Application of Modified Basketball Game Against Understanding Playing Basketball

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Abstract: The purpose of this research is to see how the application of a modified basketball game to the understanding of play basketball in class X of SMAN 1 Baleendah (Experimental Research in SMAN 1 Baleendah). This research used experimental method research conducted in 12 times meeting. Population in this research is class X SMA Negeri 1 Baleendah, the sample of 50 students, divided into two groups, namely experiment and control. The sampling technique is using *simple random sampling*. The instrument used was GPAI. Based on the results of processing and analysis of obtained data of experimental group was an average pretest score 4.92 with s (Standard Deviation) 1.15 and post-test score 7.84, with s (Standard Deviation) 1.21, the control group with an average pretest score 4.92, with s (Standard Deviation) 1.15 and post-test score 5.20, with s (Standard Deviation) 1.19, and t_{obt} 19.226 <t_{table} 0.284 results are not significant to the control group, while the experimental group obtained t_{obt} 4,056> t_{table} 0.284 and there is an significant increased score because t_{obt} is greater than t_{table}. Based on these achievements, it can be concluded that, on learning basketball through game modifications affect the increased understanding of playing basketball in class X SMA Negeri 1 Baleendah.

1 INTRODUCTION

Game of basketball is known as the sport of the second-fastest in the world after the ice hockey, game of basketball is an activity that is done by bouncing the ball (dribbling), passes the ball (passing), and shot the ball (shooting), the activity was aimed at scored to ring opponents. In the world of education is no less interesting basketball game with a variety of championships both national and international level are contested, which distinguishes them is the purpose and goals to be achieved. In the Unit Level Curriculum (KTSP), especially at the high school (SMA) basketball game is one activity that is used as a learning activity in physical educational subjects. And to date learning materials basketball game activity has become part of the curriculum for teaching physical education (Penjas) planned systematically aims to improve individual organic, neuromuscular, perceptual, cognitive, emotional and physical education within the framework of the system.

Teaching materials in a learning activity, especially in the big ball game of basketball teaching materials in schools often be used as teaching materials are provided to students in the learning process. However, in its application in the field, the form of media or learning tool used is less suitable given or applied in learning activities, games of basketball that are hard too often make students afraid and are not confident that adversely affects the enthusiasm and participation of students that cause students inactive for move. Limited facilities and infrastructure owned by the school is one of the problems that are often found in the implementation of teaching physical education, so they could not meet the equipment needed by teachers in implementing the learning (Turner and Patrick, 2004).

In addition to the equipment less, the Rules of basketball complex makes students confused to play, such as when students dribbled other students must have swarmed students who carry the ball and tried to pick it up, or it is not uncommon students dribble exceeding two steps after switching off the ball, students are less precise in the motion passing, the students do not understand the space where they had to stand up, students have not been nimble in taking the decision to print the numbers, students have not

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been able to create a space to be freed from custody opponent and students too individualistic when play basketball in progress, this is seen when students do not pass the ball to other friends when these students are at a disadvantage. But in reality in schools with the state of the student as described above educators (teachers) still forced students to be able to carry out the movement technique was perfect and required to be scored, but in the realm of physical education, a technique in a game and exercise is not a departure which can be used as a measuring learning success, or the output from the learning itself (Papaioannou, 1994).

Based on the explanation above, we can look at that in a process of learning the necessary infrastructure in order to achieve a complete education goals can improve individual quality both in terms of physical, social, and emotional. In addition, one of the things that must be done by the teacher in the classroom learning implementation is to make the learning plan. With lesson plans will help teachers to facilitate learning that are expected to minimize the deficiencies that will happen (Fay, et al., 2005; lawless, K.A. and Pellegrino, J.W. 2007).

On the other hand, in making a planning need for a method of learning because learning method is one part that can not be separated to create a plan. The learning method that can be used by teachers today very widely. A teacher will be able to do their job properly when he controlled and able to perform the skills to teach using methods appropriate to the characteristics of the subject, purpose, and subject to be taught. Often encountered in schools that a teacher to conduct classes with a variety of methods, such as, the overall method, the method section, the whole-part method, progressive method, and a solid training methods and distributed.

2 METHODS

The method used to support this research is experimental method, because in the process of the study, researchers gave treatment. Thus the experimental research method can be interpreted as the research methods used to find a specific treatment effect against the other in uncontrolled conditions.

2.1 Subject

The subjects were students of class X SMAN I Baleendah, totalling 500 students, then take 10% of 500 is 50, and the methods used to determine the 50 students through the process of drawing. Then after a determined 50 students, researchers divided into two groups: the experimental group and the control group, each of which amounted to 25 people.

2.2 Instrument

The instrument used in this study is the Game Performance Assessment Instrument (GPAI). Indonesian in the form of tests to make decisions and implementation tactics of playing skills. To determine the success of students in the learning needs assessment is through tests. The test consists of two tests, namely one-group pretest-posttest design.

2.3 Data Analysis

The steps that must be taken in data processing are as follows:

- Calculate the average value of the sample group had been in Standardize using the formula:

$$\overline{X} = \frac{\sum X}{n} \quad (1)$$

Information:
$\overline{X}$ = Mean average
X = Score obtained
N = Number of people
$\sum$ = "sigma" which means the amount

Source: Abduljabar, B., Darajat, J. (2012, hlm. 76)

- Look for the standard deviation of the scores that were not grouped using the following statistical formula :

$$S = \sqrt{\frac{\sum (x - \bar{x})^2}{(n - 1)}} \quad (2)$$

Information:
S = Standard deviation sought
n = Number of sample
x = Score obtained
$\bar{x}$ = Mean average

Source: Abduljabar, B., Darajat, J. (2012, hlm. 84)

The measures taken are:

a. Determining the value of the average
b. Looking for x by subtracting scores obtained by the average value.
c. Price x squared, then summed

Attractive square root once divided by the number of respondents.

- Normal Curve

Tabel 1: Use of normal curve with 5 category value (a-e).

Border in curve	value	Category
M + 1.8 or more	A	Very good
Between M+0.6 and M + 1.8 S	B	Good
Between M+0.6 and M + 0.6 S	C	Enough
Between M+1.8 and M + 0.6 S	D	Poor
Unless from – 0.6 S	E	So poor

- Normality Test

Normality test is intended to determine whether the data from the measurement results are normal or not. Normality test used by the author in this study in this research is Liliefors normality test, this test using the steps as follows:

a. Standardize any number of observation, $X_1, X_2, \ldots X_n$ by making the raw numbers $Z_1, Z_2, \ldots, Z_n$ using the formula :

$$Zi = \frac{X_i - \overline{X}}{s} \quad (3)$$

Information:
Z = raw number to-i
X_1 = Data from observation to-i
$\overline{X}$ = Average sample group
S = Standard deviation of the sample group

Source: Riduwan. (2015, Page. 189)

1. For each raw numbers using the standard normal distribution list, and then calculates the probability $F(z_i) = P(z \leq z_i)$
2. The calculate the proportion of $Z_1, Z_2, \ldots, Z_n$ less than or equal to Zi. If the proportion is expressed by

$$S(Z_i) : S(Z_i) = \frac{\text{banyaknya } Z_1, Z_2, \ldots, Z_n \leq Z_i}{n} \quad (4)$$

3. Calculate the difference $F(Z_i) = -S(Z_i)$ and determining the absolute price
4. Take the greatest absolute value among the absolute prices, call the biggest price normality test lilifors L_0 criteria, is :
   1) The hypothesis is accepted when $L_o < L_t$, the conclusion normal distribution of data
   2) The hypothesis is rejected when $L_o > L_t$ the conclusion is not normal distribution of data

b. Homogeneity test. The formula is as follows :

$$F = \frac{\text{The Largest variance}}{\text{The Smallest variance}} \quad (5)$$

Source: Riduwan. (2015, Page. 186)
Testing criteria are: accept the hypothesis if F-count is smaller than F-table distribution with degrees of freedom = (V1, V2) with significance level (a) = 0,05.

c. The next step calculates an increase in exercise results with significance testing, using the t test with the formula :

$$t = \frac{\overline{x} - \text{«} \circ}{\frac{s}{\sqrt{n}}} \quad (6)$$

Information:
t : t value sought
$\overline{x}$: The average value obtained from the data collecting
« ∘ : The average value of difference
SB : standard deviation
n : number of sample

Source: Riduwan. (2015, Page. 207)

3 RESULTS AND DISCUSSION

3.1 Result

Hypothesis Test Results Summary Play Skills Basketball in the control group and the experimental.

Tabel 2: Test results summary play skills basketball in the control group and the experimental.

Control group	N	$\bar{x} \pm sd$	T_{cal}	T_{table}	Sig.	remarks
Pre-test	25	4.92 ± 1.15	-19.226	0.284	.000	No Significant
Post-test	25	5.20 ± 1.21				

Experiment group	N	$\bar{x} \pm sd$	T_{cal}	T_{table}	Sig.	remarks
Pre-test	25	4.92 ± 1.15	4.054	0.284	.070	Significant
Post-test	25	5.20 ± 1.21				

From the table above it is known that the t value obtained is smaller than the control group of t table i.e. -19 226 t <t table 0.284. The significance of playing basketball skills in the experimental group was 000. Because the t value obtained is smaller than t table then Ho is rejected and H1 accepted. The conclusion was that there is no real influence on increasing understanding of playing basketball with no modifications to the learning basketball exerts given. Thus the hypothesis is not tested and can not be accepted. While for the experimental group known that the t value that is greater than t table i.e. 4,056 t> t table 0.284. The significance of playing basketball skills in the experimental group was .070. Because the value of t is greater than t table then Ho is rejected and H1 accepted. The conclusion can be drawn then there is a real impact on improving the understanding of playing basketball with modifications exerts on learning basketball game used. Thus the hypothesis has been tested and accepted.

3.2 Discussion

Based on observations when the research took place, calculation and data processing statistically, the results of this study provide answers to research problems raised writer for twelve (12) meetings, it is known that the effect of modification of the game basketball surveyed have a real impact on an increased understanding of play basketball in class X SMA Negeri 1 Baleendah.

During treatment carried 12 times meeting, found the facts of the field that looks the development of students' understanding of the game of basketball marked with students will position where he should stand, where he had to run, the right to take a decision in which he had to do dribble, passing or penetration, make a decision whether he should ask for the ball or clearing a friend who is being guarded by the opponent, and be able to look for space to create chances to score. This is evidenced also by the results of the data analysis of the comparison between the control groups with an experimental group where there is a significant proportion of the understanding of the game of basketball. This change is the result of the treatment (treatment) done to the students during the learning process, with programs being developed at each meeting is done, in line with Agustan, B. (2015) argued that : "Based on research, the treatment group basketball instructional modifications after being given pre-test to post-test increased significantly. Time treatment lasts for one month with 12 meetings, but the difference score pre-test and post-test increased significantly. Unlike the physical education learning through conventional learning. Based on the research findings that scores at pre-test and post-test control group did not increase significantly. The reason for the difference in treatment at the time of physical education learning takes place. Differences in treatment had on the provision of material that is so appealing is rarely given to each student. This is what makes the difference score pre-test and post-test on any model of learning is presented differently. "(Page. 28)

However, modification of learning is not the main focus in the learning process; it's just a way to simplify, facilitate, and guiding students into the learning situation. Applying modifications to enhancing the understanding of student learning, especially in learning the game of basketball should be packaged differently and certainly creative, innovative and to develop cognitive abilities, psychomotor, and affective so that students continue to be motivated to do a series of interactive learning process (Li and Lam, 2013). In line with Vygotsky's theory about the role of social interaction and the development of the nearby area (zone of proximum development) has some implications for the teaching of physical education. Implications of Vygotsky's theory is reinforced by the position of social constructivism philosophy that believes that knowledge of physical education a shape (construction) socially (Berk and Winsler, 1995). According to Murray and Arroyo (In Shabani, K. 2010) suggests that "Indicate that the zone of proximal development can be characterized from both cognitive and affective perspectives. From the affective perspective the learner should avoid the extremes of being bored and being confused and frustrated. From the cognitive perspective we say that material should not be too difficult or easy. Both boredom and confusion can lead to distraction, frustration, and lack of motivation. Of course the optimal conditions differ for each learner and differ for the same learner in different contexts. "(page. 241)

Can be interpreted according to Murray and Arroyo indicated that the zone of proximal development can be characterized from both the perspective of the cognitive and affective. From the perspective of affective learner must avoid the extremes become bored and become confused too frustrated. From a cognitive perspective we say material that should not be too difficult or easy. Both boredom and confusion can cause disruption, frustration, and lack of motivation. Of course, the

optimal conditions are different for each student and different to fellow students in a different context.

Students in the ZPD (DPT) respectively, so that they each can reach the level of potential abilities. The situation in the field is empirically not simple. Not every student has mastered the material prerequisites properly, or the students to master but with the quality of mastering diverse. So there are students who have not reached the level of the actual capabilities or actual achieved level of ability of each student is not the same. This means, ZPD (DPT) they are different, which implies the need for variations guidance and interactive learning environment.

4 CONCLUSIONS

Based on the research, processing and analysis of data that has been elaborated at Chapter IV, on the effect of modification of the game basketball towards the understanding of playing basketball, the authors conclude that: Modification of the game of basketball have a significant influence on the results of understanding to play basketball in class X SMAN 1 Baleendah.

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