Efforts to Improve Long Jump Skills in Squat Style Through a Play-Based Approach on 11th Grade Science Students at Teladan High School in Sei Rampah

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Abstract

The problem of this research is the inadequate learning process and facilities in the long jump technique using the squat style, as well as the lack of mastery of basic skills in long jump, resulting in suboptimal student learning outcomes. Based on the problem, the research problem in this study is how to improve learning outcomes in long jump using the squat style through a play-based approach for students in class XI IPA of Teladan Sei Rampah High School, Sei Rampah Subdistrict, Serdang Bedagai District. This study is a Classroom Action Research (CAR) conducted in 2 cycles. The population and subjects of this study are 36 students in class XI IPA of Teladan Sei Rampah High School, Sei Rampah Subdistrict, Serdang Bedagai District. The results of this study show that through play-based learning, students' abilities in learning long jump using the squat style can be improved. The conclusion of this study is that through play-based learning, the ability to perform long jumps using the squat style can be improved for students in class XI IPA of Teladan Sei Rampah High School, Sei Rampah Subdistrict, Serdang Bedagai District.

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INTRODUCTION

Learning is a conscious process carried out by individuals through training and experiences, resulting in changes in behavior that encompass cognitive aspects (comprehension, knowledge), affective aspects (emotional, values), and psychomotor aspects (motor skills) (Faizah, 2017). In everyday life, humans can continue to learn whenever and wherever they are. Thus, learning can be considered universal, as it is not only a requirement for understanding something, but also a process of personality behavior change (Syam et al., 2022). The quality of an educational institution, whether formal or non-formal, is largely determined by the competence of its educators. Education is a crucial foundation for progress and positive development in the future. It plays a vital role in developing human resources and unlocking the potential that lies within students. The primary focus of teachers in the learning process is to educate and guide students to acquire knowledge. Physical education and health education are essential components of formal education, as they aim to develop physical fitness, motor skills, critical thinking abilities, and prioritize activities that contribute to the overall physical, mental, social, emotional, harmonious, balanced, and coordinated development of students.

Therefore, weaknesses in physical education and health education in high schools need to be addressed, and the selection and development of materials should be tailored to the needs of high school students (Ajhuri, 2019). The use of instructional media is also influenced by several factors such as psychological factors, motivational factors, selection of methods used, and classification of the objectives of instructional media usage (Samsudin, 2014). This is because many high school physical education teachers still use a "Teacher Centered" approach to teaching physical education, which emphasizes teacher control and does not allow students to be creative according to their own desires (Dini Siswani & Suwarno, 2016). According to Lindgren, (Herlian, Didimus Tanah Boleng, 2019) the school environment, especially the role of teachers, is highly influential. Teachers who have a close relationship with their students, appreciate their efforts in learning, and provide guidance when students face difficulties, can inspire a sense of success and reinforce their self-confidence. The positive self-assessment attitude of teachers, demonstrated through everyday behavior, can be emulated by their students, enabling them to also develop a positive self-assessment.

Maksum (Irmansyah, et al, 2020) has shown that many physical education teachers lack in various aspects, including scientific knowledge, teaching skills, understanding of the substance of each sports branch, low critical thinking ability, limited creativity in problem-solving, lack of motivation to improve competence, and inadequate collaboration and discourse for critical exchange of ideas and experiences. This research will focus on the study and analysis of the squat style in long jump (Prasetyo, 2016). Along with the development of time, the means of play have also undergone changes. In high schools, the use of game-based approaches has become more prevalent. With this approach, students are not just learning by sitting and listening to the teacher give lessons, but they are directly involved in various activities that lead to specific movements and encourage them to use all of their potential and surroundings to optimize their learning experience. As a result, students can truly enjoy a fun and engaging learning environment, which increases their level of engagement and intensity in the learning process (Faridah, 2016).
However, the reality in the field is that at Teladan Private High School in Sei Rampah, Sei Rampah District, Serdang Bedagai Regency, there has never been an approach to learning through play or games. Another issue is the ability of physical education teachers in high schools to present the Teaching and Learning Process (PBM) of athletics, especially in long jump, which focuses more on mastery of techniques and student achievement or performance (Djamaluddin & Wardana, 2019). Long jump is a simple and relatively easy athletic event compared to other events. This is because before being given instruction or training, students already have a basic understanding of the long jump movement. As a result, students can quickly learn the correct long jump techniques (Purnomo & Depan, 2017).

Based on the initial observation results conducted by the researcher on 11th-grade students of SMA Swasta Teladan Sei Rampah, the average learning outcomes of the students only reached 28%, with only 10 students having a score above the Minimum Mastery Criteria (KKM) which is set at 75.00, out of the total of 36 students consisting of 22 female students and 14 male students.

The teacher demonstrated to the students how to perform the long jump, and after finishing the demonstration, the students were instructed to try it themselves (Fajar, 2019). After the students had finished trying twice each, the teacher immediately made marks in the sandpit to measure the distance of their jumps. The teacher did not pay much attention to how the students took off, pushed off the board, hung in the air, and landed. The teacher only evaluated how far the students landed in the sandpit. From this, we can conclude that the students are weak in pushing off the board, especially in determining which foot should step on the board. This reality presents a challenge and at the same time a hurdle for physical education teachers in high schools on how to plan and execute teaching tasks related to the long jump, particularly in a way that is engaging and captivating for students to follow. Teachers play a crucial role in the learning process, as they hold the key to the success of education and have a dominant influence on its quality.

Given this circumstance, the author considers it a dilemma in the world of physical education and health in schools. This is especially true when a school lacks teachers who specialize in their respective fields. One of these is physical education teachers in high schools who have the ability to apply a play-based approach that can enhance students' jumping skills, particularly in the technique of takeoff. In this case, the researcher will investigate the improvement of learning outcomes in long jump through a play-based approach, specifically the squat style, for students in grade XI of the science program at Teladan Sei Rampah Private High School, Sei Rampah Subdistrict, Serdang Bedagai Regency. This school is one of the high schools that has incomplete facilities and infrastructure. Therefore, during physical education classes, many students are not active in sports. This game activity will be designed in such a way that it is expected to improve the students' jumping abilities.

Based on the description, the following problems can be identified:
1. What factors can improve the learning outcomes of long jump for the 11th grade students of SMA Swasta Teladan Sei Rampah, Sei Rampah District, Serdang Bedagai Regency?
2. Is there an improvement in the learning outcomes of long jump through a play-based approach for the 11th grade students of SMA Swasta Teladan Sei Rampah, Sei Rampah District, Serdang Bedagai Regency?
3. What is the method for improving the learning outcomes of long jump through a play-based approach for the 11th grade students of SMA Swasta
4. Can improving the play equipment alone improve the learning outcomes of long jump for the 11th grade students through a play-based approach at SMA Swasta Teladan Sei Rampah, Sei Rampah District, Serdang Bedagai Regency?

The research problem in this study is how play-based approach can improve the learning outcomes of long jump for students in grade XI IPA of SMA Swasta Teladan Sei Rampah, Kec. Sei Rampah, Kab. Serdang Bedagai. The aim of this study is to determine the improvement of learning outcomes in long jump through play-based approach for students in grade XI IPA of SMA Swasta Teladan Sei Rampah Kec. Sei Rampah Kab. Serdang Bedagai.

METHODS

The psychomotor domain describes human behavior in four categories without a strict hierarchy, which are:

1. Body movement (gross motor skills), which emphasizes precision in gross body movements.

2. Movement coordination (fine motor skills), which aims to develop coordinated patterns of movement among various body parts to achieve proficiency.

Participants

This research is planned to be conducted at Teladan Sei Rampah Private High School, Sei Rampah Subdistrict, Serdang Bedagai Regency. The research subjects are 36 students of class XI IPA from Teladan Sei Rampah Private High School, located in Sei Rampah District, Serdang Bedagai Regency. The subjects consist of 14 male students and 22 female students.

Procedures

a. Phase I Action Planning (Alternative Solutions I)

In this stage, the activity carried out is to plan the action based on the existing problem, which is to create a lesson implementation plan (RPP) tailored to the difficulties experienced by students and alternative actions planned to be given to students, namely by providing the long jump lesson material with the squat style and using a playful approach. Other activities carried out are creating a learning outcome test format, especially the success of students when performing the jumping/leaping technique (Jospiah, 2017).

b. Implementation Phase I

After the plan was developed, the action was taken to address the difficulties faced by students, which was done by providing treatment using a play-based approach to teaching the long jump material conducted by the physical education teacher at the school, while the researcher acted as an observer assisted by other physical education teachers, and the teaching activities carried out were the development and implementation of the learning implementation program that had been prepared.

The implementation is described as follows; 1) Prepare the students and the learning task sheet on the field; 2) Guide the students in doing warm-up exercises; 3) Deliver the lesson material on long jump through various exercises using a play approach, and students practice those exercises; 4) Give the students the opportunity to ask questions about the material taught; 5) Give the students the opportunity to practice the long jump technique independently; and 6) Conduct the first learning outcome test. At the end of the action, a learning outcome test is given to the students to see the learning achievement after the action. The minimum classical completeness criteria that must be achieved by students in
learning long jump is 85% of the total number of students, and the minimum individual completeness criteria that must be achieved by students is ≥ 75%. If 85% or more of the total number of students have successfully performed the supporting technique in long jump, then the learning in cycle I is considered complete.

c. Observation and Evaluation I

At this stage, observation and evaluation are conducted on the implemented action. The researcher assists as an observer, supported by other physical education teachers, to identify any deficiencies and to assess whether the teaching and learning conditions in the field have been implemented according to the teaching program during the action. The physical education teacher also acts as an assessor during the data collection for the student learning outcomes test. The observation is conducted in accordance with the assessment aspects listed in the learning observation sheet.

d. Reflection Stage I

The results obtained from the action and observation stage are collected and analyzed in this stage, resulting in conclusions from the actions taken based on the test results in cycle I. The reflection results are used as a basis for planning in cycle II. The minimum completeness criteria per individual student is 75%, and the minimum completeness criteria that must be achieved in classical terms for the long jump learning is 85% of the total number of students. (Dini Siswani & Suwarno, 2016).

Design or Data Analysis

The research instrument is a tool for collecting data” (Ariwibowo, 2013). The instrument in this study is a tool used to reveal or describe the research object. The instrument in this classroom action research is a performance test using an observation sheet. The data collection techniques in this classroom action research include tests and observations. Tests are used to obtain data on students' learning outcomes of the basic technique of the squat jump and long jump. Meanwhile, observations are used to collect data related to student and teacher activities during the learning process. In this activity, the data obtained from student learning outcomes are presented in a table using the established formula. As explained below:

\[
KKM = \frac{\text{The score obtained}}{\text{the maximum score possible}} \times 100
\]

With the criteria of learning outcomes according to Zainal Aqip (2008) including:
1. 90 – 100 = Very Good (A)
2. 80 – 89 = Good (B)
3. 70 – 79 = Enough (C)
4. 60 – 69 = Bad (D)

From the description above, it can be determined which students have not achieved learning mastery and which students have achieved learning mastery individually. Furthermore, it can also be determined whether students' learning mastery can be achieved, seen from the percentage of students who have achieved learning mastery. It can be formulated as follows:

\[
PKK = \frac{\text{Many students achieved } KKM \geq 75\%}{\text{Total number of students}}
\]

Explanation:

PKK=Classical completeness percentage

In a group (classical), learning completeness is considered to have been achieved if at least 80% of the students in the group have met the minimum
completeness criteria per individual of ≥ 75%.

RESULT AND DISCUSSION

This research is planned to be conducted at Teladan Private High School in Sei Rampah Subdistrict, Serdang Bedagai Regency. Prior to the research, the researcher conducted a preliminary test aimed at identifying and formulating problems obtained from the results of the preliminary test conducted. The test given to students was a standing long jump test performed before determining the planning. Based on the data analysis, it can be concluded that the play-based approach can influence and improve the learning outcomes of the squat jump in long jump. However, in the first learning test, the research results did not meet the expected classical completeness criteria of 85%. This is because some students were unable to achieve the level of learning completeness as they were still unsure or hesitant when performing the landing posture. Therefore, further improvements need to be made in the second cycle of action.

Table 1. Description of the Initial Test Score, Cycle I, and Cycle II of the Standing Long Jump Test

<table>
<thead>
<tr>
<th>Score</th>
<th>Initial Data</th>
<th>Cycle I</th>
<th>Cycle II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Student %</td>
<td>Student %</td>
<td>Student %</td>
</tr>
<tr>
<td>pass</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>(&gt;75)</td>
<td>10</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>not pass</td>
<td>7</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>ed</td>
<td>8</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>(&lt;75)</td>
<td>26</td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

Based on the table of description of the results of the initial test of squat jump technique above, it can be seen that the students' ability in learning the squat jump technique is still relatively low. The next step was to conduct an initial test to see the students' learning outcomes in the squat jump technique. The test given to the students was the squat jump technique performed before planning the learning process. From the results of the initial test, it can be concluded that most students were not able to perform the squat jump technique correctly. According to the researcher, many students still do not master the basic technique of the squat jump correctly, so it is necessary to provide learning of the squat jump technique using a play-based approach.

Fig 1. Bar Chart of the Results of the Initial Test on Squat Jump

Based on the observation conducted by the researcher, the teacher lacked mastery of teaching methods that could explain the process of movement techniques, so the students only performed without knowing the basic technique of long jump squat style. Sometimes, the students took the process of learning lightly, so the learning process became ineffective. The researcher found that from the physical education teacher, it was known that many female students could
only jump without knowing the basic technique of long jump.

Description of Action Results in Each Cycle
1. Cycle I
   a. Problem
   Based on the initial test results above, the problem faced by students in learning the squat jump is that they can perform the squat jump in their own way, resulting in unsatisfactory learning outcomes for the squat jump.
   b. Action Plan I
   Action plan I is developed to overcome the problem faced by students in mastering the material of the squat jump. The problem-solving approach taken is to carry out learning according to the lesson plan that has been prepared in the lesson plan. The steps taken in action plan I are:
   1. Prepare the implementation plan of the learning that has been made as an effort to solve problem I.
   2. Check the attendance of students and give punishment for those who are not disciplined.
   3. Explain the material of the squat jump.
   4. Then direct the students to the field, and the students are directed to do warm-up exercises.
   5. Prepare the first learning outcomes test.
   c. Implementation of Cycle I Action
   The implementation of Cycle I action focuses on the learning process that can improve student learning outcomes by using a playful approach. The steps that the researcher must take are:
   1. Directing students to be orderly in paying attention to the teacher when demonstrating basic squat jump techniques.
   2. Conduct the first learning outcomes test.
   d. Observation of Cycle I
   Observation and evaluation are conducted to identify any shortcomings and whether the teaching and learning process has been implemented according to the program during the action. At this stage, the physical education teacher also assists in the assessment. The problems faced by the students are related to the takeoff technique in descriptors 2 and 3, body posture in the air in descriptors 1 and 2, and landing posture in the final descriptor.

Table 2. Description of Cycle I Result Values for Squat Jump

<table>
<thead>
<tr>
<th>Take off</th>
<th>Push off</th>
<th>Body posture in the air</th>
<th>Landing position</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>∑ 139 =</td>
<td>∑ 115 =</td>
<td>∑ 95 = 69 =</td>
<td>259 = 5</td>
<td></td>
</tr>
<tr>
<td>X = 3,86</td>
<td>X = 3,19</td>
<td>X = 2,64</td>
<td>X = 1,92</td>
<td>72,08</td>
</tr>
</tbody>
</table>

e. Reflection on Cycle I
   From the observation in cycle I, it can be concluded that there has been an improvement in the students' ability to perform the long jump with the crouch style.

Table 3. Description of Cycle I Result of Straddle Long Jump

<table>
<thead>
<tr>
<th>No</th>
<th>Test Results</th>
<th>Number of students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>≥ 75 (Passed)</td>
<td>21</td>
<td>58.33 %</td>
</tr>
<tr>
<td>2</td>
<td>≤ 75 (Failed)</td>
<td>15</td>
<td>41.67 %</td>
</tr>
</tbody>
</table>

Based on the table of cycle I result described above, it can be seen that the students’ learning outcomes in learning the squat jump technique have started to improve. Out of the 36 students who were the subjects of this study, it turns out that there were 21 students (58.33%) who have achieved mastery, while 15 students (41.67%) still have not achieved mastery. The class's average score obtained in this
cycle I reached 72.08. Based on the table above, it can be seen that the analysis of the students' learning outcomes in the long jump with a squat style in cycle I is actually better than the pre-test results, although it is not yet optimal, so it needs to be continued to cycle II. This can be seen from the students' mistakes in practicing the long jump with a squat style and the average value obtained is still low.

![CYCLE I](image)

**Fig 2.** Bar Chart of Student Learning Improvement in Cycle I

2. Cycle II
   a. Problem

   Based on the learning outcomes from Cycle I, the problems faced by the students are in the takeoff technique on descriptors 2 and 3, body posture in the air on descriptors 1 and 2, as well as landing posture on the continuation of the descriptors. Therefore, the researcher plans to carry out Cycle II actions to overcome these problems.

   b. Action Plan II

   The Action Plan II is prepared to overcome the problems faced by students in mastering the material of the squat jump style long jump. The problem-solving is done by implementing the planned learning in the lesson plan. The steps taken in the Action Plan II are:

   1. Prepare the implementation plan of the learning that has been made as an effort to solve problem II.
   2. Check the attendance of the students and give punishment to those who are undisciplined.
   3. Explain the material of the squat jump style long jump.
   4. Then direct the students to the field. The students are directed to do warm-ups.
   5. Prepare the II learning outcomes test.

   c. Implementation of Cycle II Action

   The II Cycle action is focused on the learning process that can improve student learning outcomes using a playful approach. The steps that the researcher must take are:

   1. Directing students to be disciplined in paying attention to the teacher when demonstrating basic techniques of the squat jump style long jump.
   2. Conduct the II learning outcomes test.

   d. Observation of Cycle II

   Observation and evaluation are carried out to identify any shortcomings and to see if the teaching and learning process has been implemented according to the program when the action is taken. At this stage, the physical education teacher also assists in the assessment. The problems faced by students are related to their take-off posture, body posture in the air, and landing posture in the final descriptor.

   e. Reflection

   From the observation in cycle II, it can be concluded that there has been an improvement in the students' learning outcomes from the test on the squat jump technique. The students have shown an
improvement in their ability to perform the squat jump technique.

Table 4. Description of Cycle II Results for Squat Jump Technique

<table>
<thead>
<tr>
<th>Test Result</th>
<th>Number of Students</th>
<th>Average Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Test</td>
<td>10 26</td>
<td>66.61</td>
<td>Failed</td>
</tr>
<tr>
<td>Cycle I</td>
<td>21 15</td>
<td>72.08</td>
<td>Failed</td>
</tr>
<tr>
<td>Cycle II</td>
<td>32 4</td>
<td>76.89</td>
<td>Passed</td>
</tr>
</tbody>
</table>

Based on the table of the description of cycle II results above, it can be seen that students' learning outcomes in learning the squat jump technique have started to improve. Out of 36 students who were subjects in this study, it turns out that 32 students (88.89%) have achieved learning mastery, while 4 students (11.11%) still have not achieved learning mastery. The class's average score obtained in cycle II reaches 76.89.

Fig 3. Diagram of the Results of the Second Cycle Long Jump Test

In cycle II, the teaching and learning process went better compared to cycle I. In cycle I, the overall student activity was only 58.33%, then it increased to 88.89% in cycle II. After one meeting of intervention was given in cycle I, the students were given the cycle II learning outcomes test again, in which 32 students achieved learning mastery and 4 students still did not achieve it because they could not perform the long jump with squat style movement correctly. This indicates an improvement from cycle I to cycle II.

Comparison of Results between Cycles

Table 10. Average Scores of Initial Test, Cycle I Test, and Cycle II Test

<table>
<thead>
<tr>
<th>No</th>
<th>Test Results</th>
<th>Number of Students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>≥ 75 (Passed)</td>
<td>75</td>
<td>88.89 %</td>
</tr>
<tr>
<td>2</td>
<td>≤ 75 (Failed)</td>
<td>4</td>
<td>11.11 %</td>
</tr>
</tbody>
</table>

Out of 36 students who became subjects in this study, only 10 students (27.78%) have achieved learning completeness, while the rest, which is 26 students (72.22%), have not achieved learning completeness. The average score obtained was only 66.61 (not complete). Furthermore, based on the results of cycle I above, it can be seen that the students' learning outcomes in learning the squat jump have started to increase. Out of 36 students who became subjects in this study, there are 21 students (58.33%) who have achieved learning completeness, while 15 students (41.67%) have not achieved learning completeness. The average class score obtained in this cycle was 72.08. Then based on the table of cycle II results described above, it can be seen that the students' learning outcomes in learning the squat jump have started to increase. Out of 36 students who became subjects in this study, there are 32 students (88.89%) who have achieved learning completeness, while 4 students (11.11%) have not achieved learning completeness. The average class score obtained in this cycle was 76.89. In the first learning test, the research results did not meet the expected classical completeness criteria of...
85%. This is because some students were unable to achieve the level of learning completeness as they were still unsure or hesitant when performing the landing posture. Therefore, further improvements need to be made in the second cycle of action.

CONCLUSION

In conclusion, based on the results of the previous chapter, it can be concluded that the play-based approach can improve the learning outcomes of the squat jump technique in high jump among 11th-grade students of SMA Swasta Teladan Sei Rampah, Sei Rampah District, Serdang Bedagai Regency. This is indicated by the increase in the percentage of students who achieved the learning mastery level. The findings obtained by the researcher showed that at the initial cycle, only 10 out of 36 students (27%) achieved the learning mastery level, while in cycle I, there was an increase of 21 students (58%) who achieved the learning mastery level, and in cycle II, there was an increase of 32 students (88%) who achieved the learning mastery level. Thus, there was an increase of 61% from the initial cycle to the end of cycle II.

REFERENCES


