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The Effect of Direct Instruction Learning Model on The Forearm Pass Learning Outcome in Volleyball

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Abstract

Direct Instruction learning model is a model that is widely used in Physical Education learning. However, some steps in the implementation of this model are sometimes ignored which affects the learning outcomes. The purpose of this study was to determine the effect of Direct Instruction learning models on learning outcomes of the volleyball forearm pass. This research was an experimental research using One-Group Pre-test-Post-test Design. The subjects of the study were 32 students, consisting of 15 male students and 17 female students aged 13 years in average. Volleyball skill test instruments were used in this study. The results of the study show a significant increase of the average scores. The study implies that the Direct Instruction learning model would affect learning outcomes of volleyball forearm pass if all steps of this model are implemented.

INTRODUCTION

The Education has a vital role in a holistic Indonesian human development. Therefore, education should be developed from various aspects of disciplines (Azeiteiro, Bacelar-Nicolau, Caetano, & Caeiro, 2015; Yarime et al., 2012), since a quality education could improve the intellectuality of a nation. Education is an important part of the process of national development that contributes to the economic development of a country (Ngutsav, Akighir, & Terhemba, 2017; Yudi, 2012). Education is also an investment in developing human resources (Sinambela, 2019; Wijaya, Sudjimat, & Nyoto, 2016) where skill and ability improvements are believed as the factors supporting a person's struggle in life.

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Nowadays, education is highly crucial in daily life as the process of learning knowledge, skill, and habit and as a media to humanize humans in their social life (Setiawan, Yudiana, & Rahmat, 2018). Education is an effort to humanize the youth (Ditjen Dikti). The improvement from a human into a humane human is what education is for. Education is the process containing activities for social life and helping preserving the culture and social organizations from one generation to other generations. According to the definition above, it concludes that education is a planned effort to humanize humans in their social life.

In every level of education, there is Physical Education subject integrated in the primary, secondary, even in higher education level. Physical Education is from, about, and through physical activity (Abduljabar, 2011; Bailey, 2013; Stott, 2013; Sugden & Wright, 2014). Meanwhile, according to Junaedi (2016), Physical Education, Sport, and Health subject is the process of education utilizing physical activities to gain individual ability in physical, mental, and emotional aspects.

Physical Education, Sport, and Health subject at school has a vital role to provide an opportunity to the students to directly experience learning through physical activity, sport, and health (Setiawan, 2017). Physical Education instruction at schools includes volleyball game. Volleyball is a sport played by two teams separated by a net (PBVSI). Each team scores points by dropping the ball into the opponent's field. The purpose of the game is to pass the ball over the net to drop on the opponent's field. Each team plays three times of passing to return the ball. Furthermore, according to Kharisma (2016), volleyball game is a sport played by two teams aiming to drop the ball into opponent's area by using hands. The number of the player of each team is six persons.

A volleyball games should be supported by a good basic technique skill (La'I & Haluti, 2018). In learning basic techniques, a strong understanding on the basic technique learning stages is necessary. However, in reality, the learning process is not as expected. The observation conducted to the students of MTs Negeri 3 Indramayu showed that the students had a difficulty in doing volleyball forearm pass technique. The difficulty included the steps in doing forearm pass and the coordination of movement. Most of the forearm pass was not conducted maximally due to the intact of the ball on the arm and the height of the ball that was not over the head. It was shown by the average score gained by the students (21,84).

To overcome this problem, an appropriate teaching model is required to help the students in improving forearm pass learning outcomes in the volleyball game (Esminarto, Sukowati, Suryowati, & Anam, 2016; Widodo & Widayanti, 2013). The Direct Instruction teaching model is assumed to be appropriate to overcome the problem, since the Direct Instruction model reinforces the teachers to lead the instruction. In the Direct Instruction model, the teachers become the source and the drive to all decisions made related to the instruction and students' involvement in the learning process, thus the students will be easier in comprehending the instruction as stated by Metzler (Ginanjar, 2016) that the Direct Instruction model has "Teacher as The Instruction Leader" theme, hence the teachers become the leader of the instruction. In the Direct Instruction, the teachers become the source driving all decisions made related to the content of instruction, learning management, and students' involvement.

METHODS

The research was conducted by using One-Group Pretest-Posttest Design that becomes one of the Pre-Experimental research model designs. In One-Group Pretest-Posttest Design, a class was given a pre-test, treatments, and a post-test. Therefore, the result of the treatment would be more accurate by comparing the condition before and after treatment. The data collection technique used in this research was observation and documentation of the skill test.

Instrument

The instrument used was the skill test on forearm pass in volleyball games. All the samples were doing forearm pass of volleyball with the correct technique that had been learnt before through the Direct Instruction learning model. It enabled the researchers to directly examine the result of the Direct Instruction learning model. According to Depdiknas (Prasetyo, 2013), the guidelines of the volleyball skill test for students aged 13-15 years are as follows:

- 1) The aim was to measure the skill in doing forearm pass under 60 seconds.
- 2) Tools and Equipment needed were 2,3 meter pole for male, 2,15 meter pole for female, a volleyball, a stopwatch, a 4.5m x 4.5m square field, and
- 3) An adjustable chair/box that enables the test officer to stand on it with horizontal view with the height of the net.
- 4) Test Officer

The test officer consisted of persons with the following duties:

Test Officer I, had to:

- 1) Stand near the area of the test taker.
- 2) Count the time for 60 seconds.
- 3) Give commands.
- 4) Watch the legs of the test taker if they exceed the arena of the test.

Test Officer II, had to:

- 1) Stand on a chair/box.
- 2) Count the correct forearm pass.

Procedure

- 1) The test taker stood at the center of the 4.5m x 4.5m area.

- 2) To start the test, the ball was bounced by the participants after hearing "Ya" command
- 3) After the ball was bounced, the test taker did the forearm pass with 2.3 m minimum height for male and 2,15 m for female.
- 4) If the test taker failed doing the forearm pass and the ball was out of the arena, the test taker immediately took the ball and continued doing the forearm pass.
- 5) Once both of the test taker legs were out of the area, the test officer 1 commanded the test taker to immediately go back to the area and the bounce of the ball when their legs were out of the arena was recorded.
- 6) Outcome Scoring, the correct forearm pass was calculated when the ball reached minimum 2,30 m for male and 2,15 for female and conducted in the area for 60 seconds.

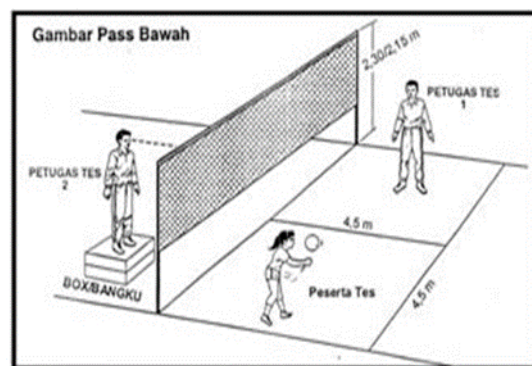


Figure 1. Forearm Pass in Volleyball Games

Participant

The population of this study were all the students of MTs Negeri 3 Indramayu that consisted of 590 students. Simple random sampling was the technique used. This technique is the simplest technique. In simple random sampling, the samples are chosen from the member of population chosen randomly without seeing the level of the member of population. This technique is used if the member of population is considered homogenous as depicted. Therefore, the samples of this study were 32 students consisting of 15 male students and 17 female students.

Data Analysis Technique

The data analysis was conducted by calculating the mean, standard deviation, a normality test by using Liliefors test from the obtained data. The Pearson

Product Moment test was taken to test the research hypothesis.

RESULTS AND DISCUSSION

Basically, the use of Physical Education model at schools is aimed to help teachers and students in the learning process. If the use of the Direct Instruction model is relevant with the steps required, it would have positive impacts on learning outcome.

By using the forearm pass volleyball test, the data from the test are depicted in Figure 3. The data describe that during pretest, the result of the lowest forearm pass was five times of passing, while the highest achievement was 45 times of passing in 60 seconds. In the posttest, the lowest record was 7 times of passing and the highest record was 65 times of passing in 60 seconds. The result of the pretest and posttest forearm pass in volleyball can be concluded that all of the samples got improvements. The lowest improvement was 1 time of passing, while the highest improvement was 38 times of passing. Therefore, the mean of the forearm pass in volleyball was 18,22 times of passing in 60 seconds.

normality test is if the calculated $L < L$ table, the data are normal. Therefore, as the calculated $L < L$ table, $0,1121 < 0,1566$, the result of the normality test in the pretest was normal. Meanwhile, the calculated L in the posttest was $0,0761$, while the L table was $0,1566$. The foundation of the conclusion of the normality test is if calculated $L < L$ table, the data are normal. Therefore, as the calculated $L < L$ table, $0,0761 < 0,1566$, the result of the normality test in the posttest was normal.

Table 1. Hypothesis Test

	N	Mean	P Value	t	t tab	Sig.
Pretest	32	21,84	0,00	-17,63	2,04	
Posttest	32	40,13				

According to table 1, it was found that the calculated t was $-17,63$ and p value was $0,00$, with the level of significance $0,00 < 0,05$, thus H_0 is refused. The foundation of the conclusion is that if the p value $< 0,05$, the H_0 is refused or there is a significant relationship. Therefore, it concludes that there was an effect of the Direct Instruction model on the outcome of forearm pass in volleyball game. According to the

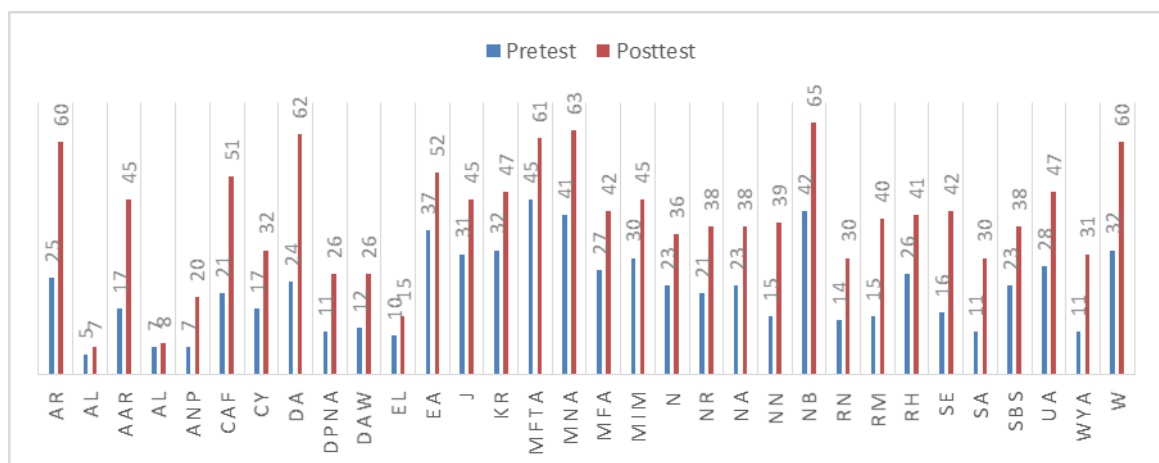


Figure 2. Pretest and Posttest Forearm Pass in Volleyball

According to the analysis of the data, the mean of the pretest was $21,84$ and the standard deviation was $10,7$. Meanwhile, the mean of the posttest was $40,06$ and the standard deviation was $15,25$.

Furthermore, the result of the pretest data shows that the calculated L was $0,1121$. Meanwhile, the L table was $0,1566$. The foundation of the conclusion of the

reflection of the data analysis, the result of this study shows that the students gained quality improvements at the end of learning.

The result of this study supports the findings of previous studies. For instance, the result of the study conducted by Setiawan (2014), where the result of the study shows that the use of a learning model aligning

the characteristics and the need of the students in Physical Education and post instruction give impacts on the learning outcome. Besides, the result of study of Hamzah, Ginanjar, & Setiawan (2019) shows that there is an effect of the use of the Jigsaw learning model on the forearm pass learning outcome in volleyball of the junior high school students grade VIII.

The result of this research and previous research show that the use of the Direct Instruction and Jigsaw model in volleyball forearm pass learning gives a positive impact.

CONCLUSION

According to the result of the data analysis and discussion, it concludes that there is an effect of the Direct Instruction model on the forearm pass in volleyball. It could be a reference for Physical Education teachers that Direct Instruction gives a positive impact on the forearm pass learning outcome in volleyball learning if all stages in the Direct Instruction learning model are well-conducted. Further research related to the use of this model can be conducted with different subjects or objects to enrich the result of the research related to the Direct Instruction model.

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