pay attention to the explanations of group friends and lecture lecturers.	64%	80%
4	Achievement in learning	Students get good learning outcomes with a minimum score of 78.	66%	86%
		Average	65%	82.5%

Table 5
The result of Creativity in Making Learning Videos

No.	Indicator	Criteria	Cycle I	Cycle II
1	Material Coverage	Students can present complete learning materials in videos.	63	80
2	Material Accuracy	Students can explain the material accurately.	69	83
3	Presentation Technique	Students can coherently present learning materials.	75	85
4	Material Presentation Support	Students can use supporting facilities to present material in learning videos.	73	82
5	Motivating Ability	Students can motivate student learning through learning videos.	70	80
		Average	70	82

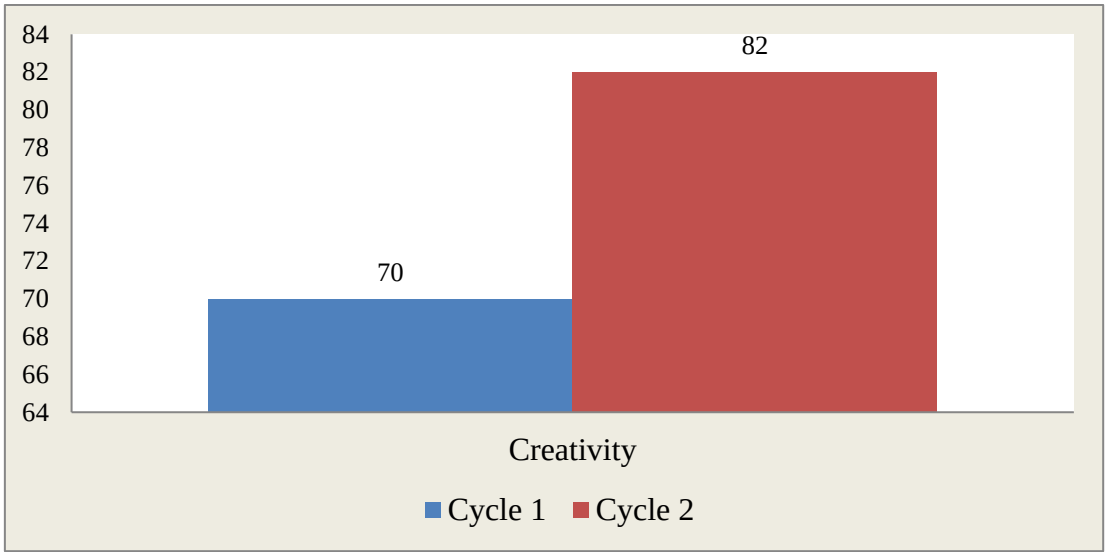

Figure 1
The Creativity Difference of Each Cycle

CONCLUSION AND SUGGESTIONS

Based on the application of PjBL with 2 cycles to physical education students at the University of Bengkulu in athletic learning, it can be concluded that there is an increase in student creativity in making athletic learning videos. From the results of this study, it can be recommended for physical education students be able to find more creative ideas and put them into innovative products that can be used as interesting and easy-to-use learning media.

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