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LEARNING BASKETBALL DRIBBLING TECHNIQUES IN HIGH SCHOOL: INTEGRATED PROBLEM BASED LEARNING MODEL WITH AUDIOVISUAL MEDIA

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ABSTRACT

The objective of this study was to determine if a problem-based learning model integrated with audiovisual media can improve the learning outcomes of basketball dribbling techniques in public high school students. This type of research is classroom action research, which is carried out during two learning cycles consisting of four stages: planning, implementation of action, observation, and reflection. The sample in this study was 36 students in class X.I of public high school 16 Makassar. The study employed the purposive sampling technique. The instrument used in this study was a test of basketball dribbling technique ability. The data analysis technique used quantitatively is descriptive methods by finding the average and relative frequency percentage and qualitatively using observation methods. The results of the study showed that in the pre-cycle, 8 students completed it with a percentage of 22%, and 28 students did not complete it with a percentage of 78%. In Cycle I, students who completed the study increased to 27 students with a percentage of 75%, and 9 students did not complete the study with a percentage of 25%. In Cycle II, there was a significant increase in learning outcomes, namely students who completed became 36 students with a percentage of 100% and did not complete 0 students with a percentage of 0%. In conclusion, using a problem-based learning model with audiovisual media can help improve basketball dribbling skills for students at public high schools.

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1. INTRODUCTION

Problem-Based Learning (PBL) is a learning model where students learn to be able to think critically, have problem-solving skills in real-world situations, and gain basic understanding and knowledge about the material in the lesson (Leary et al., 2019; Satriani et al., 2021; Muzaini et al., 2022; Anggraeni et al., 2023; Hasbi & Fitri, 2023). Cognitive theory, which includes constructivism learning theory, is the basis of problem-based learning (Schmidt et al., 2019). Student learning outcomes using audiovisual media with the PBL learning model on basketball material are very effective

in improving learning outcomes (Aji et al., 2020). Additionally, using the Problem-Based Learning model helped students learn about basketball effectively with the help of audiovisual media (Rizhardi, 2023). The author draws the conclusion that problem solving is the main focus of problem-based learning because it helps students gain relevant knowledge.

Learning media aims to stimulate thinking, increase motivation, and attract students' attention so that it can create a safe and conducive atmosphere during learning activities in the classroom (Aryani & Rodiyana, 2021; Wulandari et al., 2023). Media, in this case learning resources, is a term that contains the meaning of activity, which includes roles such as liaison, distributor, deliverer, and various other roles (Muis & Wahyudin, 2016). Furthermore, learning media consists of various tools used by teachers as message senders to convey information to students during learning activities (Sofi-Karim et al., 2023). Videos that are adapted to the developmental stage of children and relevant and captivating videos can stimulate their interest and involvement in teaching and learning activities (Hudain et al., 2023). Teachers use audiovisual media, a learning medium that combines sound and images into a single concept in a video or presentation slide, to deliver material more effectively and efficiently (Putra, 2024). So, audiovisual media is a learning tool used to increase the effectiveness of the learning process, which consists of a combination of auditory and visual elements in a content. This audiovisual media can help educators in delivering teaching materials to their students, and also they will be more interested in learning the material presented (Nicolaou et al., 2019).

Basketball is a sport that consists of five players on one team, and this game is played by two teams (Aji et al., 2020; Prasetyo et al., 2022; Calvo et al., 2024). Each team tries to get points or scores by putting the ball into the opponent's basket while trying to prevent their opponents from doing the same. Through basketball, students' physical and spiritual health can improve, both while playing and while absorbing the values contained in this sport (Fahrizal, 2023). Playing basketball requires supportive physical conditions, such as when achieving achievements where physical abilities are used as a key that plays a very important role in determining the expected results. Athletes must get the right and proper physical training (Kamaruddin, 2020). In the game of basketball, there are a number of basic techniques and skills that players must have. These basic techniques and skills include dribbling, passing, shooting, lay-up, and pivot (turning the body) (Fahrizal, 2023). However, one cannot properly master technical skills in a sport without first mastering the basic movement patterns. Basic movement patterns are a crucial foundation in learning skills in every field of sport (Hulteen et al., 2018; Newell, 2020; Ilham, 2023).

The results of a preliminary study at Senior High Schools 16 Makassar showed that Physical Education had not fully achieved the expected goals. The learning outcomes of students, particularly in the subject of Physical Education, indicate a less than satisfactory performance. Several factors contribute to this problem, including the use of outdated teaching methods and the lack of technology integration in physical education learning strategies. In today's era, teachers must be capable of implementing 21st-century learning, which involves putting students at the center of the learning

process and integrating technology, as seen in the independent curriculum. Another factor is that students still lack the ability to practice dribbling techniques because many students still do not understand the basic basketball techniques.

As the researcher observed during the observation of students when dribbling, it was done by slapping the ball using the palm of the hand instead of using the middle fingers as the main control. In addition, dribbling done by students is too high and too low when bouncing the ball, and other observations when students do walking or running dribbling, many still do dribbling by bouncing the ball right in front of the feet so that it interferes with movement when stepping. That is what underlies the researcher discussing this problem as a study with the hope that the results of this study can be useful for all students and physical education teachers and can improve the learning outcomes of state senior high schools.

2. METHOD

This study is a type of Classroom Action Research that aims to determine how much the problem-based learning model integrated with audiovisual media can improve the learning outcomes of basketball dribbling techniques in senior high school students. Public High School 16 Makassar hosted this study. The research design used the stages of planning, implementing actions, observation, and reflection, consisting of two learning cycles. The population in this study was students at Public High School 16 Makassar. The sampling technique in this study used purposive sampling, namely samples with determined criteria (Robinson, 2024). The sample in this study was selected from one class, namely 36 students in grade X.I.

The instrument in this study was a basketball dribbling technique test that had a validity of 0.804 and a reliability of 0.879. We will use different methods to track student progress in basketball skills and teamwork. This includes tests on dribbling done after each learning cycle, watching students directly, and keeping records. These methods will help us understand how well students are doing while using a problem-based learning approach. The collected data was processed quantitatively and qualitatively (Creswell & Creswell, 2017; Nawir et al., 2023). The research data obtained from the dribbling ability test were then processed and analyzed quantitatively using descriptive methods by calculating the average and relative frequency (percentage). Then the qualitative analysis used the observation method to see the results of the learning process in each cycle in the study. The following presents indicators of student learning outcomes completion in Table 1.

Table 1. Student Learning Outcome Completion Indicators

Value Range	Criteria	Information
>95-100	Very Good	Completed
>85-94	Good	Completed
≥75-84	Enough	Completed
<75	Poor	Not Completed

3. RESULTS AND DISCUSSION

Results

Before implementing the action, a pre-cycle learning is first carried out by observing to find out the learning conditions in the classroom. Table 2 below displays the learning outcomes from the pre-cycle, which serve as initial data for taking action.

Table 2. Student Pre-Cycle Learning Completion Data

Completeness	Information	Frequency	Percentage
≥75	Completed	8	22%
<75	Not Completed	28	78%
	Total	36	100%

Table 2 showed that the results of learning basketball dribbling techniques in the pre-cycle, more students did not reach the KKM of 75; namely, 28 students did not complete it with a percentage of 78% of the total number of 36 students, so only 8 students with a percentage of 22% completed the KKM. The following presents data on the results of students' learning completion in Cycle I in Table 3.

Table 3. Criteria for Students' Learning Completion in Cycle I

Completeness	Information	Frequency	Percentage
≥75	Completed	27	22%
<75	Not Completed	9	78%
	Total	36	100%

Based on Table 3, the learning outcomes of basketball dribbling techniques in Cycle I have increased for students. The results that were completed increased to 27 students with a percentage of 75%, so students who did not complete also decreased, leaving 9 students who did not complete with a percentage of 25%.

Table 4. Learning Completion Results Data for Cycle II

Completeness	Information	Frequency	Percentage
≥75	Completed	36	100%
<75	Not Completed	0	0%
	Total	36	100%

The results in Table 4 show that the improvement in learning outcomes of basketball dribbling techniques in Cycle II of students has increased from the previous cycle. The number of students who completed the first cycle was 27 students with a percentage of 75%. While in the second cycle, the completion increased to 36 students with a percentage of 100%, students who did not complete the previous first cycle were 9 students with a percentage of 25% who did not complete, while in the second cycle there were no more students who did not complete. The following are the learning results of basketball dribbling skills pre-cycle, cycle I, and cycle II presented in Figure 1.

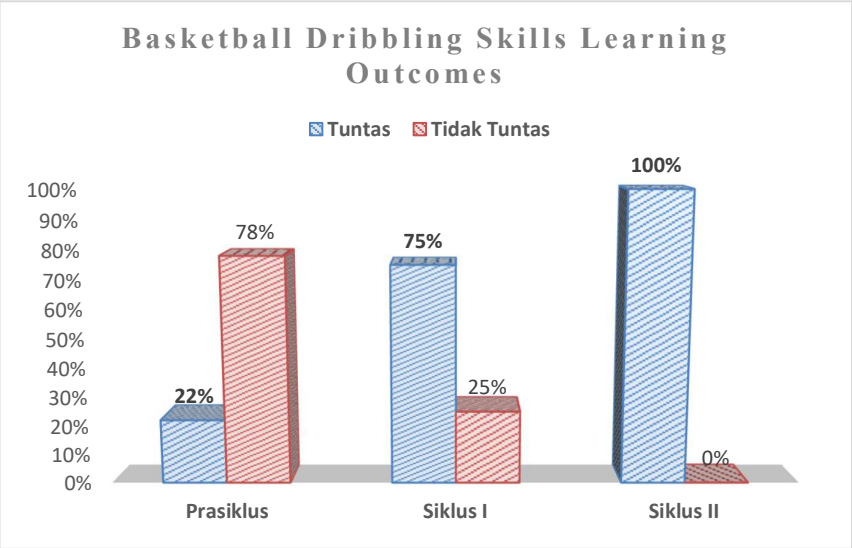

Figure 1. The Learning Results of Basketball Dribbling Skills Pre-Cycle, Cycle I, and Cycle II

Discussion

Pre-Cycle

The learning outcomes of students of public high school 16 Makassar in the Pre-cycle of basketball dribbling technique material obtained the results of dribbling ability that more students did not reach the KKM 75 or did not complete than those who completed it with an average score of 72.97. This happened because the basketball dribbling technique learning strategy was not quite right so that students did not understand the basketball dribbling technique material; for that, it was necessary to explain and strategize in the form of a learning model that could improve the quality of learning so that pupils were more interested and enthusiastic in following the learning process. Because PJOK is procedural learning, learning must be planned and designed systematically so that all aspects of sports learning are considered (Jastrow et al., 2022; Haris et al., 2024).

The explanation suggests that difficulties during the learning process came from the teaching methods and the basketball material, particularly the dribbling techniques. The lack of clear explanations of these techniques hindered students' understanding and prevented them from achieving their learning objectives.They will be hard to direct and poorly understand dribbling technique, which involves slapping the ball with the palm instead of the middle fingers. In addition, the dribbling done by students is too high and low when bouncing the ball, and other observations when students do walking or running dribbling, many still do dribbling by bouncing the ball right in front of the feet so that it interferes with movement when moving. Another problem in the pre-cycle is that the learning strategy in the form of the learning model used is not effective, along with the syntax not being appropriate.

Based on the results of the pre-cycle obtained, namely, more who did not complete compared to those who completed it, it can be concluded that class X.I students of public high school 16 Makassar have not completed the basketball dribbling material. Thus,

improvements are needed to improve learning outcomes so that they continue to cycle by implementing classroom action learning starting from planning, implementing actions, observation, and reflection. In cycle I learning, effective learning strategies are used and improve critical thinking skills, namely problem-based learning in the form of a problem-based learning model integrated with audiovisual media in the form of learning videos to support learning and improve learning outcomes for students. The Problem-Based Learning model can effectively improve students' basketball learning outcomes through audiovisual media (Rizhardi, 2023; Antoni et al., 2023).

Cycle – I

Based on the results of the pre-learning cycle that had been passed, where more students did not complete the material on basketball dribbling than did, the researcher conducted classroom action research in cycle I. According to Burns et al. (2022), there are four important stages in action research, namely (1) planning, (2) implementation, (3) observation, and (4) reflection.

During the planning stage, the researcher creates a teaching plan for physical education, sports, and health. This plan includes the main content and goals for teaching students. It is based on the use of problem-based learning combined with audiovisual media to help improve the basketball dribbling skills of students at Public High School 16 in Makassar. Preparing tools and materials is important in this study, as is the preparation of test instruments and observation sheets. The goal is to help students learn the right way to dribble a basketball during physical education, sports, and health classes. We will employ a teaching method known as Problem-Based Learning to accomplish this. Students should be prepared to pay attention and engage in the lessons effectively.

Once the researcher has planned everything, the next step is to start teaching based on the lesson plan. This involves using a problem-based learning approach that includes audiovisual materials. Cycle I learning is carried out for 2 meetings by following the syntax of the problem-based learning model.

The teacher explains the biomechanical aspects, such as body position, center of gravity settings, and efficient use of the feet, before students practice dribbling techniques. Such as paying attention to the use of the fingers in a springy manner when the hand dribbles the ball and the ball is bounced slightly beside the body rather than right in front of the feet so as not to block the feet when stepping, the position of the knees is somewhat bent, and the body position is leaning forward so that students can maintain better balance when dribbling the ball. So, the teacher can show how wrong movements can affect the effectiveness of basketball dribbling. For example, if a student bounces the ball too high when dribbling, this can reduce control and increase the likelihood of losing the ball. With direction that focuses on these biomechanical aspects, students will not only learn better dribbling techniques but also develop a deeper understanding of how their movements can be improved through the application of scientific principles in sports. According to Hudain et al. (2024), the function of biomechanics in improving dribbling movements is closely related to proper movement

analysis. By understanding principles such as force, momentum, and balance, students can more easily identify errors in their dribbling technique.

The observation stage involved using a basketball dribbling ability test observation sheet to assess students' dribbling learning outcomes. Results from the first cycle show that student learning has improved significantly. This progress is linked to using effective learning strategies, specifically a problem-based learning model that helps students focus on how to properly perform basketball dribbling techniques. As stated by Hursen (2021); Adil et al. (2023), a learning model that focuses on problems and is oriented toward SETS can increase students' interest and critical thinking skills so that they are able to face and solve everyday problems..

In addition, the use of audiovisual media in the form of dribbling technique learning videos is also applied in learning so that students can be more focused and interested when delivering material and are able to understand it well. In line with the results of research from Aji et al. (2020), basketball learning outcomes through audiovisual media are very effectively improved by using the PBL learning model. The first round of research showed that students at Public High School 16 Makassar improved their basketball dribbling skills. Out of 36 students, 27 reached the passing score of 75, which is 75% success. In the previous assessment, only 8 students passed, which was 22%. The number of students who did not pass also went down, with only 9 students remaining, which is 25%. Before, there were 28 students who did not pass, making up 78%.

During the reflection stage, we see that using problem-based learning along with video materials has improved students' understanding and skills in basic basketball dribbling techniques. In fact, the completion rate has increased to 75%, with 27 students successfully mastering the skills. After cycle I, 25% or 9 students were still unfinished, so the researcher was dissatisfied with the process because it had not been properly observed, so the research was continued to cycle II and used the same flow in hopes of better results. In line with the opinion of Arikunto (2021), if there has only been one cycle, of course the process has not been observed properly, because it has only been implemented once. Thus, even if the cycle has only been implemented once and yields good results, it should not be stopped.

Cycle – II

Based on the results of cycle I, the researcher felt dissatisfied with the process that had been carried out, so the classroom action research was continued in cycle II to provide further actions. In line with the opinion of Arikunto (2021), the second repetition of learning was carried out with the aim of making improvements if the presentation of the method was not good. The repetition was carried out with the aim of strengthening the method being tried in order to obtain a clear picture.

During the planning stage, the researcher updated the Learning Plan or teaching module, which is the main material for the Physical Education, Sports, and Health subject. This material will be used to teach students, including specific learning goals. The researcher focused on using a problem-based learning approach combined with

audiovisual media to help improve basketball dribbling skills for students at Public High School 16 in Makassar.

Cycle II research involved two meetings that followed the same learning approach as Cycle I. We continued using the problem-based learning model, which now included videos to help teach the material and assist students in finding extra information to solve issues related to basic basketball dribbling techniques. The problem-based learning model's syntax guides the execution of this cycle.

In the problem-solving process, students work together with their respective group members to find learning videos to support problem solving and then do dribbling exercises with various variations of exercises according to the results of their discussions based on LKPD. According to Ibrahim et al. (2018), using audiovisual media to learn can effectively improve student learning outcomes in basketball.

In the process of learning dribbling techniques, the teacher provides variations of zigzag dribbling exercises back and forth at a distance of 10 meters, both repeatedly and in groups. We give repeated exercises to students to help them become more accustomed to the movements and improve their performance. During the learning process, the teacher provides assistance to each group so that the teacher can control and guide dribbling learning intensively. Thus, students gain learning experience and repeated practice to obtain excellent technique results. When students do zigzag dribbling movements, they have utilized the center of gravity well so as to maintain balance when turning. Then the ball dribble has used the fingers in a spring manner where the ball is bounced slightly to the side of the body, and the position of the legs is slightly bent, and the back is straight to help maintain stability.

The observation stage involves using a basketball dribbling ability test observation sheet to assess students' dribbling learning outcomes. In the second research cycle, students at Public High School 16 in Makassar showed good improvement in basketball dribbling skills. Out of 36 students, all 36 met the passing score of 75, achieving a 100% success rate. In the first cycle, only 27 students passed, which was 75%. In cycle I, 9 students did not pass, but now there are none who did not complete the requirements. This means that there were an additional 9 students who completed, so that in cycle II there was a significant increase in learning outcomes with good results, namely 100%. The results of completion were obtained from students who were categorized as good (69% with a total of 25 students) and from students who were categorized as sufficient (31% with a total of 11 students).

This increase is due to the use of effective learning methods, specifically problem-based learning, which includes the use of educational videos to present information. According to Nopandri & Wathoni (2024), the application of the problem-based learning model can improve students' abilities in improving learning outcomes in Physical Education and Health. Thus, the use of this learning model makes a positive contribution to the learning process and the achievement of PJOK learning objectives. According to Adil et al. (2023), the problem-based learning model has a significant impact on students' creative thinking skills in physical education and health learning. This aligns with the findings of Ilham (2024) research, which demonstrates that the

utilization of audiovisual media, such as learning videos, enhances learning outcomes. The theoretical implications of this increase in learning outcomes show that using intriguing and creative audiovisual learning media has different effectiveness and efficiency compared to learning methods that do not use these media.

Next, the reflection stage of this classroom research focuses on enhancing student learning by analyzing the results from an earlier stage. Changes were made in two cycles by using a combined problem-based learning approach with video and audio materials to teach basketball dribbling techniques to students at Public High School 16 in Makassar. The results are that the application of the integrated problem-based learning model with audiovisual media can improve the learning outcomes of basketball dribbling techniques. Thus, the learning process has been carried out well so that the results are also good, so this research is considered successful and sufficient until cycle II. According to Arikunto (2021), a good process should lead to good results. This means that good results are a logical consequence of a good process.

4. CONCLUSION

The results and discussion that have been carried out in two learning cycles with stages (a) Planning, (b) Implementation of actions, (c) Observation, and (d) Reflection because of literature review, previous framework of thinking in making improvements in learning and data analysis results. The increase in student learning outcomes seen from the number of students who completed the learning was obtained in the pre-cycle; 8 students completed the learning with a percentage of 22%, and 28 students did not complete it with a percentage of 78%. In Cycle I, students who completed it increased to 27 students with a percentage of 75%, and 9 students did not complete the learning with a percentage of 25%. In Cycle II, there was a significant increase in learning outcomes, namely students who completed the learning became 36 students with a percentage of 100%, and 0 students did not complete the learning with a presentation of 0%. In conclusion, the research shows that using a problem-based learning model with audiovisual media greatly improves the basketball dribbling skills of class X.I students at Public High School 16 Makassar.

As a suggestion, the research results can be a reference for teachers in improving student learning outcomes through the problem-based learning model. Additionally, we recommend conducting additional research on a wider range of materials.

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