

Barred Pipe Modification

Does It Affect the Learning Results?

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Abstract: This research aims to find out about the effect of basketball learning modification on 'layup shot' learning result. The method used in this research is the experimental method, with the research design of 'Randomize Pre-test – Post-test Control Group Design'. The population in this research consists of 11th graders from SMAN 1 Sindangwangi, consisting of 103 students from four different classes. The sample in this research was acquired using 'cluster random sampling' method. The sample acquired consisted of 50 students from two different classes, each class consisted of 25 students. One class becomes an experimental group, and the other one becomes the control group. The instrument in this research is 'layup shot' test. This research was conducted for four weeks; three meetings were done each every week. The data analysis technique is SPSS 18 through 'Paired Samples t-Test' and 'Independent t-Test'. The outputs from this research are: 1) There's a significant increase of score between the pre-test and post-test score on the students' layup shot learning result that used the barred pipe modification learning; 2) There was no significant increase in score between the pre-test score and post-test score on the layup shot learning result of the students that used the conventional learning.

1 INTRODUCTION

Physical education is a part of the education programs which offer contribution through experiences from the movement towards the students' holistic development and growth. The complex learning experience about the students' motoric capabilities (Arianto, 2013). The objective of physical education learning formulated by the teachers in the process of teaching and learning should refer to the curriculum and physical education becomes really important and useful. (Kurkova, Scheetz and Stelzer, 2010). Everytime they teach, teachers are expected to be able to formulate the objective of the learning activity, specifically in the form of physical activity which can be observed; to describe the assigned job clearly, in which the level of success can be measured and evaluated as well.

The physical activity of the students must be supported by the factors in accordance with their development. For instance, the physical activity is centered on the factors of pleasure, accomplishment,

and the ability to move (Hohepa, Schofield and Kolt, 2006). Moreover, this physical education should not make the students have too much trouble in which can cause them to be stressed out (Blankenship, 2007).

On the characteristics and the meaning of physical education, physical education should be able to make the students feel comfortable and confident to participate in the learning process (Reeves and Stein, 1999). The participation can be exercised if the physical education equipment should be met. The participation in this activity has to have contents, especially in physical education (Isabel Piñar *et al.*, 2009).

One way for the teaching process with the students' participation can be done, but the equipment does not support the process itself, is to create a modification to cover the deficiencies in terms of facilities and infrastructure. With the lack of supportive of facilities and infrastructure, for the basketball learning process can be done, the teachers have very active roles in the learning process in accordance with the curriculum that has been made.

Moreover, as the students are heterogeneous, the modification should be in accordance with the students' level of capabilities. What's important in this modification is that for the essence to maintain, because the essence of this modification is to analyze and develop the teaching materials by designing the potential learning activities, so that this can help the students to learn. It is meant to lead, direct, and get students to learn. Therefore, students can work on their scientific abilities and skills (Arianto, 2013). The abilities of the students will be formed if they exercise the move often through the experience assigned by the teachers. This is as stated on the meaning of the physical education itself, which is a part of the educational program which offers contribution through the experience of movement towards the holistic development and the students' growth. A complex learning experience about the students' motor. (Arianto, 2013).

The modification has a basic purpose, to simplify some games assigned without losing the existing fundamental concept (Arias, Argudo and Alonso, 2011). This purpose is related to the result that is expected in lay up shot. After the modification is considered to be needed, it has to be analyzed, like what and how to make that modification to fit the concept of physical education learning and it has to be analyzed first (Arias, Argudo and Alonso, 2011). Moreover, the key of modification involves a process to find out about the change in the games, without leaving out the characteristics of the games (Arianto, 2013).

The modification of the equipment is also important for the students (Chase *et al.*, 1994). This can usually affect the interest and motivations of the students in following all the teaching materials without any obstacles related to learning equipment.

The modification also refers to the process of presenting the better things than the original forms. The modification is one of the means to be done by the teachers so that the learning process can reflect the quality of the process itself. (Arianto, 2013).

Related to the learning result, we chose the psychomotor learning result type: the shooting result. The shooting method chosen is the layup shot, because lay up shot can have more influence than any other type of shots. (Arias, 2012).

2 METHOD

2.1 Participant

We used the cluster random sampling technique, and we got samples from the class of XI IPS 1 and XI IPS 2, XI IPS 2 as the experimental group and XI IPS 1 as the control group. The samples chosen from the experimental group will be the representative of the eleventh-grade students in SMAN 1 Sindangwangi.

2.2 Procedure

By using the Randomize Pre-test – Post-test Control Group experimental method, we wanted to see how far the treatment from two types of treatment, the modified basketball games learning, in this case, the layup shot learning, on the experimental group to the layup shot learning result on the eleventh graders.

2.3 Instruments

Layup shot test (Rismayadi, 2001, pg. 53) stated that the measuring instrument for the layup shot test with layup shot test that has the validity level of 0.79 and reliability 0.90 as the test instruments.

3 RESULTS AND DISCUSSION

These are the description of the data coming out as the result of the layup shot learning, as shown in Table 1.

Table 1: Description of the lay up shot result data.

Groups	Test	Treatment	N	Average	Average Gains	Standard deviation
Experiment	<i>Pre-test</i>	Barred Pipe	25	1.64	1.32	1.08
	<i>Post-test</i>	Modification	25	2.96		1.09
Control	<i>Pre-test</i>	Conventional	25	1.68	0.08	1.11
	<i>Post-test</i>	Learning	25	1.76		1.17

According to the Table, the score of the layup shot learning result on the barred pipe modification pre-test group has the average of 1.64, whereas the post-

test has the average of 2.96. The conventional learning group shows the score of 1.68 for the pre-test and 1.76 for the post-test. It means that, according to

the average score comparison between the pre-test and post-test scores on the two treatments, there is an increase of score on the barred pipe modification group, whereas, on the conventional learning group, the score increases, but not significantly. It is obvious that on the barred pipe modification, the score increases more, compared to the conventional learning.

The barred pipe modification has been proven to be able to give such good influence on the result of the layup shot learning in the basketball games learning in SMAN 1 Sindangwangi, stated that there is a significant increase of the score between the pre-test and post-test scores.

The modification here refers to a creation, adjustment, and shows some new, unique and interesting equipment/infrastructures on the physical education teaching and learning process (Arias, Argudo and Alonso, 2011). The implementation of this modification is really needed by every physical education teacher as one of the alternatives or solutions in overcoming the problems that happen in the physical education teaching and learning process, especially on the sports games, the modification is a neat, focused, and integrated to the other educational aspects.

The barred pipe modification makes it easy for the students to learn the layup shot. This is in accordance with the meaning of the modification, that it should be able to make the students feel comfortable and confident in participating in the learning process (Reeves and Stein, 1999). It has to be remembered that physical education should attract the students to learn and make them more creative so that they can discover new things so that if there is no qualified equipment, the teachers should do something that can encourage the students to learn with the modification method.

Participation can also be achieved by modification (Eime *et al.*, 2015). The limits on the learning facilities can inhibit the students' physical activities. This is not in accordance with the meaning of the physical education learning. Participation can also be helpful for the students in socializing with their friends, as the movement assigned usually has to be done together (Isabel Piñar *et al.*, 2009).

4 CONCLUSIONS

There are two conclusions: 1) There is a significant increase in the score between the pre-test and post-test scores on the layup shot learning result of the eleventh-grade students, using the barred pipe

modification method; 2) There is no significant increase between the pre-test and post-test scores on the layup shot result of the eleventh-grade students that used the conventional learning method.

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