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Application of Ball Modifications in Basketball Dribble Learning on Student Motivation at SD Negeri Medaeng II Sidoarjo

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ABSTRACT

PJOK learning is one of the subjects in schools, which in practice requires a pleasant atmosphere with the aim of improving students physical fitness. To create a pleasant learning atmosphere, it is necessary to have a motivational boost that can build the enthusiasm of students to do PJOK learning. One of the things that can be done is to provide several games using modified sports equipment in learning to dribble basketball. By using a modified rubber ball in basketball dribble learning it can maximize and make learning time more efficient. This study aims to determine the amount of increased motivation of students using a modified rubber ball in basketball dribble learning. Using a quantitative descriptive experimental method, the population in this study was 77 students in class 5 at SDN Medaeng II using cluster random sampling technique. Based on this research, it can be concluded that there is an increase in students motivation in learning to dribble basketball using a modified rubber ball. These results were obtained from the results of filling out the questionnaire and processing the data using SPSS version 26 tools. The sig T-test result of 0.000 indicates that there is a significant difference between the results of the pretest and posttest questionnaires, as well as the results of increasing student motivation by 42.86%.

Keywords: *Tool Modification, Basketball Dribble Learning, Motivation*

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INTRODUCTION

Physical Education is a process aimed at developing growth, physical skills, intelligence, and character formation, along with positive values through systematically designed and arranged physical activities for every citizen to achieve their educational goals (Pralista & Kartiko, 2016). By utilizing physical education in schools, it is hoped that students can enhance their growth and physical health, especially while studying at school. Learning how to teach related to the skills of a teacher so they can achieve national educational goals. Teachers are expected to provide good learning experiences for students to be motivated to participate. Through an engaging approach, students can master the learning material well. One of the physical activities in schools is basketball, which is popular across elementary, middle, and high school levels. When conducting basketball

lessons in schools, teachers need to generate creative ideas to create an interesting and enjoyable learning atmosphere for participants.

The aim is to capture students' attention and engage them in learning carefully, thus enhancing the abilities of students who study basketball. While conducting observations at SDN Medaeng II, students at this school show great enthusiasm during Physical Education (PE) classes because they see it as an opportunity to play with their peers. One of the PE lessons that students at SDN Medaeng II particularly enjoy is basketball learning material. Basketball is highly favored among students because it involves group activities, allowing them to interact and communicate directly with friends to foster cooperation. However, it could become monotonous if not implemented according to the students' characteristics, resulting in uninteresting basketball games. If a teacher fails to employ appropriate teaching methods, especially for fundamental basketball techniques like dribbling, it will impact the participants' ability to learn how to perform basic basketball dribbling techniques. According to Cahyono (2015), basketball is a simple game that is easy to learn but requires good practice to perfect and develop good teamwork. This game also demonstrates dribbling with agility, fantastic innovation, great movement, deception, and alternating scoring between teams, all while overcoming various obstacles to stimulate students' interest in every basketball lesson taught. Dribbling in basketball is considered one of the most important basic techniques.

However, unfortunately, elementary-level students often feel intimidated when dribbling with a regulation-size basketball. The regulation size of a basketball, 74-78 cm with a weight of 600-650 grams (FIBA, 2022), makes students feel the ball is too large and heavy, causing discomfort if it hits any part of their body. According to Hamzah B. Uno (2011), the relationship between motivation and learning is interconnected. Learning involves a shift in one's attitudes that is relatively permanent and is formed as a result of practices aimed at achieving a specific goal. Learning motivation exists and is stimulated by intrinsic factors in students, such as ambition and desire to succeed in their learning needs, as well as hopes for their future aspirations. Meanwhile, extrinsic factors include rewards or incentives, conducive learning environments, and engaging learning activities. These factors can be shaped by stimuli, prompting individuals to become more interested in engaging in learning activities with greater enthusiasm and diligence.

Most students still feel fearful about participating in basketball lessons, especially when dribbling, because the ball used appears too big for fifth-grade students at SD (elementary school). Therefore, as teachers, we need to brainstorm ways to modify the basketball to make it simpler and less intimidating for students. The regulation size of a basketball is indeed large, causing it to

frequently slip out of students' reach during dribbling. Thus, modifying the equipment is necessary, one option being the use of a rubber ball of the same size but lighter in weight than the regulation basketball. This alternative, which is more affordable and can be purchased in bulk, can provide a solution so students don't have to wait long for their turn to practice dribbling with their peers. Of course, this effort should be complemented by motivational encouragement from the teacher to foster students' enthusiasm for learning with the available simple equipment. Teachers should motivate their students to engage in learning, providing stimuli or encouragement to spark their interest, especially in dribbling lessons for basketball. Utilizing the school's facilities, teachers can create modified equipment resembling basketballs but simpler or smaller in size than the regulation basketball. If the school's resources are inadequate for teaching, teachers should resort to using simple modified equipment resembling the original ball. Additionally, employing engaging teaching methods can make learning enjoyable and interesting for students.

Adequate facilities and infrastructure are crucial for sports education, especially for basketball. The lack of available resources in schools forces teachers to think quickly and find appropriate solutions to overcome obstacles. One solution is to use modified equipment to ensure that learning objectives, especially in basic dribbling skills for basketball, are continuously met. Using rubber balls can be an effective solution to support learning basic dribbling techniques in basketball. Syahban (2016) defines modification as the effort to make changes by adjusting in terms of facilities and completeness, as well as purpose and usage methods (techniques, styles, programs, and evaluations).

The changes involve altering or replacing equipment without eliminating its original function. It also involves utilizing more affordable modified equipment. Therefore, using rubber or plastic balls is considered a cost-effective solution to overcome limitations in school equipment provision. According to Purnomo (2019), motivation refers to the conscious impetus or effort to stimulate an individual's behavior, urging them to act in order to achieve specific results or goals. Motivation pertains to a process that underlies an individual's choices regarding various activities they wish to undertake.

In this study, the modification of equipment involves using rubber balls to maximize finger usage instead of using the palm to bounce the ball. This modification must be proportional to the child's age development so that they do not feel scared and can learn effectively. It is expected to produce optimal learning outcomes if teachers can motivate students to engage. Limited resources also contribute to students' frustration as they wait for their turn to practice basketball dribbling.

Thus, the researcher attempts to introduce additional modified rubber balls, which are also more affordable, to give more students the opportunity to practice basketball dribbling. By using modified rubber balls, it is hoped that students will be more enthusiastic about participating in dribbling basketball lessons. Motivational encouragement plays a significant role in prompting students to pursue specific goals. Adequate facilities and resources can help stimulate students' motivation to engage in learning, especially in dribbling basketball lessons. When motivation comes from within the students themselves (intrinsic) or from external sources or the environment (extrinsic), it can drive them to achieve their goals. Intrinsic motivation can be observed when students show interest in learning something, prompting them to pursue their goals. Extrinsic motivation may come from close individuals influencing students to engage in certain activities or from specific stimuli or rewards, encouraging students to achieve their targets (Gira, 2016).

Based on the above explanations, the researcher aims to apply ball modification to address the lack of basketball equipment in schools. By utilizing rubber balls that resemble the original basketball, it is hoped that students will gain a clearer understanding of the learning objectives. Providing interesting lessons aims to boost students' motivation to engage in learning. Utilizing the vast schoolyard space available at SD Medaeng II, which measures 20 x 9 square meters, it can be used for learning by incorporating various games related to dribbling basketball. Incorporating games during lessons can increase students' enthusiasm for learning. Teachers can also provide rewards to students who perform well in learning and achieve good results. Therefore, the researcher has chosen the title "Application of Ball Modification in Dribbling Basketball Lessons to Motivate Students at SD Medaeng II." The use of modified balls is expected to capture students' attention and interest, enhancing their motivation to participate in learning basic dribbling techniques in basketball. Thus, during implementation, it can be observed how much motivation the students receive for learning basketball dribbling and the level of learning achievement obtained by using modified equipment.

METHOD

The population in this study consists of students at SDN Medaeng II, with a focus on fifth-grade students. According to Hamzah (2021), a sample is a subset of the total number and behavior possessed by a population. Sampling must be conducted in such a way as to obtain a sample that can accurately represent the actual population conditions. The use of sampling is necessary in descriptive quantitative research as it helps save time, effort, and costs in conducting research. In this study, the researcher utilized the Cluster Random Sampling method because the research site

focused only on one class in elementary school, namely fifth-grade students who were to be tested. Therefore, a sampling method like this is more suitable for collecting data. The research sample consists of 77 fifth-grade students. (Maksum, 2018)

The method employed in this research utilizes a quantitative descriptive research method. The quantitative descriptive research method aims to objectively describe or depict a situation using numerical data, starting from data collection, interpretation of the data, and presentation of the results (Salmaa, 2021). Based on the research to be conducted by the researcher, which involves calculating the percentage increase in student motivation through equipment modification approach, the researcher utilizes the quantitative descriptive research method in its implementation.

The method employed in this research utilizes an experimental research design. This research method is carried out to determine cause-and-effect relationships between variables. Surveys are then conducted using questionnaires to gather information, aimed at assessing the percentage of learning achievement and the increase in student motivation. This enables the researcher to determine whether there is any level of learning outcomes and motivation received by students after the treatment has been applied.

The data analysis technique used in this study is quantitative descriptive analysis (mean, standard deviation, normality test), paired sample t-test, and improvement in results.

RESULT AND DISCUSSION

Results

Regarding the questionnaire, there are 20 statements to assess the magnitude of student motivation. Each question has a maximum score of 5, resulting in a total maximum score of 20 x 5 = 100. This data will be subjected to t-test analysis using SPSS version 26. The statement sheets were provided to 77 fifth-grade students as research samples during both the pretest and posttest phases, allowing us to determine the extent of improvement in student learning motivation.

1. *Mean Value* and Standard Deviation Data Results

The total scores obtained from filling out the questionnaire were summed up from both the pretest and posttest scores, then divided by the number of samples available. The mean score of the pretest for students was 70.03, and the mean score of the posttest for students was 83.13. The minimum score for the pretest was 61, and for the posttest was 76. The maximum score for the pretest was 78, and for the posttest was 90. The results of the statistical analysis using SPSS tools can be seen in the table below:

Table 1. Mean Control Class and Experiment Class

	N	Minimum	Maximum	*Mean*
pretest	77	61	78	70,03
posttest	77	76	90	83,13

And the standard deviation obtained from the score data of the pretest and posttest is 3.790 for the pretest and 3.596 for the posttest. These results can be seen in the attachment on page 64. The standard deviation is used to measure the level of similarity or proximity within a set of data.

2. Normality Test Results

The normality test is used to determine whether the data distribution of a variable group is normal or not (Hidayat, 2014). Therefore, using SPSS tools, the Kolmogorov-Smirnov test is employed to assess the normality between the pretest and posttest data, resulting in the following outcomes as shown in the table below:

Table 2. Normality Test Data

Indicator	*Sig.*
Pretest	0,200
Posttest	0,185

The criterion for the normality test is that if the p-value (sig) is greater than 0.05, then the data is considered normally distributed. Conversely, if the p-value (sig) is less than 0.05, then the data is considered not normally distributed (Maksum, 2018). Therefore, based on the results obtained from the normality test between the pretest data with a value of 0.200 and the posttest data with a value of 0.185, both sets of data are considered normally distributed because the p-value (sig) is greater than 0.05.

3. Percentage Results

Normalized gain or profit is commonly used in assessing students in pretest and posttest evaluations. Calculating the gain value can indicate the difference between the two sets of data regarding how the sample has changed due to the treatment given (BAO, 2006). The calculation results show that the sample has an increase of 42.86%, as seen in the attachment on page 65. The increase from pretest to posttest is considered moderate as it exceeds 30%.

Discussion

The research encompassed a comprehensive pretest and posttest assessment, meticulously analyzing questionnaire responses from students. Results revealed that the mean score for the pretest stood at 70.03, with scores ranging from 61 to 78, while for the posttest, the mean score increased to 83.13, with scores ranging from 76 to 90. Furthermore, the standard deviations were calculated to be 3.790 for the pretest and 3.596 for the posttest, indicating the dispersion of scores around the mean.

To ensure the reliability of the data, a normality test was conducted using the Kolmogorov-Smirnov test through SPSS tools. This test examined whether the distribution of scores followed a normal distribution pattern. Remarkably, both the pretest and posttest data exhibited normal distributions, as evidenced by p-values of 0.200 and 0.185, respectively, surpassing the threshold of 0.05.

A pivotal aspect of the evaluation was the computation of the normalized gain, a crucial metric for assessing the effectiveness of interventions or treatments. The normalized gain, calculated as 42.86%, delineates the extent of improvement experienced by the sample from the pretest to the posttest phase. Importantly, this increase of 42.86% exceeds the commonly accepted threshold of 30%, indicating a substantial enhancement attributed to the treatment provided. In summary, the research findings, detailed in the attached document on pages 64 and 65, underscore the significant improvement observed in student performance from the pretest to the posttest evaluation.

This research was conducted by Reza Fransuka, Wiwik Yunitaningrum, and Edi Purnomo, titled "The Effect of Variations in Teaching on Basic Basketball Dribbling Skills Learning Outcomes in Seventh Grade Students". The aim of this study was to determine the effect of teaching variations on the learning outcomes of basketball dribbling skills in seventh-grade students at SMPN 10 Pontianak. The researchers utilized an experimental method with a pre-experimental design. The sample consisted of 36 students selected through purposive sampling technique. The results and data analysis revealed that the average score for the pre-test was 62.04, while the average score for the post-test was 77.59 (an increase of 15.55), with a percentage increase of 25.08%. Based on these findings, it can be concluded that teaching variations have a positive effect on the learning outcomes of basketball dribbling skills (Fransuka et al., n.d.). And The research conducted by David Epifani Mahendra and Hendrig Joko Prasetyo aimed to enhance the basketball dribbling learning outcomes of seventh-grade students at SMP Tarakanita Solo Baru in the academic year 2015/2016. This study employed the Classroom Action Research (CAR) method. Data were collected from 75 seventh-

grade students at SMP Tarakanita Solo Baru, comprising 37 students from class VIIA and 38 students from class VIIB. Data collection techniques included observation and assessment of basketball dribbling learning outcomes. Descriptive data analysis based on quantitative analysis with percentages was utilized in this research. Based on the findings, it was revealed that the use of modified basketballs could improve the basketball dribbling learning outcomes of seventh-grade students at SMP Tarakanita Solo Baru in the academic year 2015/2016. The conclusion drawn from this research is that the implementation of an innovative teaching model, namely modified basketballs, can enhance the basketball dribbling learning outcomes of seventh-grade students at SMP Tarakanita Solo Baru (Epifani Mahendra & Hendrig Joko, 2016)

CONCLUSION

Following the elucidation of the research findings, a recommendation that can be offered is for teachers to provide an engaging experience during Physical Education (PE) classes, aiming to ignite enthusiasm and motivation among students for learning. This can be achieved by utilizing modified equipment to enhance the provision of sports facilities and incorporating various games to create an enjoyable atmosphere for students, particularly during basketball dribbling lessons.

After conducting this research, Physical Education teachers can enhance their teaching by implementing modifications to equipment in each lesson, thus making the learning process more engaging and preventing students from feeling bored. This is particularly important during dribbling lessons, where modified equipment can compensate for the limitations of available resources in schools. Additionally, incorporating games that contain elements related to the learning objectives is recommended. In PE classes, students are required to master the basic techniques of each learning material; therefore, the delivery of the content should be engaging, allowing students to understand the objectives of the lesson without feeling pressured. Consequently, teachers should possess a repertoire of innovative methods to create a fun learning environment for students, motivating them to actively participate in the lessons.

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