

THE DEVELOPMENT OF BADMINTON SMASH TRAINING MODEL

Asrori Yudha Prawira^{1,2}, Moch. Asmawi², Firmansyah Dlis², Abd. Halim⁵

¹ *Fakultas Keguruan dan Ilmu Pendidikan, Universitas Bhayangkara Jakarta Raya*

² *Pendidikan Olahraga Pascasarjana, Universitas Negeri Jakarta*

³ *Fakultas Keguruan dan Ilmu Pendidikan, Universitas Esa Unggul*

ABSTRACT

The development of science and technology is an important thing in increasing resources, especially in the field of sports. The use of proper training model can help coach in conveying the training material, including badminton smash. This study aimed to produce a badminton smash training model for beginner athletes. This study used research and development methods (R&D) of Borg and Gall. The subjects of this study were 30 beginner athletes in PB. Jaya Raya Jakarta, with purposive sampling technique. Based on the results of the pretest and posttest, it obtained significant results in improving smash skills in badminton. Therefore, it can be concluded that badminton smash training model for beginner athletes was effective and can improve the results of badminton smash skills.

Keywords: training, smash, athletes, badminton, development

I. INTRODUCTION

Badminton is a sport coaching. Badminton is popular sport in Indonesia for children to adults. This can be seen in every place, people play badminton everywhere both indoors and in open field (Hasibuan, Dlis, & Pelana, 2020). Various types of strokes that must be mastered by badminton athletes include serve, underhand, lob, dropshot, smash, netting, and drive (Zutshi, 2019).

Badminton requires physical condition in addition to technique and strategy mastery. Physical condition is a very vital part in improving athlete's achievement. Firdaus and Purnama (2018) said badminton is in dire need of endurance, speed, agility, and power; where the explosive power is needed to make a smash hit. Explosive power is the most important component of badminton to support the success of scoring points. (Seyfarth, Friedrichs & Wank, 2019).

Some of these basic techniques are very viral to score achievements in badminton. Digy, Dnhuvahog and Thomas (2020) said the basic technique that can score points is smash. Smash is the most important skill in badminton. Smash plays an important role in scoring points. In order to win the badminton game, you must score as many points as possible. Smash in badminton is one of the most important skills to become a master in badminton (Sutarjo, 2018).

Among things that drain energy in badminton is smash. Many novice athletes complain that it is difficult for them to hit smash well even though they have put all their energy into hitting a smash. (Maryam, 2020). However, the success of the smash can improve the mood and excitement of the athlete-self and his/ her teammates, so the game will be more excited (Zhang, Li, & Jiang, 2013).

The problems that currently exist in badminton is that the training that has been carried out so far was felt to be less than optimal. This can be seen from the interaction and training process centered on the coach as the only source of information, while athletes tended to be passive and only received knowledge from the coach. The results of interviews with badminton coaches showed that lack of literature on smash training models owned by the coach was one of the obstacles that so far had not had any solution. As a result, variations in the form of badminton smash training were minimal and monotonous. This was confirmed by one of the coaches of the Jaya Raya Ragunan club. Due to the lack of variety and program of trainings, it showed that the smash training he did for every practice was

the same; the only difference was that the target and the length of the training in hitting the shuttlecock, depending on the number of badminton athletes present on that day.

The fact showed that from 5 of novice athletes, only one or two athletes who correctly hit smash. It meant that the achievement of success in doing smash movement was less than optimal, so in percentage viewed from the number of athletes was 5%, only 3% of the athletes can do the smash and 2% of athletes can't hit smash well. The importance of position of the smash will produce a smash hit that dives sharply and powerful so that it can cause difficulty for the opponent to receive and return the blow. Therefore, the smash must be hard and directed to get points from the smash.

Based on these facts and problems, the model of smash training that was often carried out in training was less varied and not programmed properly. The athletes tended to be passive and unmotivated in practicing badminton smash. Therefore, the purpose of this research was to create a badminton smash training model and test its effectiveness to improve the athlete's ability in practicing and also his/ her achievement.

II. RESEARCH METHOD

The purposes of this study were: (1) to develop a product and (2) to test the effectiveness of the product in achieving its objectives. The method used in this study was Borg and Gall's research and development method (1983). There were 9 stages development procedure, including: (1) research and data collection, (2) planning, (3) initial product development, (4) initial field trial, (5) revising the results trial, (6) main field trial, (7) refinement of field test products, (8) field implementation tests, and (9) finalizing product refinements (Aka, 2019). This study was done from February 2021 until April 2021. The samples of this study were 30 badminton novice athletes aged 12-14 years old. The samples were taken by using purposive sampling technique. The data analysis was qualitative with percentage of Z test (average value), normality test and efficacy test.

III. RESULTS AND DISCUSSIONS

Results

Based on the results of the feasibility test of the smash training model in badminton showed the pretest score was 596 with percentage of 49.67% of the maximum score of 1200, and the posttest of 1036 with percentage of 86.33%. And the difference between pretest and posttest was 440 with percentage of 36.67%. The results of the study pointed that the average value of the effectiveness of the badminton smash training model for novice athletes aged 12-14 years old was shown in the following table:

Table 1 Average Value

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Test	19.86	30	9.272	1.382
	Post_Test	34.53	30	9.129	1.361

The output result using SPSS 25 was the average value of the badminton smash training before being given the new training model was 19.86 and after being treated with the new training model was 34.53. This meant that there was an increase in the average value of the smash. The next step was to calculate the normality test between the pre test and the post test which is presented in the table 2 below:

Table 2. Normality Test

	Smash	Kolmogorov-Smirnov ^a		
		Statistic	df	Sig.
Result	Pre-test	.192	30	.200
	Post-test	.244	30	.200
a. Lilliefors Significance Correction				

Based on the results of the output from the table above, the normality test for smash training before was 0.192 and after being given the new training model it was 0.244 with p-value of $0.200 > 0.05$. Thus, the conclusion result was normal distribution. Next, the calculation of the significance of the difference between the pre test and the post test which was presented in table 3 below:

Table 3 The Difference Significant

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre_Test - Post_Test	14.667	12.008	1.790	42.941	35.726	21.974	29	.000

In the significance test of the difference with SPSS 25, the results of t-count = 21.97, df = 29, and p-value = 0.000 < 0.05, which meant that there was a significant difference in smash training before and after being given the new badminton smash training model for novice athletes. So, it could be said that the new badminton smash training model for beginners aged 12-14 years that has been developed can effectively improve badminton smash skills for novice athletes.

IV. DISCUSSION

In line with the hypothesis, this study succeeded in showing that the results of the effectiveness of the developed model were effective. Based on the comparison between the pretest and posttest values given to the novice athletes aged 13-15 years, the results were t-count = 21.97, df = 29, and p-value = 0.000 < 0.05, which meant there was a significant difference in result of the smash training before and after given the new model. In other words, the new smash training model has been proven to improve athletes' performance when practicing badminton.

In the world of sports, especially badminton, there are lots of training models that can be used to improve athletes' skills. The smash training model can help the coach to make adjustments to athletes' movements who are just practicing with badminton smashes. A smash hit is doing a smash by swinging the racket, hitting the racket leaf completely, perpendicular between the racket leaf and the arrival of the shuttlecock so the blow that is carried out is in full power, especially wrist skills and body balance to maintain a standing position (Gazali and Cendra, 2019). However, it is uncommon for this training model to be used by athletes and coaches for talent screening and to support the process of coaching and developing athletes. As the results of research by Wiratama and Karyono who said that to be a good and accomplished badminton player, it is required to master the basic techniques of badminton through the use of training models used to train smash techniques. (Wiratama & Karyono, 2017)

Furthermore, this study also proved that the smash training model in badminton could help coaches in conveying badminton smash training material for beginner players aged 12-14 years and improved their smash skills. This training model was carried out from easy to difficult things to do, thereby it increased activeness and enthusiasm in badminton smash training.

V. CONCLUSION

The results of the study confirmed that the new smash training model in badminton could be used for novice athletes aged 12-14 years. Therefore, it can be used by coaches and athletes to be incorporated into training programs.

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