APPLICATION OF COOPERATIVE LEARNING MODELS JIGSAW TYPE FOR IMPROVING LEARNING OUTCOMES GROUNDSTROKE FOREHAND TONNIS

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Abstract

Objective: The purpose of this study was to look at the learning outcomes of the tennis stroke forehand game with the application of a jigsaw cooperative learning model to class IV E students of SDN Wiyung Surabaya.

Method: Research conducted by researchers is an experimental research using an action research approach within the scope of the class that is classroom action research (CAR). The subjects of this study were students of class IV E SDN Wiyung Surabaya. This is because all the problems that arise are in this class. The total number of students is 34 people with gender characteristics, 18 men and 16 women.

Results: The results of the study are as follows: In cycle 1, 17 students successfully surpassed KKM or 50% said the results of the application of the learning model were not yet complete. In cycle 2, 32 students succeeded in exceeding KKM or 94.12%. Because the percentage is 85%, this can be said to be complete. For the average initial study the results were 23.53% and the final study results were 94.12%. Then the increase in the results of the students’ groundstroke forehand tennis game test before and after receiving the jigsaw type cooperative model is equal to 62.57%.

Keywords: learning outcomes, tennis, jigsaw cooperative models

INTRODUCTION

Physical education, sports and health are part of the education of Indonesian people as a whole. Therefore physical education in schools has an important meaning for overall education [1]. To achieve this goal, teaching physical education uses physical activity as the main means through movement activities [2]. The purpose of physical education is basically to be able to develop humans as a whole, in the sense that children (students) must be able to develop aspects of skills, knowledge, attitudes, and their physicality [3]. There are many problems that become obstacles for teachers when teaching, including: 1) Many physical education teachers when
teaching are passive (acting as supervisors and giving orders to their students). 2) Many physical education teachers lack active participation when teaching games. 3) Many physical education teachers do not have / make good lesson plans. 4) Many physical education teachers still maintain a distance (relationship with their students) when teaching learning material so that students lack supervision (support). 5) Many physical education teachers are not able to explore and create new games as a form of fun. And 6) Many physical education teachers are less able to adopt good small game forms in order to complement their shortcomings [5].

Based on a preliminary survey conducted by researchers at SDN Wiyung, namely during teaching two months in the context of PPL II which is required from the State University of Surabaya (Unesa), and the researcher explained that there were several obstacles that hindered student learning outcomes. Some of these obstacles include: 1) The difficulty of cooperation between students in learning, 2) As many as 60% of student learning outcomes were not optimal, then only 40% of students managed to get maximum results or an average score of 67.41 only, 3) The results of direct interviews with 4 physical education teachers at SDN Wiyung indicated that the learning outcomes of physical education students were still lacking, especially in learning tennis and badminton, on the grounds that according to students both games were boring. Therefore, a new innovation in Physical Education learning is needed, namely the researcher wants to apply the jigsaw type cooperative learning model through the tennis game approach [6]. And also there are several problems that arise, namely students often lazy or lack enthusiasm in learning physical education, especially tennis and badminton [7]. As soon as the researcher asked some of the students concerned, they immediately replied that we were bored with this game because it was all that was being taught, thus the researcher wanted to apply a new game, namely the tennis game [9]. Because the motivation and discipline contained in students are the main factors for achieving maximum learning outcomes. Therefore,

Then the alternative chosen to attract students in participating in Physical Education learning is to apply the jigsaw cooperative learning model through the application of tennis games. By applying the jigsaw cooperative learning model, it is hoped that students will be more enthusiastic in participating in physical education learning, especially in tennis game material because students are invited to work together in small groups to study physical education, especially tennis games and group success is determined by all members [10]. This allows all group members to take an active role in physical education learning activities [11]. Tennis is a type of game using a small ball and a paddle or bat made of wood, is carried out by one or two
players who face each other in a rectangular court which is bounded by the net at the center by hitting the ball to return the ball hit by its opponent until one of the players wins the rally and game by obtaining a score in accordance with the applicable rules. Broadly speaking, the game of tonnis is played in a manner similar to that of tennis. Even tonnis can be used as a base game before practicing tennis [13]. In teaching tennis, modifications can be made by using a badminton court, foam balls, a shorter racket (paddle) and alternative regulations [14]. With such modifications, Tonnis is expected to be an easy and interesting game to be played by the community, especially for elementary school children. Playing the tonnis game students will feel happy and the feeling of being happy is indirectly increased the students' interest in this tonnis game and the learning will run smoothly [15].

METHODS

The purpose of this study was to see the learning outcomes of the groundstroke forehand stroke of tonnis games with the application of the jigsaw cooperative learning model in grade IV E SDN Wiyung Surabaya. The research conducted by researchers was experimental research using an action research approach within the scope of classes, namely classroom action research (PTK). The subjects of this study were students of class IV E SDN Wiyung Surabaya. This is because all the problems that arise are in this class. The total number of students was 34 people with gender characteristics, 18 men and 16 women.

RESULTS

The results of this study will describe the results of the application of the jigsaw type cooperative learning model to learning forehand groundstroke strokes on tonnis with a focus on discussion which includes the results of the initial study and the final study.

Teaching and Learning Observation Results

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Percentage of Completeness</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>First study</td>
<td>40%</td>
<td>Not finished yet</td>
</tr>
<tr>
<td>I</td>
<td>61.35%</td>
<td>Not finished yet</td>
</tr>
<tr>
<td>II</td>
<td>85.76%</td>
<td>Completed</td>
</tr>
</tbody>
</table>

From the data table 1 above proves that before learning tonnis, students are given question material that is assessed by the researcher to measure the initial study about the results of cognitive data by 40%, it can be said that they have not reached completeness. After that, the researcher entered the first cycle, and then the students were given tonnis learning, after which
they purchased question sheets to find out the results of the cognitive in cycle I which were assessed by 3 observers, namely achieving a result of 61.35%, from these results it has not been said that it has not reached the KKM. Then it was continued in the second cycle of students after being given tonnis learning material, the students were again given questions that were assessed by 3 observers, the result was 85.76%, so it was said to be complete for the results of observations in tonnis learning.

From the results of the calculation of the percentage of students' cognitive learning outcomes in each cycle can be seen in the following table:

![Figure 1. Percentage diagram of students' cognitive outcomes completeness](image_url)

**Student Personality Results When Following Tonnis Lessons.**

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Percentage of Completeness</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Study</td>
<td>40.15%</td>
<td>Less</td>
</tr>
<tr>
<td>I</td>
<td>63.26%</td>
<td>Less</td>
</tr>
<tr>
<td>II</td>
<td>85.76%</td>
<td>Well</td>
</tr>
</tbody>
</table>

From table 2 above proves that in tonnis learning, it is not only assessed from the test and the results of the observations but also the student's personality when learning from the teacher to do groundstroke forehand on tonnis. The first study got 40.15% and from the first cycle of 63.26%, it can be said that the student's personality is lacking. After the first cycle the test has not reached the KKM, then it is continued in the second cycle and the results of the student's personality when doing tonnis the results are 85.76%, so it can be said to be good.
From the results of calculating the percentage of student personality in each cycle can be seen in the following table:

![Percentage diagram of student personality results](image.png)

**Figure 2. Percentage diagram of student personality results**

**Complete Forehand Groundstroke Learning Outcomes at Tonnis**

The minimum completeness criterion (KKM) at the research site is 75. Therefore, the analysis of the completeness of learning outcomes is carried out to determine the achievement of learning outcomes obtained by students after receiving the application of the jigsaw-type cooperative learning model of groundstroke forehand learning on tonnis for 4 meetings in 2 cycles. The measurement of learning achievement completeness is measured on the psychomotor aspect.

Table 3. Percentage of students' psychomotor learning outcomes in cycle 1

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Total Completeness</th>
<th>Completeness Percentage</th>
<th>Stats</th>
</tr>
</thead>
<tbody>
<tr>
<td>First study</td>
<td>8</td>
<td>23.53%</td>
<td>Not finished yet</td>
</tr>
<tr>
<td>I</td>
<td>17</td>
<td>50%</td>
<td>Not finished yet</td>
</tr>
</tbody>
</table>

The results of the calculation of the percentage of student learning outcomes in each cycle can be seen as follows: In cycle 1, the number of students who succeeded in exceeding the KKM was 17 students. Meanwhile, the percentage is 50%. Because the percentage of successful students is less than 50%, it can be said that the results of the application of the jigsaw-type cooperative learning model of groundstroke forehand learning in tonnis cycle 1 have not been completed, and it then be continued in cycle 2.
Table 4. Percentage of students' psychomotor learning outcomes in 2 cycles

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Completeness</th>
<th>Percentage</th>
<th>Stats</th>
</tr>
</thead>
<tbody>
<tr>
<td>First study I</td>
<td>8</td>
<td>23.53%</td>
<td>Not finished yet</td>
</tr>
<tr>
<td>I</td>
<td>17</td>
<td>50%</td>
<td>Not finished yet</td>
</tr>
<tr>
<td>II</td>
<td>32</td>
<td>94.12%</td>
<td>Completed</td>
</tr>
</tbody>
</table>

In cycle 2, the number of students who succeeded in exceeding the KKM was 32 students. Meanwhile, the percentage of successful students was 94.12%. Because the percentage of the number of successful students is greater than 85%, it can be said that the results of the application of the jigsaw cooperative learning model in cycle 2 can be said to be complete. Meanwhile, 2 students whose scores have not reached the KKM are given remedies by the panjasorokes teacher. From the calculation of the percentage of student learning outcomes completeness in each cycle can be seen in the following table:

![Figure 3. Percentage diagram of psychomotor learning outcomes](image)

Based on the diagram above, it can be seen that the quality of learning outcomes by applying the jigsaw type cooperative model to the groundstroke forehand material in the tennis game for the initial study only 8 students passed the KKM, the percentage was 23.53%, so the researcher gave treatment in cycle I showed 17 students and the percentage 50% who have not reached the KKM, the researcher conducts research again into cycle II in which students who reach the KKM are 32 students and the percentage is 94.12%, then the bias is said to have achieved and passed the KKM. From the results of the initial study, cycle I and cycle II the researcher compared learning from the initial study and the final study, namely the percentage increase of
DISCUSSION

Description of Cycle I Results (Cognitive, Affective and Psychomotor)
From the data table 1 above proves that before learning tennis, students are given question material that is assessed by the researcher to measure the initial study about the results of cognitive data by 40%, it can be said that they have not reached completeness. After that, the researcher entered the first cycle, then the students were given tennis learning, after which they purchased question sheets to find out the cognitive results in the first cycle which were assessed by 3 observers, namely achieving a result of 61.35%, from these results it has not been said that it has not reached the KKM.

Table 2 proves that in tennis learning, it is not only assessed from the test and observation results, but also the student's personality when learning from the teacher to do groundstroke forehand on tennis. From the first cycle of 63.26%, it can be said that the student's personality is lacking. The results of the calculation of the percentage of student learning outcomes in each cycle can be seen as follows: In cycle 1, the number of students who succeeded in exceeding the KKM was 17 students. Meanwhile, the percentage is 50%. Because the percentage of successful students is less than 50%, it can be said that the results of the application of the jigsaw-type cooperative learning model of groundstroke forehand learning in tennis cycle 1 have not been completed.

Description of Cycle II Results (Cognitive, Affective and Psychomotor)
From the data in table 1, for the cognitive component, it can be seen that in cycle II students after being given tennis learning material, students were again given questions that were assessed by 3 observers, the result was 85.76%, so there was a significant increase in this second cycle. Whereas in table 2, it can be seen there was an increase in the personality aspect from 63.26% to 85.76%. And in table 4, the percentage of the number of students who succeeded is 94.12%, so it can be said that there is a significant increase in the psychomotor aspects that occurred in cycle 2.

CONCLUSIONS

Based on the results of research on the increase in forehand groundstroke results in the tennis game through the jigsaw-type cooperative model in class IV E SDN Wiyung Surabaya, it can be concluded that the application of the jigsaw cooperative learning model provides an increase in the ability for groundstroke forehand in the student tennis game of 85.37%.
REFERENCES


