

Comparison of Learning Methods Based on Animals Name and Conventional Learning to Improve Free Throw Shooting Skills in Basketball Games

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Received May 12, 2023; Revised August 7, 2023; Accepted August 23, 2023

Cite This Paper in the Following Citation Styles

(a): [1] Bafirman, Ali Munir, Fiky Zarya, Thesya Alda Nia, "Comparison of Learning Methods Based on Animals Name and Conventional Learning to Improve Free Throw Shooting Skills in Basketball Games," *International Journal of Human Movement and Sports Sciences*, Vol. 11, No. 5, pp. 1150 - 1157, 2023. DOI: 10.13189/saj.2023.110524.

(b): Bafirman, Ali Munir, Fiky Zarya, Thesya Alda Nia (2023). *Comparison of Learning Methods Based on Animals Name and Conventional Learning to Improve Free Throw Shooting Skills in Basketball Games*. *International Journal of Human Movement and Sports Sciences*, 11(5), 1150 – 1157. DOI: 10.13189/saj.2023.110524.

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Abstract The method of animals name and conventional method are two methods that can be used by a teacher to train various basic techniques in sports including basketball, but rarely has the technique of animal names been the subject of investigation by previous researchers. This study aims to recognize the differences in the contribution of conventional learning practice methods and animals name method to shooting ability in basketball games. This type of research is an experimental one with a quantitative approach. The population in this study was class XI students majoring in social studies with a total of 315 students. The sample in this study was 42 students from 2 classes XI social studies B and XI social studies D, with 21 students in each class and the instrument in this study is in the form of treatment shooting with a free throw technique as much as ten times. This research shows that animals name method-based exercises significantly improve shooting skills in basketball games, while conventional-based learning methods do not have a significant impact on shooting therapy in basketball games. Thus, there are differences between the learning process using the animals name method and conventional methods, with an average of 80.77% in animals name and an average of 73.27% in conventional method. Thus, the researcher draws the conclusion that overall the animals name method is very effective compared to conventional methods, because the animals name method is very interesting, simple, and easy for students to do in the learning process.

The limitations of the research are in terms of time, financial side, research subject and not many experts involved in this research.

Keywords Animals Name, Conventional, Shooting, Free Throw, Basketball, Student

1. Introduction

Physical education learning at the unit level of high school education has a lot of materials taught to students. From the entire material provided, in fact, many students were found to have not finished carrying out learning, one of which was basketball learning. In the game of basketball, there are several basic techniques, including passing, dribbling, and shooting. In learning basketball, from these basic techniques, most students find it difficult to do shooting techniques for upper middle students as beginners. The difficulty of performing this technique is usually due to improper methods or ways of shooting. The importance of this research is carried out to be able to provide appropriate and interesting methods for students in carrying out shooting techniques in basketball learning. Because if the learning is not interesting and too monotonous, it will cause students to feel bored [1]. Education is a form of implementation in an effort to

increase self-capacity to train Intellectual Quotient thinking of both soft skills and hard skills. From the results of data analysis obtained from the Education Rankings By Country 2021 source published by the World Population Review, it was noted that Indonesia in 2021 was ranked 54 out of 78 countries in the list of rankings for education levels in the world. Of course, this makes a very large task for the ranks of stakeholders ranging from the government, society, educators, and even students, especially the world of education has entered the 4.0 era where learning is more flexible and efficient [2]. Sport is a series of skill movements that are played and arranged in a structured and systematic manner [3].

In general, according to law no. 3 of 2005 related to the national sports system in chapter VI article 17, sports are divided into 3 branches, including, 1.) Recreational sports, 2.) Sports Achievements, 3.) Sports Education [4]. Recreational sports are sports that are carried out for the purpose of refreshing a person's physical and spiritual situation [5], while the purpose of recreational sports itself is none other than to fill free time in order to get fitness, excitement, and strengthen social relations [6]. In addition to recreational sports, there are achievement sports. Sports achievements have a very big impact on local governments because they can support in terms of political recognition to the economic field [7]. In sports, these achievements emphasize more on the achievements of athletes to be able to achieve victories and develop the skills of athletes in a structured manner with the aim of achieving an achievement in a competition [8]. So it can be concluded that the higher the quality of coaching, the higher the athlete will also develop his skills. And the last one in the sport itself is the sport of education. Sports education is a sub-sport based on the world of education [9]. In the world of education, it is not spared from several learnings that can revolutionize the mindset of humans, including philosophical learning, general knowledge learning, and even physical-based education. Physical Education is a learning taken by humans at every level, from elementary school to college by using various aspects of physical fitness, movement skills and physical development, attitudes and intellectuals in life.

Physical education is also one of the elements of the educational component that leads to the development of body building, physical fitness, physical activities, and skill development [10]. The purpose of physical education itself is also to be able to develop individuals in a neuromuscular, intellectual, organic, and emotional manner, and the physical education is closely related to the world of sports, because by exercising, the objectives of the vision and mission of physical education itself will be carried out [11]. Sports in the physical education system follow the existing curricula in Indonesia. The curriculum in Indonesia currently implements the 2013 curriculum system, which is more focused on the safik approach, as well as thematic and systematic assessment in the learning system [12]. In sports, education teaches several sports in

general, such as: football games, volleyball, javelin throwing, table tennis, and basketball games.

Basketball is one of the sports played by 2 teams and each team consists of 5 players, so the purpose of the basketball game is to put the ball into the basketball hoop and try as much as possible so that the opponent cannot put the ball into the basketball hoop of his own region [13]. Basketball is also one of the sports that is very popular among teenagers, and there is a total number of approximately 450 million players including both men and women around the world [14], because there are so many benefits contained in the game of basketball, such as providing health that involves both the metabolic system in the body, cardiorespiratory, and musculoskeletal [15]. Basketball is one of the games that is included in the category of aerobic-based sports characteristics, and anaerobic because the game requires a very high intensity of skilled movement, ranging from running, jumping, to moving places [16].

Basketball playing skills is divided into 2 categories, namely: 1) defensive skills (blocking, stealing, and bouncing) and 2) attacking skills (passing, dribbling, and shooting) [17]. However, at the general and beginner education levels, it is only enough to be able to practice basic skill movements, such as: passing, dribbling, and shooting. The passing technique is one of the basic techniques that are most often used during competitive basketball games, because the passing technique is a factor that can affect cooperation to be able to create a maximum shot [18] and in playing passing is divided into 3 basic engineering movements, including: Chest Pass, Bounce Pass, and Overhead Pass [19]. In addition to the passing technique that plays a role in playing basketball, the dribbling technique is also important. The dribbling technique is the most basic movement of running and dribbling skills and requires maximum speed and agility when running [20]. The benefit of the dribbling technique is to be able to penetrate the defensive area and create an opportunity to be able to score points [21]. And the basic technique on the last basketball game was shooting. Shooting is also a technique which is one of the most frequently used movement techniques as well as a goal in basketball games by inserting the ball in the opponent's hoop [22]. In order to get good and correct shooting skilled motion, several prefix, advanced, and suffix indicators are needed [23]. In shooting techniques, basketball games will be more interesting if there are varied efforts by each team in an effort to get the ball into the opponent's hoop [24]. As well as in shooting, very high accuracy is needed in order to master the course of the match [25]. So it can be concluded that shooting techniques play a very full role in the game of basketball.

However, there are problems that exist in the shooting technique of the basketball game, especially in the world of education. Many students have difficulty in receiving shooting material, due to monotonous learning factors and movements that they have not mastered as beginners, even

though the shooting technique is one of the basic technical skills that play a very important role in basketball games, because scoring the ball into the basketball hoop is something that can support success / victory.

The results of the observations that have been made by the researchers above in improving the learning outcomes of shooting using conventional methods show that there are still many students who have not received good enthusiasm and motivation to learn for the better. Therefore, it is necessary to have the right method in improving these learning outcomes, namely the animals name method which can increase skillful movement in shooting techniques in basketball games. It can also increase students' enthusiasm in the teaching and learning process, so that the learning is not too monotonous and does not cause boredom to students. From this explanation, it can be concluded about the animals name method and the support of previous research and relevant research, so researchers are interested in being able to find out the level of effectiveness between conventional sources in books and new methods of animals name in improving shooting techniques for basketball games.

2. Materials and Methods

This type of research is an experimental study that uses two groups of techniques with different treatments. Experimental research is a study carried out to determine the influence of the consequences of the treatment imposed on the object under study [26]. In conducting a study, experimental research is the best way to determine the relationship among several variables [27].

The research was conducted at SMA Negeri 1 Ngawi from February 2022 to April 2022. The population of this study consisted of 9 classes of class XI social studies students, namely from class XI A to XI I as many as 315 students. To determine the number of samples used in this study, researchers used the Random Sampling technique, which is a technique that is applied by dividing a population into smaller and random forms in order to get maximum results [28]. In this case, the researchers chose a sample of two classes, namely class XI B consisting of 22 students as a control class and XI D consisting of 22 students as an experimental class. So the total sample used in this study was 44 students.

The instrument in this study was a free throw basketball shooting test with ten [10] shooting times. The Free Throw technique is an effort to shoot the ball into the basketball hoop without any interference given when the opponent commits a foul [25]. Before conducting the basketball shooting test, previously the sample was given treatment, for the experimental class, using the animals name method, and students were given examples of throwing basketballs by imitating animal styles, such as: frogs, kangaroos, and giraffes. As for the control class, students were treated using conventional methods as in general in the student package book. In the application of the game of basketball,

there is a foul, so that when the referee gives a foul, it will get a free shot [29]. Shooting is calculated by all objects, including the control class that uses conventional methods and the experimental class that uses the animals name method. Data analysis techniques were carried out in this study by conducting validity and reliability tests, normality tests, homogeneity tests, and hypothesis tests with the independent samples test method with the help of SPSS software version 25.

3. Result

Validity Test

The validity test in the study is used to determine whether a test or quiz is valid. The validity test is said to be valid if the rcount value $>$ rtable or the significance value $<$ 0.05. Here are the validity test results.

Table 1. Validity Test

Corelation			
		Shooting	Score
Shooting	Pearson Correlation	1	1.000**
	Sig. (2-tailed)		.000
	N	44	44
Score	Pearson Correlation	1.000**	1
	Sig. (2-tailed)	.000	
	N	44	44

** . Correlation is significant at the 0.01 level (2-tailed).

From the table above, it is known that the rcount value is 1,000 $>$ rtable 0.297. This means that the value is valid. In addition, the significance value in the table above is 0.000 $<$ 0.05. After the assessment sheet has been tested to its validity, the researcher can continue his research on the sample.

Reliability Test

After the assessment sheet is tested for validity, a reliability test is carried out with the aim of seeing the consistency of the test sheet made by the researcher, being carried out repeatedly. The reliability test is said to be reliable when the Cronbach alpha value $>$ 0.6. Here are the results of reliability tests using Cronbach alpha.

Table 2. Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.331	2

From the table above, it is known that the value of Cronbach alpha is 0.331 $>$ 0.06. This means that the test sheet is said to be reliable and can be used repeatedly.

Normality Test

The normality test was carried out by the researcher to find out that the study was normally distributed. The normality test uses the Kolmogorov-smirnov method with a significance level of > 0.05 . Here are the results of the normality test:

Table 3. Normality Test

One-Sample Kolmogorov-Smirnov Test		
N		22
Normal Parameters ^{a,b}		Mean
Normal Parameters ^{a,b}	Std. Deviation	.0000000
Most Extreme Differences	Absolute	2.23227271
Most Extreme Differences Test Statistic	Positive	.116
	Negative	.101
	.116	-.116
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		

From the table above, it is known that the Asymp sig (2-tailed) value is $0.200 > 0.05$. This means that the data from the study is normally distributed, because the significance value > 0.05 .

Homogeneity Test

The homogeneity test was carried out by the researcher to find out whether the sample tested was from the same variant. The homogeneity test uses the Chi-Square method, if the significance value of the > 0.05 , the data is homogeneously distributed or comes from the same variant. The following are the results of the homogeneity test presented in the table:

Table 4. Homogeneity Test

Chi-Square Test				
	Pretest Control Group	Posttest Control Group	Pretest Experimental Group	Posttest Experimental Group
Chi-Square	4.364 ^a	6.636 ^b	10.727 ^c	10.000 ^d
df	9	8	7	10
Asymp. Sig.	.886	.576	.151	.440

The table above is known from the whole either from the control group or the experimental group contributing homogeneously or the sample is derived from the same data. The results are known that the significance value of $0.440 > 0.05$ means that the data contributes to homogeneous.

Hypothesis Test

The hypothesis test is used to find out the answer to whether there is a difference between conventional methods and animals name on the ability to shoot basketball with the free throw technique. The hypothesis test was carried out using the independent samples test method with a significance value level of < 0.05 . Here are the hypothesis test result.

Table 5. Group Statistics

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Test Results	Control Group	22	73.27	2.694	.574
	Experimental Group	22	80.77	3.558	.759

From the results of the table above which shows data from the two groups, the control group had a standard deviation value of 2,694 with a mean of 73,27 compared to the experimental group which had a standard deviation value of 3,558. with a mean of 80,77. So it can be concluded that the experimental group has a superior level of effectiveness compared to the control group, because in terms of biomotor, the animal name movement invites students to play a more active and innovative role and imagine in the teaching and learning process.

Table 6. Hypothesis Test

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Control Test Results - Experiments	Equal variances assumed	2.010	.164	7.883	42	.000	7.500	.951	9.420	5.580
	Equal variances not assumed			7.883	39.119	.000	7.500	.951	9.424	5.576

The table above shows on the degree of freedom (df) 42 obtained t table at a significance level of 5% (2,018), while the calculation is obtained by a value (7,883) meaning > a t table of 5% (2,018), thus it means that H₀ is rejected, and there is a difference in effectiveness between the conventional method and the animals name method which has a significant effect on the shooting ability of basketball free throw techniques at SMA Negeri 1 Ngawi.

4. Discussion

The quality of the process in teaching and learning basketball depends on the planning system and teaching / developing physical qualities, tools and methods that are appropriate to use [30]. Because in playing basketball, it is expected to have some special skills, both physical qualities and creative and innovative playing development [31]. As educators, there are many efforts made by educators in helping students to successfully complete their learning outcomes. In addition, educators also carry out strategies to be able to improve shooting techniques for basketball games. Research researched by [32] used conventional sources of learning books in general. In the study, the average student had completed their learning outcomes, but student enthusiasm still seemed to be lacking.

Unlike the research that has been carried out from [32] related to the increase in shooting basketball games using the animals name method, in the study the average student completed carrying out learning. Besides that, students were very interested in the method, they didn't look bored, and their enthusiasm in carrying out learning also looked better, because the method given was not monotonous. The animals name method is a method that uses several animal names, such as: frogs, kangaroos and giraffes. The emergence of the basis for taking animal names is based on similarities between biomotor components that occur between the movements of animals name and the physiological ones in motor movements of games. As we know, the main basic movement in performing the Free

throw shooting technique seeks a motor position that is on the leg more inclined downward, optimizing the explosive power of the leg muscles. This is in line with the dominant frog movement leaning down by maximizing the explosive power of the leg muscles on the foot. The next is the movement of kangaroos, where the second movement is to balance between body position and ball holding, so it aims to be able to train balance and focus between the hit of the ball and body position, and the motor movement is similar to the position of kangaroos, where the majority of kangaroos are animals that have hand movements that are more forward inclined when compared to animals frog. Finally, the giraffe movement is a suffix movement rather than the Free Throw shooting technique skill, which is a technique that supports the success of athletes in inserting the ball into the opponent's basket. This is in accordance with the biomechanical analysis in the movement of the free throw shooting technique, and after making a shot, the player will make additional movements on the fingers by bending the fingers as much as 90°, because it can help stabilize the rotation of the ball so that it can be controlled properly. So that the movement is very similar to the head of a giraffe, where the position of the long head and the position of the hands straight up and the ending of the bent fingers is a form of the head of the giraffe.

Some of the names of these animals already cover some of the movements in general. The results of the analysis are as follows: 1) Frog Animals, at the stages of frog style include: a) In posture more inclined downwards, b) With the condition of the knees to be bent $\pm 90^\circ$ like frog animals, c) Holding both hands on the ball, fingers so that they can be stretched. 2) Kangaroo animals, at the stage of movement of kangaroo animals include: a) In this stage the posture is more inclined slightly forward, b) The holding of the ball is the same as that of the frog animal, but the difference is that the position of the body and hands is more raised like a kangaroo animal, c) The center of concentration is at the point of the basketball hoop. And the last 3) Giraffe Animals, in the final style of the giraffe animal there are several stages including: a) The movement of the giraffe animal is a suffix movement to get the

maximum throw, b) The direction of the gaze remains fixed on the basketball hoop, c) When making a basketball throw to the basketball hoop, the suffix of the wrist position is bent as well as the head of a giraffe animal.

This study was conducted to discuss whether there are differences in learning basketball with conventional methods and animals name methods. This study involved 42 students at SMA Negeri 1 Ngawi class XI which was divided into two groups, namely the control group and the experimental group. From the data that has been obtained on the ability to shoot basketball free throw techniques with different treatment in the control class using conventional methods while the experimental class uses the animal names method, there are significant differences. The two methods have the same influence in improving basketball shooting skills but there are differences in the average results of student learning completion. This is in line with the experience of researchers in the process of implementing the use of the animals name method used in learning to shoot basketball, which provides its own attraction for students, because the method imitates the style of animals such as frogs, kangaroos, and giraffes so as not to make students bored in following learning. It can be seen that students are very happy in enjoying the learning process. This is because of the mindset embedded in students that the movement is a unique movement, so it can invite students to keep learning with game modifications. While in the conventional method students have been accustomed to shooting basketball since they were in junior high school, there are still students who make mistakes in making movements. This is due to the lack of enthusiasm, attractiveness and motivation of students in following monotonous learning and has been carried out when they are in junior high school.

In line with the results of observations made by researchers on students of SMA Negeri 1 Ngawi, there are several students who have not completed learning basketball shooting techniques. In this learning, the teacher uses conventional methods, but the enthusiasm of the students seems to be lacking, and some students are not focused on listening to the instructions from the teacher. Of the 44 students, only 25 (56.82%) completed the learning. The completeness of learning is measured from the KKM standard, which is 70.

The study [34] explained that there is a level of difficulty for students in receiving material, as well as [35] in their research in an effort to improve shooting layup techniques with audio-visual methods, and [33] related to the discussion of improving shooting techniques with discovery learning methods, of course it can be concluded that learning shooting techniques for basketball games at the beginner level is difficult, starting in terms of ball holding, posture and throwing the ball on the opponent's hoop. Learning that is designed creatively and innovatively is very necessary, because with this learning, the training / learning that has been obtained by students gets maximum

results [36]. So that it is a big task of researchers to be able to help students in finding the level of effectiveness in an effort to improve good and correct basketball game shooting techniques according to predetermined KKM standards.

This method is almost the same as the previous research conducted by [33], in which the researcher used the role playing method in improving basketball shooting. Role playing is a method that uses students' imagination and passion in playing living characters and inanimate objects. These results have an influence in increasing basketball shooting results, judging from the results of the pretest test average of 60.84 and the posttest test results of 64.71. These results proved to have a significant influence with a percentage of 6.36%.

Conventional learning is also no less good for improving student learning outcomes, although in fact it still looks monotonous and is commonly done by students on basketball learning materials at the junior high school level. The research that has been carried out by [34] the researchers is looking for the effectiveness of discovery and command learning methods. Both methods are conventional methods. The outcomes of effective learning are more than command methods. As a teacher, they should provide innovations in carrying out learning that if students are less enthusiastic in participating in learning so that students are more enthusiastic in participating in learning. By making innovative learning methods interesting and not monotonous for students, making students immune to having different movement experiences in their brains and it is likely that students will do basketball shooting movements well. So that the learning outcomes of students better understand in detail the movements and the effectiveness of using the method.

5. Conclusions

Based on the research that has been carried out, both methods have a level of effectiveness in improving the results of learning to shoot basketball free throw techniques. But there are significant differences from the average yield of shiva values. The use of the animals name method looks better in terms of the average results of student scores, because this method makes students interested and enthusiastic about carrying out learning so that learning outcomes are more satisfactory than conventional methods that look monotonous and have been practiced by students before in junior high school.

Acknowledgements

Thanks to the students, teachers, and principals for their cooperation, so that this research can run smoothly. And hopefully this research can be useful for all of us.

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