Measuring Learning Outcomes and Softball Skills with Cooperative Learning Model

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Abstract: The purpose of this study is to measure the softball learning outcomes and skills using cooperative learning model. The research design used in this study is one group pretest-posttest design on softball extracurricular members that were determined based on the saturated sampling. Data were collected from the Game Performance Assessment Instrument (GPAI) test and The O'Donnell Softball Test, pre and post-test and processed by using t-tests. In the hypothesis, the tests found a significant difference and better at 34.11% for the improvement of learning outcomes and there were significant differences amounted to 19.82% for the improvement of softball skills. This proves that there is significance of cooperative learning model for learning outcomes and softball skills.

1 INTRODUCTION

Physical education has very strategic (reaching all aspects of behavior such as physical domain, social, affective, and cognitive) and unique (have contributions like no other subjects, such as physical fitness, motor skills, and active lifestyle) roles. The existence of physical education within the national education system cannot be separated from a belief in the values of physical education contained therein, which, if maintained in conducive education circumstances, will contribute significantly on the overall achievement of educational goals (Alzetta, Gozzini, Moi and Orriols, 1976). The result of a learning process is one of the achievements of educational goals (Bailey, Armour, Kirk, Jess, Pickup, Sandford and Education, 2009). The learning result is an ability that is obtained by the students after going through the learning activities (Blaine and Crocker, 1993) and is also part of the evaluation (Bailey, Armour, Kirk, Jess, Pickup, Sandford and Education, 2009).

One of the subjects taught in high school is learning the game of small ball on the subject of physical education and health sports (Penjasorkes) in accordance with the basic competence curriculum in 2013 (p. 88). There are several types of games and

sports that are included in the small ball games, namely softball, baseball, rounders, badminton and table tennis. Learning in school, especially small ball of softball game, is still very far from expectations due to a small ball learning in schools is more to baseball games. So many softball games held in extracurricular under softball clubs that are located in major cities. For the selection of methods, strategies, approaches, or models of learning must be really fit, so that possible problems that may arise can be minimized and addressed.

There are several models of learning that are often used in physical education, including direct instruction, personalized system for instruction, cooperative learning, sport education, peer teaching, inquiry teaching, tactical games and teaching for personal and social responsibility (Fitts, 1954) Cooperative learning model (cooperative learning) is a model with emphasis on students learning in groups, with the assumption that all students can contribute to the learning process. Cooperative learning is a set of teaching strategies where the key is sharing. The most important thing is the grouping of students into learning teams for specific amount of time or a specific task, with the expectation that all students contribute to the learning process and outcomes (Fitts, 1954). Cooperative learning model will be able

to provide broad opportunities to students, conducive learning atmosphere, and ability to develop knowledge, attitudes, values and social skills for students (Fraenkel, Wellen, and Hyun, 2012).

Theoretically, several studies have shown that cooperative learning model affect the results of the floor gymnastics learning (Johnson and Johnson, 1987). Later, models of direct instruction and inquiry teaching contribute to the enhancement of softball skills (Li and Lam, 2013) and learning outcomes of softball games (Metzler, 2005). Indirectly, these two studies looked at two aspects (softball learning outcomes and skills) with the same model but done separately. Thus, on the basis of those reasons, cooperative learning model allows obtaining a better result, however, this model has not been empirically tested. Conducting research with a different learning model to both these aspects turn into a novelty idea.

This study is intended to answer some questions 1) How much influence does cooperative learning model have on softball learning outcomes? 2) How much influence does cooperative learning model have on softball skills?

2 METHODS

2.1 Participants

The paper size must be set to A4 (210x297 mm). The sample set based on saturated sampling because the population was small, as many as 28 people. Samples were new members of the Foundation Board of College's Softball Extracurricular, SMA BPI 1 Bandung, West Java Province. Based on the information obtained and surveys conducted, the samples were still lacking softball skills and understanding to play softball, though there were some that have understood. The samples bias is called heterogeneous.

2.2 Procedures

Method used is experimental method with pretest-posttest design experimental design (Nashar, 2004). The study was conducted within 12 meetings and through the provision of learning tasks that must be accomplished, with details of 3 times per week with a duration of 60-90 minutes/meeting (Alzetta, Gozzini, Moi and Orriols, 1976).

2.3 Instruments

Game Performance Assessment Instrument (GPAI) test was first used (Fitts, 1954) to observe and record the behavior of players during the game, progress of appearance. The second was The O'Donnell Softball Test (Oslin, Mitchell, and Griffin, 1998) to measure the tested items' softball skills. Processing is done by using statistical t-test.

3 RESULTS AND DISCUSSION

3.1 Calculation of Learning Outcomes

Table 1: Softball learning outcomes (GPAI).

Experiment Group		Average ± sd	t	-Value	Difference	Improvement (%)
Yield Learning Softball	Pre test	1.29 ±0.45	-10.79	0.000	0.44	34.11%
	Post test	1.73 ± 0.42				

Table 1 shows the calculation results to measure softball learning outcomes with GPAI test (Oslin, Mitchell, and Griffin, 1998). Under the first hypothesis, which tested that tilapia P-value of 0.000 0.05, the first hypothesis has been tested and accepted, which means there are significant differences between pretest and posttest of softball learning outcomes from cooperative learning model (Li and Lam, 2013). Measurement result of this study is an assessment that reflects the behaviour of a player's ability to solve problems by taking the game's tactical decisions, the movement of the body in accordance with the demands of the game situation, carry out the types of skills they choose. There are three aspects of the focus in assessing the performance of the play, namely decision-making, implementing skills (efficient or inefficient), and support. In this case, the model of cooperative learning was instrumental in the improvement of softball learning outcomes (Werner, Jones, Guido and Brunet, 2006).

This implies that the interaction in cooperative learning have various positive effects on children's development including improving learning outcomes, higher memory and reasoning level (Johnson and Johnson, 1987). This shows that the influence of cooperative learning model improves softball learning outcomes.

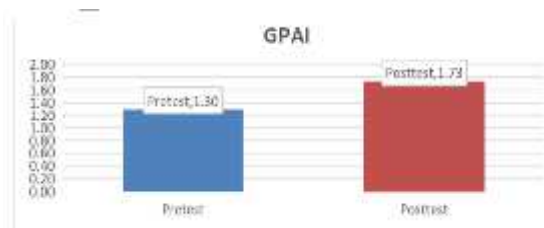### 3.1.1 Game Performance Assessment Instrument (GPAI) Test

Figure 1: The difference in pretest and post-test.
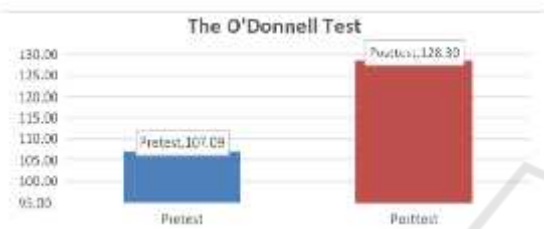
3.1.2 The O'Donnell Softball Test

Figure 2: The difference in pretest and post-test value average.

3.2 Calculations of Softball Skills

Table 2: Softball skills (the O'Donnell softball test).

Experiment Group		Average ± sd	t	P-Value	Difference	Improvement (%)
Softball Skills	pretest	107, 08 22.75±				19.82 %
	Posttest	128.30 ± 22.96	- 38.88	00 00	21.22	

Table 2 shows the calculation results to measure results softball skills with the O'Donnell softball test. In the second hypothesis, the value of P-value was 0.000 0.05. The second hypothesis was tested and accepted, which means there are significant differences between pretest and posttest softball skills with cooperative learning model. There are a number of test items for softball skills such as speed throw, fielding fly balls, throw and catch, throw repeated, fungo batting, and hand over throw accuracy. In this case, the cooperative learning model also plays a role in improving skills of softball.

3.3 Differences between the Means of Scoring on the Implementation of Character Value between Pre and Posttest

Figure 1 and Figure 2 show the development of the average value between pretest and posttest, both types of tests. There are differences in average of pretest and posttest. From these images, the difference is more visible than softball skills tests compared with the results of learning, but if presented, the softball learning outcome (GPAI) showed the number of 34.11%, while the percentage increased in softball skills (The O'Donnell Softball Test) showed the number of 19.82%.

This means that implementation of cooperative learning model, one of which, aims to improve learning outcomes, improve intergroup relations, accept a friend who experience academic problems and increase self-esteem (Fraenkel, Wellen, and Hyun, 2012; Werner, Jones, Guido and Brunet, 2006; Blaine and Crocker, 1993). As for the results of softball skills, increase was not too large. This is a skill that is based on the basic techniques in the sport. Mastery of proper and perfect techniques can be earned through specific exercises to shape and improve motor (movement) or neuromuscular development (Fitts, 1954).

4 CONCLUSIONS

There is a positive change in the results of student learning and softball skills after being given treatment in the form of cooperative learning model which illustrates the compatibility between existing theories with research results. The game of softball is one of difficult and complex learning concepts, which require quick and precise thinking in taking decisions. Therefore, this model gives effect to increase learning outcomes and softball skills. This provides clarity and evidence that the theory was the result of an assessment of empirical data through a proving ground. By that, it can be stated that the results of this study are in accordance with the theories and research data which can be proven scientifically. This model has a theoretical reason and the reference is very strong, and very well if it is kept being researched and the developed infrastructures are more complete. In addition, the number of more samples will also make the characteristics of the sample more diverse and varied, as well as deeper study involving other variables that do not exist in this study.

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