

Assessing the influence of playing method on the outcome of basketball shooting ability

Zidan Dhia^{1ABCD}, Didi Suryadi^{1,2ACDE}, Y Touvan Juni Samodra^{1ABDE}, Mashud^{3BDE},
Asriah Nurdini Mardiyanningsih^{4CDE}, Eko Saputra^{1DE}, Zsolt Németh^{5BDE}, Asry Syam^{6BCD},
Rezsa Dewintha^{7CE}, Fazarudin^{8ABC}

¹ Department of Sport Coaching Education, Universitas Tanjungpura, Indonesia

² Department of Sport Coaching Education, Universitas Negeri Yogyakarta, Indonesia

³ Department of Physical Education, Health and Recreation, Universitas Lambung Mangkurat, Indonesia

⁴ Department of Biology Education, Universitas Tanjungpura, Indonesia

⁵ Department of Theory and Practice of Sports, University of Pécs, Hungary

⁶ Department of Physical Education, Universitas Negeri Gorontalo, Indonesia

⁷ Department of Nutrition and Dietetics, Politeknik Kesehatan Kementerian Kesehatan Pontianak, Indonesia

⁸ Department of Educational Administration, Universitas Tanjungpura, Indonesia

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Abstract

Background and Study Aim Shooting in a basketball game is the method of throwing the ball into the ring or basket to get points. As a result, extra treatment is required to improve kids' shooting abilities. The purpose of this study is to examine the effect of play method on basketball shooting ability results.

Material and Methods In this work, a pre-experiment with a one-group pretest and posttest design was used. The research subjects were 11th grade students from State Senior High School 4 Ketapang, and a sample of 37 students was obtained using the purposive sampling technique. The devices in the study collected data directly from tests and measurements performed on the basketball court. Students in this study practiced the basic technique (shooting at the basketball hoop) for 1 minute, which was repeated three times to achieve the best outcomes. The SPSS Version 26 application was used to help with data analysis in this study.

Results The results show the mean pretest value of shooting ability as 72.81, while the mean posttest shooting ability is 81.68. Based on these results, the mean posttest value of shooting ability is greater than the mean pretest value of shooting ability. The results showed a significance value of $0.000 < 0.05$.

Conclusions The conclusion is that the playing method has a significant effect on the results of basketball shooting ability, so it can be said that the playing method can be applied to improve the results of basketball shooting ability.

Keywords: play method, shooting ability, basketball, students

Introduction

Physical education learning in the school environment is a compulsory subject that must be followed by all students, where physical education learning is applied in elementary schools, junior high schools, and high schools [1, 2, 3]. With the learning of physical education, it is expected that students will be able to have a healthy and fit body through the physical activities they carry out. In addition, physical education can help stimulate motor skills in children with traditional games [4]. In physical education, there are two types of games including big ball games and small ball games. Where game sports are a type of sport that competes for victory [5]. Like big ball games, for

example, soccer, volleyball, and basketball. In small ball games there are badminton, field tennis, table tennis, softball, and takraw [6]. One of the materials in big ball games taught in physical education is the sport of basketball [7].

The sport of basketball in Indonesia itself was brought over by Chinese overseas [8]. Basketball is a game sport that requires high athletic skills and physical fitness [9]. This sport is complex because the movement consists of a combination of coordinated elements, so it plays the ball well [10]. Player speed is also needed [11], because this sport is dynamic, active, and has a high tempo [12]. An article says that basketball is a type of sport with complex movements [13]. Based on this, basketball is a game that requires good physical condition.

Furthermore, basketball players also need good strength, agility, fitness, flexibility, endurance, and vertical jumping ability to achieve sports targets

[14]. Therefore, physical skills, posture, and good basic techniques make it easier to get points [7]. Proven by previous research that physical activity has a positive impact on physical fitness [15, 16, 17, 18, 19], and can reduce the risk of disease [20]. In addition, in basketball games, basic techniques also play an important role in the success of the game, including throwing techniques, catching techniques, dribbling techniques, shooting techniques, pivoting movement techniques, layup techniques, and rebound techniques [7].

According to Haidara, basketball games require every basketball player to master several basic techniques [21]. Basketball games also require special techniques such as passing, dribbling, shooting, layups, and other techniques to support the game [22]. In basketball games, the technique used to get points is shooting. Shooting is the technique of throwing the ball into the ring or basket, in order to get as many points as possible [23]. The review provides evidence that in the basketball game, technical skills are needed, especially shooting, where this is the technique most often found to obtain numbers or points.

Research studies prove that improving shooting ability in basketball can be done with the reciprocal style method [24]. In addition, other reserves from Hartanti, improve their shooting and dribbling skills can use a circuit learning model based on a scientific approach [25]. In addition, modified basketball games have an effect on gross motor skills [26], where gross motor skills are very important [27]. Sampurno suggested that improving the quality of shooting can be achieved through a learning process with a discovery teaching style or other teaching style that involves students moving actively and thinking critically during learning [28]. Munir proved that teaching with the discovery learning method is very effective for improving shooting skills [29].

Therefore, in basketball games, it is very important to master several techniques, one of which is shooting technique. Because shooting technique is a ball throwing technique that aims to put the ball into the ring or basket [30]. Furthermore, shooting techniques play an important role in scoring points in basketball games [31]. So that shooting technique skills must be mastered by every basketball player [32]. In accordance with the above statement, the author aims to prove that the play method can improve a person's shooting skills.

Materials and Methods

Participants

The subjects in this study were 11th grade students of State Senior High School 4 Ketapang in the 2022–2023 school year. In this study, using the purposive sampling technique, a sample of 37 students, consisting of 18 boys and 19 girls, was selected.

Research Design

This research is a pre-experimental study using a one group pretest and posttest design approach. In this study, there is a treatment using the play method to achieve success. Before treatment is given, first do an initial test (pretest), and then after treatment, continue with the final test (posttest).

The instrument in the study used tests and measurements carried out on the basketball field to obtain direct data. In this study, students performed basic techniques (shooting to the basketball hoop) for 1 minute, which was done 3 times to get the best results, and then scoring was carried out by the PJOK teacher as an observer and scorekeeper in the implementation.

Statistical Analysis

In this study uses an effect test, before that, a normality prerequisite test is carried out; if the data is normal, then it will be continued with the t test if it is not normal, then it uses a non-parametric test, which is assisted using the SPSS version 26 application.

Results

Based on the results of the research, the data description recorded the pretest and posttest values of basketball shooting skills. These results can provide an overview of the differences that occur with the treatment of playing methods on pretest and posttest values (table 1).

The results in Table 1 show the mean pretest value of shooting ability as 72.81, while the mean posttest shooting ability is 81.68. Based on these results, the mean posttest value of shooting ability is greater than the mean pretest value of shooting ability.

Before the effect test is carried out, a normality prerequisite test is first carried out using the One Sample Kolmogorov-Smirnov test. The results show a significance value of $0.200 > 0.05$ (table 2). Based on this value, it is concluded that the data is normally distributed.

Table 1. Descriptive Value of Pretest and Posttest

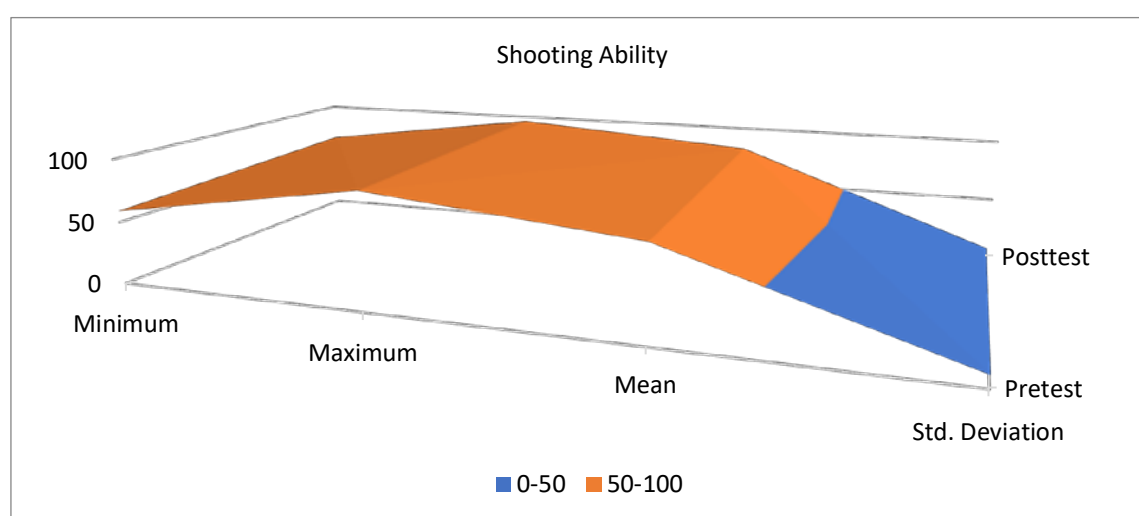
Result	N	Minimum	Maximum	Mean	Std. Deviation
Pretest	37	59.00	91.00	72.81	8.98
Posttest	37	68.00	96.00	81.64	6.76

Table 2. Kolmogorov Smirnov One Sample Normality Test

Normality Test	Result	Unstandardized Residual
N		37
	Std. Deviation	4.73319740
	Positive	0.091
	Negative	-0.072
Asymptotic Significance 2-tailed (Asymp.Sig 2-tailed)		.200 ^{c,d}

Table 3. Test Paired Sample Test

Pair	Result	t	df	Sig. (2-tailed)
Pair 1	Pretest - Posttest	-8.544	36	0.000

**Figure 1.** Results of Shooting Ability

After the prerequisite test is carried out, it is continued with the t test to determine the effect given. The results showed a significance value of $0.000 < 0.05$ (tabl. 3). Based on these results (fig. 1), it can be concluded that the playing method has a significant effect on shooting ability in class XI students.

Discussion

This study aims to determine the effect of the play method on the learning outcomes of shooting ability in basketball games. The results showed that there was a significant effect of using the play method on the results of shooting ability in basketball games. The results also show a difference in the mean pretest value (72.81) and the mean posttest value (81.64), which means there is an increase of (8.83). Relevant research results in an increase or influence of the play method to improve shooting skills in basketball games. The play method is an expression and entertainment in order to achieve pleasure and goals [33]. In addition, the play method makes the learning process effective [34].

Likewise, using the game modification method to facilitate the learning process can also create a happy

atmosphere [34]. Through modified games, we can also improve manipulative skills in early childhood [35]. A study by Rizky with a modified game method is very suitable for the training and coaching process at the age of under 13 years [36]. At that time, children still want to spend their time playing, and with the modified game method, it is hoped that the coaching process will be more fun and cheerful and increase the enthusiasm of children.

Furthermore, modifications to games are made in order to achieve goals without eliminating the characteristics of the game [37]. Not only using modified games but also traditional games is beneficial for early childhood development, for example, traditional games can shape the character of a child [38]. It turns out that exercise modification can have an influence on the exercise performed [39].

Using the game method can improve shooting abilities [40]. Other studies have proven that play can also improve fine and gross motor skills [33]. In addition, the play method can be used in cognitive development in early childhood [41]. Even a study said, using traditional games can also increase students' interest in learning [42].

Next, it proves that the game method can also be used as a learning method to increase interest in learning, especially in math subjects [42]. Mustopa searched that the play method has a good effect on learning physical education [43]. Another study using the problem-based learning method provided an increase in the ability of long serves in badminton games [44]. Based on these reviews, it has been illustrated that the play method is considered a suitable learning method to improve learning outcomes in students.

Conclusions

The results of this study have a strong foundation related to the use of playing methods in physical education. The results of this study indicate that there is a significant effect of the playing method on basketball shooting ability. The results also show an increase that occurs after being given the treatment

of playing methods. The results of this study can provide an overview of the role of teachers and sports practitioners in providing learning to students to improve basketball shooting skills. Further research recommendations can compare the effectiveness of playing methods with other methods for improving basketball shooting skills.

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Conflict of interest

There is no conflict of interest.

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Information about the authors:

Zidan Dhia; <https://orcid.org/0009-0009-4626-5016>; zidanjai15@gmail.com; Department of Sport Coaching Education, Universitas Tanjungpura; Pontianak, Indonesia.

Didi Suryadi; (Corresponding Author); <https://orcid.org/0000-0002-0206-9197>; didisurya1902@gmail.com; Department of Sport Coaching Education, Universitas Negeri Yogyakarta (Yogyakarta, Indonesia); Department of Sport Coaching Education, Universitas Tanjungpura (Pontianak, Indonesia).

Y Touvan Juni Sanodra; <https://orcid.org/0000-0003-4850-1990>; tovan@fkip.untan.ac.id; Department of Sport Coaching Education, Universitas Tanjungpura; Pontianak, Indonesia.

Mashud; <https://orcid.org/0000-0003-3107-7134>; mashud@ulm.ac.id; Department of Physical Education, Health and Recreation, Universitas Lambung Mangkurat; Banjarmasin, Indonesia.

Asriah Nurdini Mardiyanningsih; <https://orcid.org/0000-0002-6033-3056>; asriah.nurdini.m@fkip.untan.ac.id; Department of Biology Education, Universitas Tanjungpura; Pontianak, Indonesia.

Eko Saputra; <https://orcid.org/0009-0005-8678-0160>; ekosputra46@gmail.com; Department of Sport Coaching Education, Universitas Tanjungpura; Pontianak, Indonesia.

Zsolt Németh; <https://orcid.org/0000-0003-4656-2618>; zsolt.nemeth@gamma.ttk.pte.hu; Department of Theory and Practice of Sports, University of Pécs; Pécs, Hungary.

Asry Syam; <https://orcid.org/0009-0004-1698-4937>; asry.syam@ung.ac.id; Department of Physical Education, Universitas Negeri Gorontalo; Gorontalo, Indonesia.

Rezza Dewintha; <https://orcid.org/0000-0003-0239-0850>; atapoltekkes@gmail.com; Department of Nutrition and Dietetics, Poltekkes Kemenkes Pontianak; Pontianak, Indonesia.

Fazarudin; <https://orcid.org/0009-0000-9702-8541>; fazarudin2020@gmail.com; Department of Educational Administration, Universitas Tanjungpura; Pontianak, Indonesia.

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