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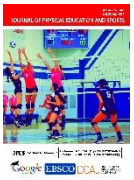

The Effect of Teaching Models and Motor Skill Levels on The Result of Basketball Learning Technique

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Abstract

This study aimed to determine: (1) The different effects of reciprocal and inclusion teaching technique on the basketball layup shoot learning results. (2) The different effects of high and low motor skills on the basketball layup shoot learning results. (3) The relationship between teaching technique and motor skills to the basketball layup shoot learning results. This research used 2x2 factorial experiment design. The research population was 67 students of Department of Sports Coaching Education, Faculty of Sports, Universitas Negeri Semarang. The sampling technique used purposive random sampling, a sample of 40 students. The data analysis technique used was a two-way ANAVA test and a significance level of a = 0.05, and the Tukey test. The results of the research were: (1) The effect of the teaching technique and motor skills to the basketball layup shoot learning results, F_{value} = 4.367 and significant value 0.044 is smaller than significant value 0.05, (2) The effect of high and low motor ability, F_{value} = 82.010 and significant value 0.000 is smaller than significant value 0.05, (3) The relation between teaching technique and motor skills to the basketball layup shoot learning results, F_{value} = 5.239 and significant value 0.028 smaller than significant value 0.05.

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INTRODUCTION

In the field of science, basketball is referred to as Basketball Theory and Practice. The subject of the Theory and Practice of Basketball in the Department of Sports Coaching Education, Faculty of Sports, Universitas Negeri Semarang is one of the compulsory lectures that must be taken as one of the requirements in completing the study. Students who learn basketball theory and practice are prepared to become professional teachers and trainers who have the technical skills required to carry out operational tasks in their field of expertise. As an academic institution, the Department of Sports Coaching Education, Faculty of Sports, Universitas Negeri Semarang has the responsibility and obligation to carry out roles and functions to achieve educational goals. Basketball skills are a very important skill and must be mastered by students. Layup shoot technique on basketball is the most effective technique in scoring scores because it is done at close range.

Motor skills are general characteristics found in a person in the form of strength, speed, endurance that can support the movement skills carried out (Kiram, 2002). The main difference for each individual in developing a motion task lies in motor skills. A person with a higher motion ability will be able to complete tasks that require special motion skills.

Teaching technique is one component that influences the achievement of learning competence of basketball technique. Teaching technique determines the success of achieving the results of learning basketball techniques so that eventually the learning objectives can be achieved well. Velázquez & Assar (2009) stated that strategies and teaching techniques have a very important contribution to the learning method. According to Mosston and Ashworth (Husdarta, 2000), there are several teaching techniques known in sports education, namely: (1) command model; (2) reciprocal teaching technique; (3) model inclusive; (4) self-check; (5) exercise model; and (6) model of conferment discovery. The teaching technique to be tested in this study is the reciprocal teaching technique which is a teaching technique that observes the appearance of peers or peer and gives immediate feedback every time you make a move, while the next teaching technique is an inclusive teaching technique that is a learning model used by the teacher by presenting the learning material in detail and offering different levels of difficulty in sequence, which aims to make the learners creative and get ease in learning a motion skill. The researcher describes the explanation and some of the research results that relate to the variables of this research are reciprocal teaching style, inclusion teaching style and motor skills which include high motor skills and low motor skills as well as the learning outcomes of basketball techniques. Research relevant to this research includes: (1) Research by Abdillah (2010) with the title "the influence of the teaching method of Peer Teaching with Inquiry Teaching and the ability of motor educability on learning outcomes of basketball, concluded based on data processing the following results were obtained: average score of increase in low motor educability group (Peer Teaching: 0.667, Inquiry Teaching: 5), High motor educability group (Peer Teaching: 8, Inquiry Teacing: 8.933). It can be interpreted that the increase in scores in each motor educability group (Peer Teaching) is not meaningful, and there is no difference in the effect of the interaction of teaching methods and motor educability capabilities. (2) Research by Fathurohman, Rahayu & Sugiharto (2012) with the title Influence of Discovery Learning Model on Learning Outcomes in the Class VII Game of Bolabasket in Sruweng 1 Public Middle School concluded that there was a positive and significant discovery model on basketball game learning outcomes and models give a significant influence on the results of teaching basketball games, namely guided discovery compared to the convergent discovery and divergent discovery models. (3) Research by Saputra, Sugiharto & Soekardi (2018) with the title Influence of Teaching Style and Motor Ability Level on learning outcomes of Pencak Silat in Class V Students of SD Hj Isriati Baiturrahman 2 Semarang City concluded that the results of pencak silat learning between students taught with guided discovey teaching style the overall

visual media-assisted method approach is better than the instructional style of discovey guided part method approach using visual media and the learning outcomes of pencak silat students who have a high ability motor level is better than students who have low motor skills.

Based on the literature review above, the research conducted by the researchers turned out to have a relationship from the background, research methods to the results of the study so that the literature review above can be used as a reference in the preparation of this study.

Initial observations made in the second semester of 2013/2014 showed the learning process at The Department of Sports Coaching, Faculty of Sports, Universitas Negeri Semarang was the teaching technique of giving assignments/exercises. The learning process made students less skilled in layup shoot techniques, especially the left layup shoot, this was stated directly by the lecturer. Therefore this study used reciprocal learning and inclusive learning models that are expected to provide a better influence in the learning process.

One of the efforts to realize the mastery of basic engineering skills for layup shoots in the subject of basketball theory and practice is the use of the right teaching technique in basic engineering learning of basketball at the Department of Sports Coaching Education, Faculty of Sports, Universitas Negeri Semarang, because teaching technique provide important things in the learning process in sports education (Derri & Pachta, 2007). Researchers will examine the application of learning models of basic techniques of layup shoot using (1) reciprocal teaching technique and (2) inclusive teaching technique. This learning model was expected to be used as a reference as a solution to improve the mastery of basketball layup technique skills.

The success of learning through teaching techniques will have an impact on the ability of basketball layup technique. Sanjaya (2009) stated that the fundamental thing in teaching is the process of changing behavior. Behavior change is a change of mindset, understanding, and behavior as well as changes in basketball layup technique skills. But it must also be admitted that in general, student learning success is also influenced by several factors such as motoric, intelligence, interest, talent, teaching method, media, and readiness to attend lectures. A reliable shooter is the result of training, not innate from birth. Shooting (lay up) is a technique that can be trained on its own after understanding the correct shot mechanism (Hal, 2000).

Doing lay-up shots is necessary for accuracy in directing the ball to the basketball hoop. According to Wissel the basic skills that must be trained in lay-up shots are accuracy in shooting. One factor that determines to produce an accurate shot is the angle of the shot (Hal, 2000).

Various existing descriptions indicate that the results of learning influenced teaching technique so the authors are interested to examine the influence of teaching techniques in learning Basketball Theory and Practice on students of The Department of Sports Coaching Education, Faculty of Sports, Universitas Negeri Semarang.

METHODS

The research used a 2x2 design which means that this study examined two factors. The first factor was the teaching methods (reciprocal and inclusion method) and the second factor is motor skills (high and low). Sudjana (2002) explained that factorial experiments are experiments that almost all or the same level of a factor are combined. Factorial design 2x2 of this study as shown in the following table:

Table 1. Research Design

	Teaching method (A)	
Motor ability (B)	Resiprokal (A_1)	Inklusi (A_2)
High motor ability (B_1)	A_1B_1	A_2B_1
High motor ability (B_2)	A_1B_2	A_2B_2

In the research process, the first test was a motor skills test using the Borrow Motor Ability Test, for the overall score, used the following formula: 2.2 (standing broad jump) + 1.6 (softball throw) + 1.6 (zigzag run) + 1.3 (wall pass) + 1.2 (medicine ball put) + 50 meters sprint. These results were used to divide the group and

determine high motor skills and low motor. After that, the researcher gave the learning program using reciprocal and inclusion method by dividing into four groups namely the high and low motor skills with reciprocal teaching method and the high and low motor skills with inclusion teaching method. After that, the learning test was continued with the left-hand layup shoot consisting of psychomotor aspects of doing the movement. It was then followed by the questions (written test about layup shoot), and the last was the effective aspect in the form of observations from students conducted by lecturers.

The normality test of the sample was carried out using the liliefors test technique at a significance level of 5 percent. The variance homogeneity test was performed using barlet test technique with a significant level of 5 percent. The Two-Way ANOVA statistic used a significant level of 5 percent.

RESULTS AND DISCUSSION

Normality test is used to know that the group of students sampled comes from the normal population. Normality test using SPSS for Windows Release 17.0 with Lilifors test, which results can be seen in the following table 2.

Table 2. Conclusion of Data Normality Test Results

Data Group	n	Sig	α = 5%	Conclusion
A_1B_1	10	0.833	0.05	Normal
A_2B_1	10	0.954	0.05	Normal
A_1B_2	10	0.970	0.05	Normal
A_2B_2	10	0.965	0.05	Normal

From the results of the normality test conducted on A_1B_1, there was a significant value of 0.833, the value was greater than the rejection limit level at the significance level of 0.05 (0.833 > 0.05), so it can be concluded that A_1B_1 data is normally distributed. The results of the normality test performed on A_1B_2 obtained a significance value of 0.954, the value was greater than the rejection limit level at the significance level of 0.05 (0.954 > 0.05), so it can be concluded that A_1B_2 data is normally distributed. The results of the normality test performed on A_2B_1 significance value of 0.970, the value was greater than the rejection limit level at the 0.05 significance level (0.970 > 0.05), so that A_2B_1 data can be concluded that the distribution was normal. The results of the normality test carried out in A_2B_2 obtained a significance value of 0.965, this value was greater than the rejection limit level at the significance level of 0.05 (0.965 > 0.05) so that A_2B_2 data can be concluded normally distributed.

The purpose of the homogeneity test was to determine whether the variance in the research groups was the same. Homogeneity test using SPSS for Windows Release 17.0 with F Levene Statistic test. The results of the data homogeneity test obtained the following results.

Table 3. The Results of Homogeneity Test of the Research Data

F	df_1	df_2	Sig.	Information
1.196	3	36	.325	Homogen

Levene Statistic calculation results showed F = 1.196 with p = 0.325 so that p > 0.05; the data was homogeneous.

Research hypothesis testing using Two-Way ANOVA analysis with ANOVA 2x2 formulation, after it was known that the basic engineering learning outcomes data Basketball on the research sample had a normal distribution and had a homogeneous variance. The conclusion of the Two-Way ANOVA test results can be seen in the following table 4.

The Two-Way ANOVA test showed that there was a significant difference from the learning outcomes of basketball layup technique between the groups taught using open-ended and inclusive techniques with a value of F = 4.367 and p = 0.044 so that p < 0.05. Thus the first hypothesis (H_1) that stated "There is a difference in effect between the reciprocal teaching technique and the technique inclusive of learning outcomes basketball layup technique" was accepted.

There is a significant difference from the learning outcomes of basketball layup techniques in the sample group with high motor skills and low motor skills with a value of F = 82.010 and p = 0.000 so that p < 0.05, then the second hypothesis (H_2) that stated "There is a difference the influence between students who have high

motor skills and students who have low motor skills against learning outcomes basketball layup technique" was accepted.

Table 4. Hypothesis test with Two-Way Anova

Source	JK	dk	JKT	F	p	Information
Teaching method (A)	99.23	1	99.23	4.367	0.044	Significance
Motorik ability (B)	1863.22	1	1863.22	82.010	0.000	Significance
Interaction AB	119.03	1	119.03	5.239	0.028	Significance
Eror	99.23	3	33.08			
Total	817.90	36	22.72			

There was a correlation between the learning method and motor skills towards learning outcomes of basketball layup technique with a value of F = 5.239 and p = 0.028 so that p < 0.05, the third hypothesis (H_3) that stated "There is a correlation between teaching technique and motor skills towards Learning outcomes basketball layup technique" was accepted.

By comparing the F_{value} and F_{table} it can be seen whether the null hypothesis can be accepted or not. Overall it can be seen a conclusion of the results of the statistical test by F test.

The results of the research and hypothesis testing, the following was an explanation of the four research hypotheses. There were significant differences of Two-Way ANOVA analysis result on basketball layup technique learning in groups with reciprocal teaching technique and inclusive teaching technique with F = 4.367 with p < 0.05; where the result of learning basketball layup technique by using reciprocal teaching technique with average 75.95 not comparable result of learning basketball layup technique by using inclusive learning technique equal to 72.90.

Even though the average reciprocal teaching technique had a higher than inclusive teaching technique, the overall results were comparable. This was because each teaching technique has advantages and disadvantages. The inclusive method gave students the freedom to continue or repeat, while reciprocal techniques provided opportunities for students to give feedback to their own friends. Thus, the responsibility to provide feedback shifts from lecturers to students. This shift allows students to improve the social interaction between peers. Thus both teaching techniques have similarities where students or students were given the widest opportunity to improve their abilities. Students were not just objects of learning, but subjects in the learning process.

Based on the calculation of Two-Way ANOVA analysis, there was a significant difference from learning result of basketball layup technique in group of students who had high motor skills and group of students who had low motor skills with F = 82.010 with p < 0.05; where the results of learning basketball layup technique in students who had high motor skills was better than low motor skills students. The results of this study in line with the framework of research thinking, where motor skills were the quality ability of a person who can facilitate performing motion skills. Someone who has a higher ability of motion allegedly will be more skilled at playing basketball even more skilled in completing the task of doing layup shoot. When getting learning materials basketball layup technique, there were High motor skills and Low motor skills students. Students with low motor skills showed relatively weak physical movements and tend to be less skilled in playing Basketball, especially layup shoot. However, the High motor skills students looked more skilled at playing Basketball. Students who had high motor skills were better than students who had low motor skills and were shown with different learning results lay up Basketball.

Based on the calculation of Two-Way ANOVA analysis, it was known that there was a correlation between teaching technique and motor skills towards learning outcomes of basketball layup technique with a value of F = 5.239 with p < 0.05; where the learning outcomes of basketball layup techniques in high

motor skills students were better than low motor skills students, both using reciprocal teaching technique and inclusive teaching technique.

CONCLUSION

Based on the analysis and discussion of hypothesis test it can be concluded that there were differences in learning result of basketball layup technique in student group with reciprocal teaching technique and inclusive teaching technique. Learning result of basketball layup technique by using reciprocal teaching technique was better than the inclusive teaching technique. There were differences in learning outcomes of basketball layup techniques in high motor skills student groups and low motor skills student groups. Student learning outcomes of high motor skills were better than low motor skills students.

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