

Enhancement Shotput Skills With Shot Modification on Students

Ad'dien^{1,*} Nurul Musfira A.¹ Herman¹

¹*Sport Science Faculty, Universitas Negeri Makassar, Makassar, Indonesia*

^{*}*Corresponding author. Email: addien@unm.ac.id*

ABSTRACT

This study aims to determine the increase in students' skills through the application of tool modifications. This study uses a two-cycle action research method with the design of planning, observation, action, and reflection. The subjects in this study were 23 students of SDN I Complex IKIP Makassar grade VI in Makassar. Data collection instruments used in this study were to use observation sheets and data on student learning outcomes conducted through learning outcomes tests. Data processing and analysis showed an increase in shotput's learning outcomes by applying tool modifications. The first cycle implemented the balloon modification filled with water in Shotput learning, resulting in 65.22% effectivity. The student skill increased in the second cycle, with the effectivity gain 86.96%.

Keywords: *Action research, learning tool modification, effectivity*

1. INTRODUCTION

One subject of learning in physical education for elementary in Indonesia is shotput. The purpose of this study is to increase the student's skill in throwing objects in the form of shots/balls as far as possible. As part of athletic sports, learning to reject shots is less attractive to students. Learning material that is monotonous and does not contain elements of the game. The condition is the reason for the lack of student interest. Furthermore, the characteristics of elementary school students who love to play and need dynamic learning models.

Dynamic learning contains various elements, namely student motivation to learn the material, exciting teaching materials, student needs, learning tools, learning atmosphere, and student conditions. Sports teachers must be able to design learning strategies so that the learning atmosphere is conducive to learning [1][2]. A democratic learning atmosphere will produce an emotional balance of students.[3]

Accurately, some researchers describe the important sports components that can be modified by the teacher [4][5]. The first aspect is the size, weight, or shape of the equipment used. The parts are designed according to students' abilities. The standard tools for shotput for children learning are iron weighing 3 kg - 4 kg for girls and 6.25 kg - 7.25 kg for boys. In some methods, the teacher designs learning tools with various materials and weights. Secondly, it is playing field. The field will generate the

freedom of the student to export their movements. Thirdly is playing time or duration of play. Short learning time will make it challenging to achieve student ability.

Conversely, more extended learning will cause boredom in students. Fourthly is the rules of play. Rules are divided into four: hold, square, repulsion, and the final movement.[6]. This research developed a shotput learning method by changing the shape of the shot and modifying alternative media to replace quite expensive shots. The alternative modification media must represent the characteristics of the shot, cheap, widely available, or easy to obtain. From some criteria of modification of alternative media to replace the shots, the balloon filled with water and plastic ball filled with sand can be used to modify alternative media to replace bullets. In terms of shape, there is a similarity with the form of shots. The tools are also available straightforward to get to market areas or shops.

In this study, researchers chose the sideways style (Orthodox) under physical education material for grade VI in elementary school. The explanation of sideways force shot technique is as follows: Some basic techniques must be considered in the shotput, including how to hold a ball, how to put a shot on the shoulder, how to start, how to do a sideways force shot movement.

Also, the teacher develops the game's method in the shotput to exercise. Games on the necessary motion of shotput aimed at inviting students to put down shot while

playing, bearing in mind that not all students enjoy the shotput. Modified games for elementary school children in shotput are many different types, as follows: (1) Throwing shot free target, (2) Throwing shot Through the line, (3) Throwing shot to land in a square area, and (4) Throwing shot to hit a target.

2. RESEARCH METHODS

This study uses a Class Action Research using a collaborative research model. The research subjects were the elementary students in grade VI of SDN I Complex IKIP Makassar. The experiment was held in the odd semester of 2018-2019. The subjects were 23 students. The data collection techniques that the researchers planned in the CAR were as follows: (1) Tests, (2) Field notes, (3) Documentation, and (4) Observation. In accordance with this study's objectives, the data analysis techniques were reviewed to implement learning, learning methods, and learning intensity. The data collected were analyzed using descriptive percentage analysis techniques. This technique is used to determine the number of comparison scores of each variable in the learning process.

In the pre-cycle, students use the standard shot, and there were no games. Furthermore, in the first cycle, students use a balloon modification shot filled with water in each lesson. In the second cycle, students use modification shots of plastic balls filled with sand. The test is done three times before the student receives the treatment after the first cycle ends, and after the second cycle ends. Students' shotput skills are assessed based on two aspects, namely posture (leg position, hand position, and head position) and the results of the throw. This assessment is carried out on four kinds of throwing shot games, namely: (1) free target, (2) through the line, (3) land on square area, and (4) hit a target. The assessment results are divided into two categories: low score 60-74 and high (score 75-90).

Data analysis using descriptive methods and statistical analysis using SPSS software.

3. RESULTS AND DISCUSSION

3.1. Result

3.1.1. Descriptive Analysis

The assessment of learning achievement is divided into two categories, namely low and high, at all three stages (Table 1).

Table 1. Learning achievement on three-stage

Stage	Frequency		Effectivity (%)
	Low 60 – 74	High 75 - 90	
Pre-cycle	17	6	26.09
First Cycle	8	15	65.22
Second Cycle	3	20	86.96

Table 1 outlines the descriptive analysis of student shotput test results in the pre-cycle, first cycle, and second cycle stages. The table shows that before students receive treatment, the number of students who have low skills is more significant than high qualifications. But after the implementation of cycle one and cycle two, the number of students with high skills increased.

Pre-cycle data shows that six students have a high skill or 26.09%, and 17 students or 73.91% have low skill. There was an increasing number of student skills by the action of media modification. In the first cycle tool, by using a balloon filled with water, there was an increase of 15 high-skilled students, 65.32% and eight low-skilled students or 34.78%. Then followed up on the second cycle using plastic balls filled with sand media. There was a significant increase in students with high skill as many as 20 people or 86.95% and students who have a low skill as many as three people or 13.05%.

In Table 2, it appears that in all types of the shotput games that are applied, students have improved skills. The most significant improvement is seen in the hit a target game from pre-cycle to the first cycle.

Table 2. The average score of student skills using three types of shots

Stage	Treatment	Average Score
Pre-cycle	Conventional without games	57.28
First Cycle	Baloon filled water	73.15
Second Cycle	Ball filled water	76.63

Table 2 shows the increase in all students' average scores on the use of 3 types of shots in learning for two cycles. The most significant addition is seen from the pre-cycle to the first cycle, with a difference of 15.87. The increase from the first cycle to the second cycle was only 3.48.

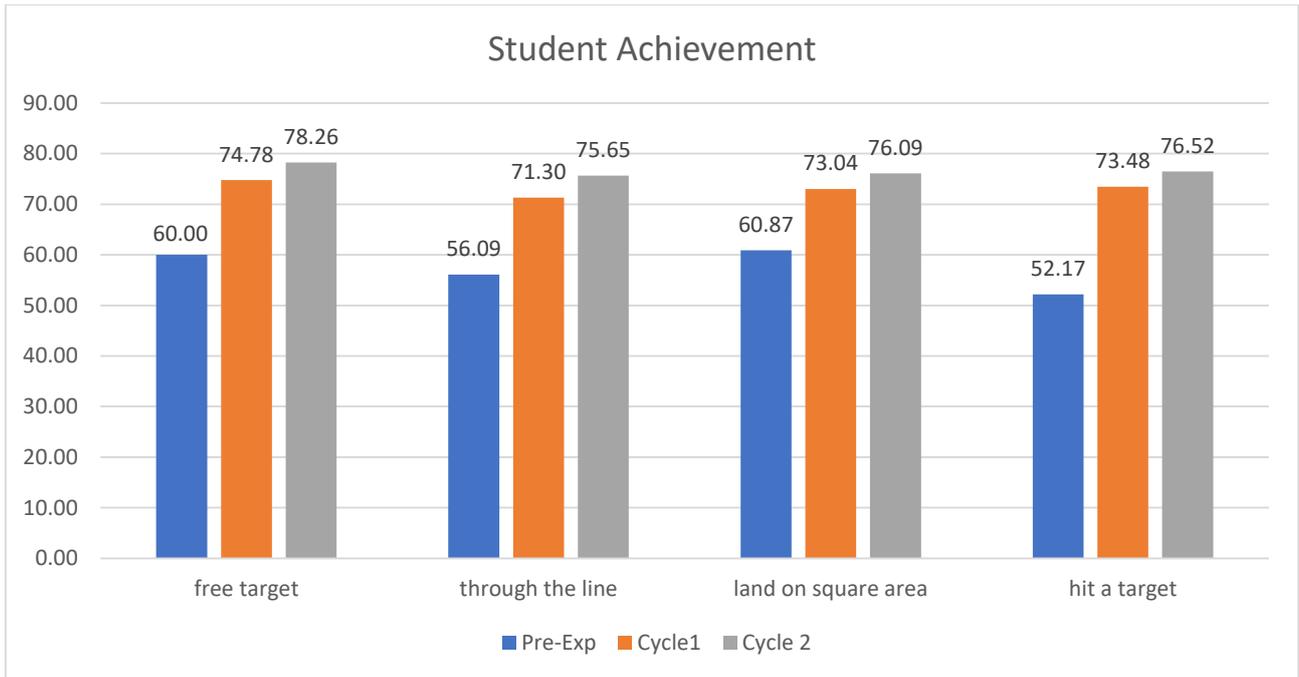


Figure 1 Student Shotgun Skill Data on Four Types of Games

3.1.2. Result of Statistical Analysis

Statistical analysis used three stages: paired sample, correlation, and the difference. Table 3, Table 4 and Table 5 describe the analysis.

In the paired samples test, it is seen that the significance value of the pre-cycle score and the first cycle is 0.000, which means that there are significant

differences. So from the results of the analysis, it can be concluded that students' shotput skills increased significantly after the first cycle. In the second difference, the study resulted from the first cycle scores and the second cycle, and the significance value is 0.008. It means that there are significant differences between the two cycles. This means that the students' shotput skills significantly improved from the first cycle to the second cycle.

Table 3. Paired Samples Statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre	57.2826	23	12.36089	2.57742
	Cycle1	73.1522	23	7.98498	1.66498
Pair 2	Cycle1	73.1522	23	7.98498	1.66498
	Cycle2	76.6304	23	4.43441	.92464

Table 4. Paired Samples Correlations

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pre & Cycle1	23	.632	.001
Pair 2	Cycle1 & Cycle2	23	.723	.000

Table 5. Paired samples test

Paired Samples Test									
		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre - Cycle1	-15.867	9.582	1.998	-20.0132	-11.72581	-7.942	22	.000
Pair 2	Cycle1 - Cycle2	-3.478	5.677	1.183	-5.93355	-1.02297	-2.938	22	.008

3.2. Discussion

Based on the preliminary test, the low score category with 60 - 74 about 17 students or 73% who have the low skill and the high score category of 75-90 about six students or 26% of students with high ability. The data above indicated that a student's shotput skill is still low. The low achievement was caused by the application one-way learning method. Most students didn't look attractive at learning because of the tedious process.

This model of action researchers chose the model developed by Kemmis and Mc. Taggart [7]. As for selecting the model because the actor model is simpler but includes a complete step. This model is also widely used by other researchers because it is a young and straightforward understanding. This model is considered suitable for researchers by emphasizing dealing with one problem when research is limited to improving learning outcomes with the modified model. The researcher's steps consist of the first stage, including the action, namely planning the early stage, Acting, Observation, Reflection. The action taken is to create a designed learning design based on a plan arranged, discussed between researchers and class teachers to be carried out in the first cycle.

The model proposed by Ebbut consists of three levels. At the first level, the initial idea is developed into the first action. The first action is to monitor the implementation of its insubje resultset under study. All the consequences are systematically recorded, including the success and failure that occurs. The monitoring notes are used as material for the revision of the second phase of the general plan. At this second level, the general idea of the revised results is made again. The action is carried out, monitoring the effect of the activity occurring on the subject under study, documenting the action's impact in detail and used as material to enter the third level. At this level, the same actions with the previous level are carried out. The researcher also documented the effects of actions, and then returns to the general purpose of action research to determine whether the problems that have been formulated can be solved [8].

The first cycle results obtained the effectivity of 65% or the learning target not yet reached. The modification of the tools is less varied, and students are less active. Besides that, teachers do not give appreciation to students who succeed in the modification. During the learning process, it is seen that students still do a lot of things that show a less energetic attitude in moving. There are always students who do basic techniques make mistakes like holding a bullet. Based on these data, the first cycle has not significantly improved learning outcomes according to the desired target. Weaknesses in the first cycle form the basis of development in the second cylinder.

Statistical analysis shows that there are differences in learning achievement between pre-cycle and first cycle. This result indicates that the game model contributes to increasing the success of the purchase. At the same time, the second analysis shows that there is no difference between the first cycle and the second cycle. It means that both models provide more effective results compared to conventional methods.

4. CONCLUSION

The research results indicated that the application of the modified media tools was an attempt to improve the put shot skill of students and the effectiveness of the learning process of Physical Education. The modification of physical education learning tools to increase the student shotput skill was effective. The learning target or effectivity of 80% is achieved in the second cycle. Based on the results, the researchers suggest teachers' physical education to be creative in responding to the lack of learning facilities and infrastructure in their schools.

REFERENCES

- [1] R. P. Pangrazi, V. P. Dauer, and R. P. Pangrazi, *Dynamic physical education for elementary school children*. Pearson/Benjamin Cummings, 2007.
- [2] C. R. Edginton, B. Kirkpatrick, R. Schupbach, C. Phillips, M.-K. Chin, and P. Chen, "A Dynamic Pedagogy of Physical Education Teacher

- Preparation: Linking Practice with Theory.,” *Asian J. Phys. Educ. Recreat.*, vol. 16, no. 2, 2010.
- [3] P. H. N. Choi and S. Y. Cheung, “Effects of an 8-week structured physical activity program on psychosocial behaviors of children with intellectual disabilities,” *Adapt. Phys. Act. Q.*, vol. 33, no. 1, pp. 1–14, 2016.
- [4] D. L. Siedentop, P. Hastie, and H. Van der Mars, *Complete guide to sport education*. Human Kinetics, 2019.
- [5] S. Thiagarajan, “Instructional development for training teachers of exceptional children: A sourcebook.,” 1974.
- [6] S. Mustafa Abdullah Ali, “The Effectiveness of Using Educational Technology-Supported Micro Teaching in the Cognitive and Motor Learning of Shot Putting Skills for Beginners,” *Assiut J. Sport Sci. Arts*, vol. 215, no. 2, pp. 454–471, 2015.
- [7] S. Kemmis, R. McTaggart, N. K. Denzin, and Y. S. Lincoln, “The Sage handbook of qualitative research.” Sage Thousand Oaks, CA, 2005.
- [8] D. EBBUT, “Educational Action Research: Some General Concerns and Specific Quibbles,” *Qual. Methods Study Educ.* Falmer Press. Brighton, 1984.