THE EFFECTIVENESS OF VOLLEYBALL SMASH TRAINING MODEL ON IMROVING SMASH CAPABILITIES OF VOLLEYBALL PLAYERS

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Abstract

Smash in a volleyball game holds very important role in the achievement of volleyball goals. Therefore, the aim of volleyball games are to get the score with the most effective way. So that, a good smashing technique is needed by every volleyball player. The effort to improve smashing skill is done by using the method of volleyball smashing training. This model combines the components of smashing techniques and physical strength as the support for the smashing technique, which used the method of drill and games. The purpose of this research is to examine the effectiveness of volleyball smash training model. This research used quantitative approach. This research type was an experiment with randomized control group pre-test and post-test design. The population of this research was every volleyball player in every senior high school in Jakarta. The sample of this research was 60 players with 30 players in the experimental group and 30 players in control group. The instrument used in collecting the data was the test of volleyball smashing accuracy. The technique in analyzing the data was t-Test. The result of this research showed that volleyball smash training model were able to improve volleyball-smashing skill with the result of t-calculation 6,924, t-table 2,045. Therefore, it could be concluded that volleyball smash training model were effective to improve smash capabilities of volleyball players.

Keywords: Training Model, Volleyball Smash, Effectivity, Drill Approach.

INTRODUCTION

Volleyball has become a sport that is very popular around the world. In Indonesia, volleyball has become a favorite sport in various circles. It becomes a favorite sport because the game is relatively light, the technique is simple, the rules are not complicated and the game is very interesting to do.

One of the government's efforts in boosting or developing the sports coaching order in Indonesia as the basis for coaching futures, is to make the community to do the sports. On the other hand, to support this effort, government also establish various sports coaching centers, which is suitable with their age circles. Therefore, from these places born many athletes with many achievements. This matter is suitable with the third constitution on year 2005 about the national sports system subsection 27 verse 5 that the coaching and the development achievement sports is carried out by involving potential young athletes from the process of monitoring, scouting and talent development as regeneration process. One of that support the content of the constitution is the abundance of athlete coaching from junior to senior volleyball championships held on various levels. This thing triggers the appearance of numerous athletes from volleyball club and various levels. The other fun reason is that this sport can be played and enjoyed by different ages and levels of ability and can also be played in any field like grass, wood, sand, or artificial floor surfaces, either inside or outside the building.

The concept of research and development is an interesting research. Development-based research is a kind of research, which aim to solve practical issues and a kind of research with product-orientation. Therefore, according to Soenyoto (2013), this research can solve practical problems,

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based on the needs and reality and the results of the research is a product that can be hardware or software. On the other hand, Khomsin (2008) stated that research is an activity to search, record, formulate, and analyze until the report.

Volleyball coaching manual stated that the basic concept of smash is divided into four stages, namely prefix, repulsion, when flying in the air, beatings and landings. The technique of starting the prefix begins with setting the prefix distance. Next, step or run towards the ball with regular pace and match the ball. Along with the third step (final step) both arms move quickly with straight elbow, then swing backwards to take momentum. That final step determines the position of the repulsion, which is in a reach of hand. According to Nenden (2012), smash is the main blow of attack in volleyball. To be a good smasher needs practice, a smasher must jump high, be good at hitting the ball while flying in the air and also must be able to reach the ball well.

The usual step followed by a long right footstep. Then the player must stand approximately 45 degrees with a distance of 3-4 meters from the back of the net. Then the players should move their left foot forward with their left leg placed next to your right leg. Bent low. They should move their arms at the back of their body. They should take repulsion while swinging their arm forward. At the highest jumping point, the player should grab and hit the ball as high as possible immediately. The players also need to keep their balance so that they not hit the net. While they are landing, they should rest on both legs and then back to normal stance.

In volleyball, smash is one form of attacking blow technique. To achieve successful attack, while doing a smash, the players should give some smash variation. Viera (2000) stated hat there are various smashes in the game of volleyball according to the characteristics between short smash (quick), medium smash (semi) and long smash (open). In addition, Martens (2012) said that Training to improve the volleyball smash technique is always through the smash technique training phases, namely funmental stage, practice stage, and automatic stage. Mental stage is an exercise that makes the players' brains look for relationships wit previous activities that have been learned, look for easy movement patterns, and start building new neural connections. Practice stage is an exercise to improve the quality of the exercises to improve the technique that has a weakness in the fundamental stages. Automatic stages are the stages of motion exercises that are adjusted to match conditions, where the player will do a good and correct smash. According to Bompa (2009), The principles of practice include: active principles and practice seriousness, the principle of overall development, the principle of specialization, the principle of individualization, the principle of exercise variation, the model principle in the exercise process, the principle of overload or the addition of training load.

The success of a team victory in a volleyball game is always determined by success in doing smash to generate points compared with other techniques. This is in line with what Beautelstahl (2005) discloses, that smash is an essential skill, the easiest way to win a number.

METHOD OF THE RESEARCH

Approach and Type of Research
The approach of this research is quantitative where the data obtained is data in the form of numbers. Type of research used is experiment with volleyball smash model. The design of this study was randomized control group pre-test post-test.

Population and Sample Research
The population in this study is all players of volleyball extracurricular. The sample of this research was five schools, which consist of 12 players each. Therefore, the sample size is 30 players in experimental group and 30 players in control group with conventional exercise treatments.

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Research Instruments

The research instrument used was volleyball smash test which was adopted from Nurhasan (2012). This test is used to measure the volleyball smash skills. The technique used is the mean difference test between groups using t-test. To facilitate the calculation, researchers use SPSS 16.0 for Windows.

RESULT

Data Description

The data descriptions display the pre-test and post-test result data from the experimental and control group, as follows:

Table 1. Description of Pre-test and Post-Test Data of Volleyball Smash Control Group

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
PreTest	30	6.00	9.00	7.4000	.77013	.593
PostTest	30	7.00	10.00	8.3000	.91539	.838
Valid N (listwise)	30					

From the table shown above, it could be concluded that the number of samples from control group was 30 volleyball players. The average pre-test for volleyball smash was 7.4. Meanwhile the post-test average for the control group was 8.3. Pre-test data above shows us the standard deviation is 0.77013 with a variant of 0.593. On the other side, Post-test data above shows us the standard deviation is 0.91539 with a variant of 0.838. The maximum value of pre-test data is 9 and the minimum value is 6. The maximum value of post-test data is 10 and the minimum value is 7.

Table 2. Description of Pre-test and Post-Test Data of Volleyball Smash Experimental Group.

	N	Minimum	Maximum	Mean	Std. Deviation	Variances
Pre-test	30	5.00	8.00	7.4333	.81720	.668
Post-test	30	8.00	12.00	9.8333	.83391	.695
Valid N (Listwise)	30					

From the table shown above, it could be concluded that the number of samples from this experimental group was 30 volleyball players. The average pre-test for volleyball smash was 7.4333. Meanwhile the post-test average for the experimental group was 9.8333. Pre-test data above shows us the standard deviation is 0. 81720 with a variant of 0. 668. On the other side, Post-test data above shows us the standard deviation is 0. 83391 with a variant of 0. 695. The maximum value of pre-test data is 8 and the minimum value is 5. The maximum value of post-test data is 12 and the minimum value is 8.

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Test of Effectiveness

The mean difference test results in the control group were as follows:

Table 3. Test of Different Meaning of Volleyball Smash Ability of Control Group

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig.(2-tailed)
Pair 1	Cont PostTest – Cont PreTest	.90000	.71197	.12999	.63415	1.16585	6.924	29	.000

By comparing the value of t_{count} and t_{table} it can be concluded that H_o is rejected and H_a accepted because the value of $t_{count} = 11.606 > t_{table} = 2.045$. In other words, there is a significant increase of conventional volleyball smash modeling on the smash ability of a volleyball player.

Meanwhile, the results of the average difference test in the experimental group were as follows:

Table 4. Test of Different Meaning of Volleyball Smash Ability of Experimental Group

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	Df	Sig. (2-tailed)
Pair 1	Exp PostTest – Exp PreTest	2.40000	1.13259	.20678	1.97708	2.82292	11.606	29	.000

By comparing the value of t_{count} and t_{table} it can be concluded that H_o is rejected and H_a accepted because the value of $t_{count} = 6.924 > t_{table} = 2.045$. In other words, there is a significant increase of conventional volleyball smash modeling on the smash ability of a volleyball player.

Then, the average difference test result is as follows:

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Table 5. Results of Paired Samples t-Test Experimental Group and Control Group

Paired Samples Test									
	Paired Differences								
				95% Confidence Interval of the Difference					
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)	
Pair 1 Different Experiment – Different Control	1.50000	1.13715	.20761	1.07538	1.92462	7.225	29	.000	

By comparing the value of t_{count} and t_{table} it can be concluded that H_o is rejected and H_a accepted because the value of $t_{count} = 7,225 > t_{table} = 2,045$. In other words, there is a significant difference from the development of the volleyball-smashing model and the conventional smash practice on improving the smash ability of the volleyball player. Therefore, it can be concluded that the volleyball smash practice model is more effective for improving volleyball player shooting ability compared to conventional smash practice.

RESULT

Based on the results of the analysis, it can be concluded material model of volleyball smash practice effectively improve the ability of smash of volleyball players. Training by collaborating on physical and engineering exercises provides physical enhancement to support smash and offset by the use of good and correct techniques. The excercise with the collaboration of physical and technical trainings provide physical enhancement to support smash and offset by the use of good and correct techniques. According to Gordon (2009), Skill collaboration with skill support aspects is an effective and efficient way to improve those skills. Those skills are volleyball-smashing technique combined with volleyball smash biomotoric ability as the supporting aspects.

In addition, Cooper (2004) stated that the associative stage is the stage of completion of the smah movement pattern from the cognitive stage which is characterized by an increasingly effective and efficient, and motion errors while doing smash is decreasing. The success of a team victory in a volleyball game is always determined by success in doing smash to generate points compared with other techniques. This is in line with what Beautelstahl (2005) discloses, that smash is an essential skill, the easiest way to win a number.

Based on these explanations it is very clear that the volleyball smash training model can provide increased smash ability for volleyball players. The smash training model is also more effective in improving the smash ability of a volleyball player than a conventional exercise.

CONCLUSION

After data analysis and discussion of research results, it can be concluded that the volleyball smash practice model effectively improves the smash ability of the volleyball player. The volleyball smash practice model is very effective in improving the volleyball smash ability compared to conventional exercise models.

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