

## The Effectiveness of Project Based Learning in Improving Student Learning Results and Motivation in Physical Education Learning

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### ABSTRACT

In physical education learning, learning needs to be developed that motivates students to produce products through project-based activities. Project-based learning can be an alternative learning that can be carried out by teachers with the aim of increasing students' understanding and motivation. This research aims to determine the effect of the project-based learning model on student learning motivation. This research uses a quantitative approach with the research design takenpostest control gorup design. This design was chosen because it was to see the effectiveness of project-based learning in junior high school students. The population in this study were class VIII students at SMPN 6 Tasikmalaya City. This research was carried out for 2 months, namely February and March 2023, and was adjusted to the schedule of the 2 classes. Data collection techniques consist of the first type, learning outcomes tests to measure student learning outcomes in football subjects and questionnaires to see students' motivation in implementing learning. Data analysis was carried out univariate and bivariate. Based on the data analysis that has been carried out, it can be concluded that project-based learning in physical education subjects helps students improve their abilities, apart from that, student motivation is better in project-based learning because there are the best products that must be produced.

**Keywords:** project based learning, motivation, Physical Education Learning

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## INTRODUCTION

Education is basically a planned effort made by a person to change knowledge, attitudes and behavior in a good direction. Therefore, we often hear that education has the aim of humanizing humans (Dwiwogo & Radjah, 2020; Hoerunnisa et al., 2019; Roehrig et al., 2007; Vlachopoulos et al., 2000). Educational problems cannot be separated from the curriculum that is applied and within it is the learning process carried out between students and teachers. Teachers are the spearhead in achieving learning goals that correlate with achieving national education goals, namely making whole humans who are religious, capable of being independent and have the ability to think critically.

The subjects that need to be improved are physical education subjects. Physical learning is basically a subject that involves student activities with the aim of developing physical fitness, movement skills, critical thinking skills, social skills, reasoning, emotional stability, moral actions, aspects of a healthy lifestyle and introduction to a



clean environment through physical activity, sports and health. selected which are planned systematically in order to achieve national education. This is in accordance with the opinion that physical education aims to ensure students have fitness and holistic changes occur in individual quality, both physically, mentally and emotionally (Mendrofa, 2021; Nur et al., 2019; Nurfadhila, 2016; Putra, 2020 ; Sumpena, 2017; Wicaksono, 2018).

Learning physical education, sports and health in general is a complex thing so it requires the right thoughts to carry it out. Learning physical education, sports and health is part of overall education. So it can be concluded that learning physical education, sports and health is education through physical activity to achieve the learning goals you want to achieve. Based on this opinion, physical education learning places more emphasis on learning through physical activity so that it can stimulate student growth and development. It is through this important goal that physical education and sports are provided at every level of school starting from elementary school, middle school to high school. The hope is that through physical education and sports provided at every level, students' growth and development can progress well according to their age level. Apart from that, through outdoor learning, physical education learning can provide physical fitness to students.

The importance of physical education subjects is not necessarily balanced with the desired learning outcomes. Several sub-materials such as football and futsal. Futsal is a game that requires strategy and player speed to move from defense to attack. This activity is possible if students have good physical condition to compete. Several things that become obstacles in the field are that students still have difficulty memorizing the rules or other theoretical techniques of the game. However, in reality, many children are already adept at playing this game because it is often played in their own home environment.

Apart from competencies that still need to be improved, another thing that is the focus and must be improved is regarding students' learning motivation in physical learning. This motivation is important because basically motivation is encouragement either coming from within oneself or the environment to achieve the expected achievements. Having high motivation in learning physical education makes students enthusiastic about achieving achievements in every lesson they take part in (Ansori, 2020; Nikmah et al., 2019).

One of the efforts that can be made by teachers in order to increase student competence in physical learning, especially when students are faced with written exams and student motivation, is by giving a project to each group to understand what they find in the field based on the investigation process. Project-based learning basically aims for students to have the ability to investigate the information they are looking for simultaneously with other students in the same group.

Project learning is basically learning that involves students in certain projects independently and simultaneously by being given a task or project that must be carried out by the group in advance (Estrada-Oliver et al., 2021; Grant & Maribe Branch, 2005; Lu, 2023; Marheni et al., 2020). After data collection, students can present products or information obtained in the field through observation activities. When presenting information obtained in the field, you can exchange information and check with other groups to add to the information obtained. Through this research, the researcher aims to determine the effect of the project-based learning model on student learning motivation.

## METHODS AND MATERIALS

This research uses a quantitative approach with the research design taken posttest control group design. This design was chosen because it was to see the effectiveness of project-based learning in junior high school students. The population in this study was class VIII students at SMPN 6 Tasikmalaya City with a total of VIII classes, then taken randomly to determine the experimental class and the control class. Class VIII A was taken as the experimental class and class VIII C as the control class. Class VIII A carries out project-based learning while class VIII C carries out learning as usually done by the teacher.

This research was carried out for 2 months, namely February and March 2023, and was adjusted to the schedule of the 2 classes. Data collection techniques consist of the first type, learning outcomes tests to measure student learning outcomes in football subjects and questionnaires to see students' motivation in implementing learning. Data analysis was carried out univariate and bivariate. Univariately using descriptive and bivariate statistics by comparing learning outcomes and student learning motivation after the learning has been implemented.

## RESULTS AND DISCUSSION

The results and discussion of this research begin with the implementation of different learning activities in two classes, namely the experimental class and the control class. The experimental class uses project-based learning and the control class uses learning usually carried out by the teacher. Implementation of project-based learning in the soccer chapter is by giving projects to students in groups. The project given is to make a report on the rules and regulations in football and conduct interviews with football players who play for football clubs in Tasikmalaya.

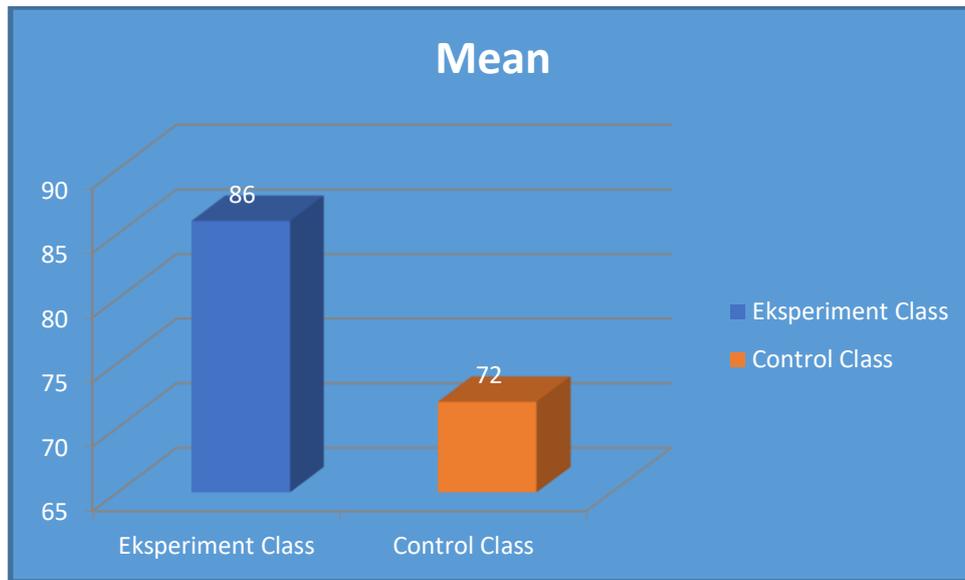
The implementation of learning is carried out starting from the provision of projects given by the teacher to all students in the experimental class. Each student has their own role and they work together with each other to obtain the information they obtain well. After the project is implemented, each group presents the results of what they obtained in the field. Each student has their own war in their group discussion. After the learning implementation was completed in both classes, tests were carried out and questionnaires were given to determine the effect of project-based learning carried out by the teacher. The results of the tests carried out after the learning was carried out were as follows:

**Table 1.** Comparison of Descriptive Statistics on Student Learning Outcomes Experimental Class and Control Class

Criteria	Experimental Class	Control Class
Rate-rate	86	72
Greatest Value	100	90
Lowest Value	70	64
Standard Deviation	7,3	5,4

Based on this data, it can be seen that the average score of the class that implements project-based learning is higher than the other class. This shows that project-based learning classes are able to improve student learning outcomes in soccer

material in junior high schools. The comparison can be seen clearly by using a bar chart as follows:



**Figure 1.** Comparison of the averages of the experimental class and the control class

Based on the bar diagram, it is clear that the experimental class is higher than the control class, however, further analysis needs to be carried out to find out whether this difference is statistically significant. The next step is a normality test for the two groups. The results of the normality test are as follows:

**Table 2.** Normality Test Results of Learning Results for Both Classes

Class	Significance Value	Conclusion
Experiment	0,03	Abnormal
Control	0,06	Normal

The results of the normality test show that one group of data is not normally distributed, so to test significance a non-parametric test, namely Man Whitney U. The results of the statistical test are as follows:

**Table 3.** Test Results for Differences Between Groups

Significance Value	Conclusion
0,002	There are differences between groups

These results illustrate that learning using project-based learning is effective in improving students' ability to learn in physical education subjects. Learning using projects shows its advantages, namely that the information obtained is the result of investigations carried out by the group. Besides that, having discussions between groups provides more understanding because students exchange ideas with each other during class discussions. Apart from comparing the learning outcomes obtained, in this research a comparison of motivation was also carried out between the two groups. The results of the descriptive statistics for the two groups are as follows:

**Table 4.** Comparison of Motivation Descriptive Statistics Between

Criteria	Experimental Class	Control Class
Rate-rate	82	63
Greatest Value	88	80
Lowest Value	64	54
Standard Deviation	3,2	2,3

The results in the table illustrate that student motivation in the experimental class is higher than in the control class. This comparison shows that there is more motivation in the experimental class group to be the best group compared to the other groups. The analysis continues by testing normality. The results are as follows:

**Table 5.** Normality Test Results of Learning Results for Both Classes

Class	Significance Value	Conclusion
Experiment	0,14	Normal
Control	0,256	Normal

With a significance value in this group  $> 0.05$ , the data distribution in this group is normally distributed. To test the differences, parametric statistical analysis was carried out with the following results:

**Table 6.** Test Results for Differences in Motivation Between Groups

Significance Value	Conclusion
0,014	There are differences between groups

These results illustrate that student motivation in project-based learning is better compared to regular learning. Project-based learning is product-based learning where after implementing the learning students demonstrate or explain the products that have been created (Chu et al., 2011; Hardinata et al., 2023; Indahwati et al., 2019; Larmer et al., 2015; Şahin, 2018). This makes students motivated to make the best products. Besides that, in project-based learning, students are trained to be independent in finding sources of information that are relevant to the topic being discussed.

Carrying out a project on football players in the city of Tasikmlaya motivates students to get to know the figures of players in the city of Tasikmalaya and besides that, students know how football is developing in the city of Tasikmalaya. The results of this research are supported by research (Larassary & Wulandari, 2022; Martiani, 2021; Ramadhan et al., 2020) which concludes that project-based learning can train students to produce the best products so that the understanding they gain is better compared to learning that is usually carried out.

## CONCLUSION

Based on the data analysis that has been carried out, it can be concluded that project-based learning in physical education subjects helps students improve their abilities, apart from that, student motivation is better in project-based learning because there are the best products that must be produced. The results of this research contribute to the development of physical education but need to be developed into other materials so that the research results become more comprehensive.

## CONFLICT OF INTEREST

Author certify that there is no actual or potential conflict of interest in relation to this article.

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