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## Effect Method of Exercise and Coordination of Free Throw Shooting Skills and Three Point of Student Extracurricular High School State 1 Ngadirojo

### Abstract

The purpose of this study was to improve basketball shooting skills using the set shoot and drill shoot training method based on the level of coordination among extracurricular students at High School (SMA) Negeri 1 Ngadirojo. This research is an experimental research. This research was conducted in 16 times face to face, consisting of pre-test, treatment, post-test. The subjects in this research experiment were X I extracurricular students at SMA Negeri 1 Ngadirojo, totaling 40 male students. Data collection techniques using the free throw and three point shooting test instrument. Data analysis uses two-way Anova variance analysis. The results showed that: (1) There was a significant effect between the set shoot training method and the drill shoot training method on the ability of free throw shooting and three point shooting. The set shoot training method is a better training method to improve the ability of free throw shooting whereas to improve the three point shooting ability a better method of using drill shoot on students (2) There is a significant influence between students who have high coordination and low coordination of ability free throw shooting and three point shooting . High coordination gives a better influence to improve shooting skills in students. (3) There is an interaction between the training methods and the coordination of the results of the shooting free throw and three point students.

**Keyword:** Training method, set shoot, drill shoot, basketball shooting.

## INTRODUCTION

The development of the world of education in the era of globalization has progressed very rapidly. The rapid progress of education is supported by the existence of the latest science and technology knowledge. Education followed by developments in science and technology is very fast to be learned and disseminated. But with the development of science and technology, many people are not physically fit or very low fitness. Evidenced by the results of research experts who conduct research on the level of physical fitness.

Research results revealed by Sulastrri (2015) physical fitness can improve one's performance. According to Cahyadi (2015) the level of physical fitness of students can be increased through extracurricular activities. Based on the above research results it can be concluded that physical fitness is very important to improve the quality of health for everyone.

Fitness and health are very important to be held in the world of education, as well as organizing sports and health education at all levels of education (Uygur, Goktepe, Emre Karabork & Kokukuz, 2010). Sports and health education at every level has been stated in the Education Law Number 20 Year 2003 The National Education System states that "Curriculum is a set of plans and arrangements regarding the objectives, content, and learning materials as well as the ways used as guidelines for organizing learning activities to achieve specific educational goals".

The curriculum in high school covers several aspects of education, one of them is physical education. Physical education in schools contains an element of learning through physical activities carried out to improve physical fitness, motor skills, knowledge and healthy life behaviors. Through physical education not only physical aspects are provided but there are also cognitive, affective and psychomotor aspects, as well as providing benefits for students in the form of physical fitness and health care. But the school also organizes extracurricular activities as a medium for developing students' abilities.

According to research conducted by Yanti, Adawiah, & Matnuh (2016), extracurricular activities are educational activities outside of school hours aimed at assisting student development, according to their needs, potential, talents, and interests through activities that are specifically arranged by students and capable and authoritative educators.

The school organizes extracurricular activities with various events such as sports and arts. Sport diselengg a rakan one basketball. Basketball is a sport that has several techniques, tactics and strategies that must be mastered by players in order to create the ability to play basketball properly.

The basic techniques in basketball include basic dribbling, passing and catching, and basic shooting into the basket (Hana & Zwierko, 2015). Basic skills include footwork, throwing and catching, dribbling, shooting, shooting from capturing, creating shots from the incline, scoring in the post (ring) , and rebounding balls (Wissel, 2012).

The basketball game involves physical aspects, including strength, speed, coordination, agility and endurance. Players must master these aspects in order to improve their basketball playing skills. One of them is basic motion shooting.

Shooting one technique for scoring points on a basketball game. Shooting requires muscle strength to throw the ball into the basket with the right accuracy. Shooting requires

flexibility and coordination to aim the ball at the target pitch according to the angle of the shot.

This activity comes from the hands, wrists, forearms, upper arms, chest, upper legs, lower legs, and even toes that need power (strength) to be able to do it properly and correctly. They manipulate the shoulders, elbows and wrists to produce the optimal ball speed, angle and angular velocity when releasing the ball (Hiroki & Mont, 2015).

Free throw and three point shooting techniques that greatly affect the acquisition of a basketball team's points. Three point accounts for 3 points, while free throw is only 1 point but can affect a team's victory. Permaianan basketball there are no term balanced (draw) (Karim & Johnny, 2015).

External and internal factors can influence the results of motion skills. Internal factors come from the individual himself. One of the external factors is the training method. The training method applied can affect the success or achievement of the training objectives. The right method can improve the results that are significant for the purpose of the exercise.

Coordination is one of the internal factors that need attention. Basketball games require coordination in all techniques. Coordination is the ability to process information into movements. Good coordination can make it easier for players to make good and harmonious movements (Tran & Silverberg, 2008).

Basketball extracurricular at SMA 1 Ngadirojo is a sport with the most interests. Last year they only passed the semi-finals at the Regent Cup tournament. Their match statistics last year showed that they often lost their miss through shots that were not on target. Free throws (free throw) they are only able to enter 30% in each of his games. While three points are 20%.

Based on observations made by researchers to extracurricular participants at SMA Negeri 1 Ngadirojo. Many students attend extracurricular activities from classes X and XI. There was a problem that the participants did. That is when the motion shooting, more accurately when shooting free throws (free throw) and three points are as follows: (1) students many still have trouble doing the shooting were true, (2) students who take extracurricular experience problems shooting into the target ring., (3) students who take basketball extracurricular in shooting are not strong enough to throw the ball into the ring (airball), (4) students do not do much shooting practice.

## **METHOD**

The method used in this study is a quasi-experimental study using pre-test post-test design. According to Sugiyono (2012) experimental research is the most complete quantitative research approach. Experimental research is defined as a research method used to look for the effect of certain treatments on others under controlled conditions. The data collection technique of this study used a test instrument.

## **Subjects**

Population is a generalization area that consists of objects / subjects that have certain qualities and characteristics determined by researchers to be studied and concluded. So the population is not only people, but also other natural objects. This research uses sample population technique. The population in this study were extracurricular students at SMA Negeri 1 Ngadirojo, 44 students, all of whom were research samples.

## Data analysis

Data analysis techniques in gunakan this research is the analysis of variance ANOVA two lanes at significance level  $\alpha = (0.05)$ . Before the data is analyzed with anava, the test includes: (1) normality test and (2) variance homogeneity test.

## FINDINGS

Description of research results are the results obtained from research in the form of data using a general description of each variable related to the study. Through this general description, it will be seen the initial and final conditions of each variable examined by processing data after the data has been successfully collected during the specified training period . Description of the results of the analysis and test results of basketball shooting conducted at SMA Negeri 1 Ngadirojo applied the set shoot training method and the drill shoot training method.

Table 1. Description of Shooting Results for Each Group based on the Use of the Training Method and Free Throw Coordination Method

Treatment	Coordination	Statistics	Pretest	Postest	Enhacement
Set Shoot	High	Total	21	42	21
		Average	4.2	8.4	4.2
		Standart Deviation	0.44	0.54	.83
	Low	Total	20	35	15
		Average	4	7	3
		Standart Deviation	0.70	1.41	1.87
Drill Shoot	High	Total	19	37	18
		Average	3.8	7,4	3,6
		Standart Deviation	.83	1.34	1.14
	Low	Total	18	38	20
		Average	3.60	7.60	4.00
		Standart Deviation	0.54	0.54	0.70

In table 1 for free throw shots the following data are obtained: (1) A1B1 group initial tests obtained an average of 4.2 after being treated with the set shoot training method obtained an average of 8.4 so that there was an increase in the A1B1 group of 4.2, (2) groups A1B2 initial test obtained an average of 4 after the treatment of the set shoot practice method on the final test obtained an average of 7, so there was an increase in the A1B2 group by 3, (3) A2B1 group in the initial test obtained an average of 3, 8 after being treated with drill shoot training method in the final test, it was obtained an average of 7, 4, so there was an increase in the A2B1 group of 3.6, and (4) for the A2B2 group in the initial test, it was obtained an average of 3.6 after being treated with drill shoot practice method on the final test an average of 7.6 was obtained, so there was an increase in the A2B1 group of 4.

In table 2 for the three-point shots the following data are obtained: (1) the A1B1 group initial tests obtained an average of 4 after being treated with the set shoot training method obtained an average of 7.2 so that there was an increase in the A1B1 group by 3.2, (2) the A1B2 group initial test obtained an average of 3.2 after the treatment of the set shoot practice method in the final test obtained an average of 7, so there was an increase in the A1B2 group of 3.8, (3) the A2B1 group on the test initial obtained an average of 3.2 after being treated with drill shoot practice method on the final test obtained an average of 8.2, so there was an increase in the A2B1 group of 4.4, and (4) for the A2B2 group on the initial test obtained an

average of 3.2 after being treated with drill shoot training methods in the final test obtained an average of 2.8, so there was an increase in the A2B1 group by 2.

Table 2. Description of Shooting Results Each group is based on the Use of the Three Point Coordination Method and Training Method

Treatment	Coordination	Statistics	Pretest	Posttest	Enhancement
Set Shoot	High	Total	20	36	16
		Average	4.00	7.20	3.20
		Elementary school	1,00	1.30	1.30
	Low	Total	16	35	19
		Average	3.20	7.00	3.80
		Elementary school	.83	1.58	.83
Drill Shoot	High	Total	19	41	22
		Average	3.80	8,20	4.40
		Elementary school	.83	.83	0.54
	Low	Total	16	30	14
		Average	3.20	6.00	2.80
		Elementary school	.83	1.58	1.64

## DISCUSSION

### Difference between Effect of Set Shoot Training Method and Drill Shoot Training Method on Shooting Results

Based on testing the first hypothesis there was a significant difference in effect between groups of students who got the set shoot training method and the drill shoot training method applied at Ngadirojo 1 Public High School. Students who were trained with the set shoot training method had better shooting results compared to students who were treated with the drill shoot training method for free throw shooting. As for the three-point shot shot drill practice method has an increase in shooting results better than students with the treatment of the set shoot practice method.

Both of these training methods, both the set shoot training method and the drill shoot training method, are each good for basketball shooting, but the results of the research conducted indicate that there are differences in basketball shooting results between students who use the shoot shoot training method and drill shoot method. The difference can be seen from the average results of increased shooting between students using the set shoot training method and the drill shoot training method.

Based on the description above it can be seen that the set shoot training method is better than the drill shoot training method for the training method for free throw shooting. As for the three point shooting practice method, the drill shoot training method is better than the set shoot training method. It can be concluded that both methods are good for improving basketball shooting capability both for free throw shots and three point shots.

### Difference between Influence between High and Low Coordination on Basketball Shooting Results

Coordination has an important role in the results of basketball shooting. The better the level of coordination, the better the shooting ability. The advantage of students who have good coordination is that they can achieve expertise in mastering perfect skills and can quickly overcome motion problems during unexpected exercises. Therefore, without having

good coordination, students will have difficulty doing the techniques in harmony and harmony.

Each student has a different level of coordination, and that will affect the results of shooting. The results showed high coordination better results compared with low coordination, but if analyzed in each group that low coordination showed good results when treated with drill shoot training methods for free throw shots. Likewise for three-point shots showed that students with low coordination showed good improvement with the set shoot practice method. So even though students have low coordination, the results of this research will still get a solution so that all students who have a high or low level of coordination can achieve.

### **Interaction between Set Shoot Training Method and Drill Shoot Training Method as well as High Coordinate and Low Coordinate on Shooting Results**

Based on the results that have been stated in the results of the study above that of meaningful interactions between the training methods of shooting results in extracurricular students in SMA Negeri 1 Ngadirojo. From the table that is presented in the form of interaction, it appears that the main factors of research in the form of two factors show significant interactions. The results of this study are interactions that mean that each group has a different influence on each group that is paired.

Based on the results of research for shooting free throw obtained ranking sequence as follows: (1) students who are trained using the set shoot practice method show good results, (2) students who have high coordination are trained with the set shoot practice method, (3) students who are have high coordination trained with drill shoot training methods, and (4) students who have low coordination with drill shoot training methods. As for the three-point shooting, the rank order is obtained as follows: (1) students who are trained using the high coordination drill shoot practice method show good results, (2) students who have low coordination are trained with the set shoot practice method, (3) students who are have high coordination trained with the set shoot training method, and (4) students who have low coordination with the drill shoot practice method.

The effectiveness applied to improve the shooting results is influenced by the low level of student coordination. Based on the discussion above for mengoptima l kan technique of shooting free throw, if students have a lower co-ordination, the student is more suitable trained in methods of exercise drill shoot and students have high coordination more suited to the workout method n set shoot. While the technique of shooting three point students have poor coordination, the student is more suitable trained with training methods set shoot and students have high coordination more suited to the workout method n drill shoot .

Reference so that the product can grow for the better. In its implications, the product can improve the basic futsal skills at the high school level. It is supported in the process of assessing effectiveness through a series of t-tests. The result of the t-test is got the mean value at pre-test is 76.77 with meeting 1 is 75.74, at meeting 1 is 75.88 with meeting 2 is 74.65, at meeting 2 is 74.65 with meeting 3 is 72.82, at meeting 3 is 72.82 with the 4 / post-test meeting is 71.32, and at the pre-test is 76.77 with the 4 / post-test meeting is 72.82. This shows that there is an increase in each meeting. So it can be concluded that the basic skills training model for attack futsal play if done continuously will experience an increase in basic skills to attack futsal so effective to use.

## CONCLUSIONS

Based on the results of research and the results of data analysis that has been done, the following conclusions are obtained: There is a significant effect between the set shoot training method and the drill shoot training method. The set shoot training method is a better training method to improve the free throw shooting capability while to improve the three point shooting ability for a better method using a drill shoot for students participating in extracurricular activities at SMA Negeri 1 Ngadirojo There is a significant influence between students who have high coordination and low coordination. High coordination gives a better influence to improve shooting skills in extracurricular students participating in SMA Negeri 1 Ngadirojo

There was an interaction between the training methods and the coordination of the shooting results of the extracurricular participants of SMA Negeri 1 Ngadirojo. The result of training with shoot set and high coordination has better interaction for free throw shots, whereas for three point shots the drill shoot and high coordination exercise is better than the others.

## REFERENCES

- Cahyadi, A. (2015). Tingkat kebugaran jasmani siswa ekstrakurikuler bola voli sekolah menengah atas negeri 1 Rasau Jaya. *Jurnal Pendidikan Olahraga*, 4 (1), 34-41.
- Hana, S., & Zwierko, T. (2015). Gaze behaviour in basketball shooting: Preliminary investigations. *TRENDS in Sport Sciences*, 2 (22), 89-94.
- Hiroki, O., & Mont, H. (2015). Kinematics of arm joint motions in basketball shooting. *Procedia Engineering*, 112,443-448.
- Karim, C., & Johnny, P. (2015). Aerobic and Anaerobic terms used in exercise physiology: A critical terminology reflection. *Sports Medicine*, 1(9), 257-269.
- Sugiyono, (2012). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.
- Sulastri, (2015). Pengaruh kebugaran jasmani dan prestasi belajar pendidikan jasmani terhadap perilaku sosial siswa. *Jurnal Ilmiah Guru COPE*. 4(1), 23-31.
- Tran, C. M., & Silverberg, L, M. (2008). Optimal release conditions for the free throw in men's basketball. *Journal of Sport Sciences*, 26(11), 1147-1157.
- Undang-Undang Republik Indonesia. (2003). *Sistem Pendidikan Nasional*. Pasal 1. No 20.
- Uygur, M., Goktepe, A., Emre A.K., Karabork, H., & Kokukuz, F. (2010). The Effect of Fatigue on the Kinematics of Free Throw Shooting in Basketball. *Journal of Human Kinetics*, 24 (2), 51-56.
- Wissel, H. (2012). *Basketball: Steps to Success* (3rd ed). Champaign: Human Kinetics.
- Yanti, N., Adawiah, A., & Matnuh, H. (2016). Pelaksanaan kegiatan ekstrakurikuler dalam rangka pengembangan nilai-nilai karakter siswa untuk menjadi warga negara yang baik di sma kopri banjarmasin. *Jurnal Pendidikan Kewarganegaraan*, 6 (11), 964-972.