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Developing Model of Shooting Exercise in Basketball

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ABSTRACT

The aims of this current research are 1) to develop a shooting training model in basketball and 2) to know the effectiveness of shooting training model in basketball. There are 40 male basketball athletes. The subject of this research is students of sport department of IKIP Mataram. There are two instruments used, i.e. test and a questionnaire that was already validated by the experts. The data has been analyzed quantitatively by using t-test formula and Likert scale. The result of data analysis show that the value of t-test is higher than t-tabel (t-test 1.927 > t-table 1.729). While, the result of questionnaire show that the mean score of data analysis from instructional media experts are 87,17% and data analysis from Coach validation of the basketball shooting training model are 86,17%. In addition, to support the analysis, data will be used SPSS 22 program. The result of current research shows that 1) there is skill improvement in shooting training model; and 2) there is the effect of shooting training model in basketball skill.

Keywords: Developing, Model, Exercise, shooting.

INTRODUCTION:

In basketball, the components of physical and psychological conditions contribute positively as described by experts “Basketball players must be able to run, jump, accelerate, decelerate, and change direction. A common thread to the success of these physical tasks is to be efficient from the ground up; in other words, you must apply optimal levels of force into the floor in the shortest time. Sir Isaac Newton’s third law of motion states that for every action there is an equal and opposite reaction” (Cole & Panariello, 2016). While, (Tangkudung & Puspitorini, 2012) claim that the condition of a good physical condition will affect the psychological aspects in the form of increased work motivation, morale, confidence, and accuracy.

Basketball games are closely related to the physical condition of athletes, because basketball players are required to be able to run, jump, accelerate, decelerate, and change direction, to achieve maximum performance must be supported by the scientific method. (Kusnanik, 2016) says that physical conditions is very important in sport. The success or failure of a team comes from the planning process. Therefore, in the process of planning an exercise in improving the basic techniques, specifically shooting, for basketball players, one needs to design exercises that are in accordance with the position and needs of the players themselves. Additionally it is imperative that while compiling and planning a training program, a trainer must master the concept and science of coaching methodology, which is the basis for preparation and planning of training programs, so that the player or the team remains at the top. The role of coach while drawing the concept of a program must be ably supported by knowledge and understanding of concepts and sports coaching methodologies. The coach of a basketball player should be able to choose the right methods.

In fact, the shooting training models in basketball games is quite urgent in West Nusa Tenggara. There needs to be real action regarding the shooting practice model in basketball games. Therefore, the researcher is interested to solve the problem in basketball game. This research will develop the shooting training model and the result of this study will be used as a guide in managing exercise programs.

METHODOLOGY:

The appropriate research design was Educational Research and Development (R&D) proposed by (Borg & Gall, 2005). The R&D required the researchers to conduct some steps including, 1) Analysis of the Learning Environment; 2) Analysis of student characteristics; 3) Analysis of tasking; 4) writing test; 5) Determining of Learning Strategy; 6) Learning Program Production; 7) Formative Evaluation; and 8) Reflection of Learning Program.
The participants of this research included 40 male basketball players. The data obtained from the test will be analyzed quantitatively using 1) a descriptive analysis containing mean, mode, median, and standard deviation; and 2) inferential analysis, which involves t-test. In addition, to support the analysis, data will be used SPSS 22 program.

FINDINGS AND DISCUSSION:

The findings of this current research were obtained from two instruments those are test and questionnaire. The following are the details of the raw data obtained from the instruments of this current research, analyzed by using t-test formula and Likert scale.

Tabulating of Expert Validation:

Basketball Training Expert:

The result of expert validation is 88,83% and obtained some suggestions from the basketball trainer they are;

1) Shooting exercises in basketball games combine physical exercise and basic shooting techniques. In determining the same, the initial load must be gradual, especially for the load that uses a vest, and the number of groups must be more or more groups so that all players or athletes get equal and more opportunities to carry out the program determined by the researcher
2) schemes that have been compiled should have contrasting differences, so that when the athlete carries out the athlete does not feel hesitant or incorrectly carry out instructions from the scheme or image determined by the researcher
3) Providing opportunities for athletes to conduct trials on smaller fields. By using half a field, the player will get used and the frequency of shooting will be even more effective and accuracy in shooting will be better

Instructional media experts:

The design of the shooting training model in basketball games was also developed by including video media as a Visual learning media. It shows the results of the expert validation is 86.43%.

Basketball Coach Expert:

The results of the basketball coach validation on the shooting training model, the ratio effect obtained from the basketball coach validation data is 87.00%.

The result test:

The following table below show the result of students' test those are

Experimental:

Table 1: Test of Homogeneity of Variances

testor1exp			
Levine Statistic	df1	df2	Sig.
5.025	4	8	.025

Table 2: ANOVA Analysis

testor1exp	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.350	11	.395	18.887	.000
Within Groups	.167	8	.021		
Total	**4.517**	**19**			

Table 3: 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	testor1exp - testor2exp	-.0550	.1276	.0285	-.1147	.0047	-1.927	19	.069

Control:

Table 4: ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.396	1	12.396	204.739	.000[a]
	Residual	1.090	18	.061		
	Total	**13.486**	**19**			

a. Predictors: (Constant), testor2
b. Dependent Variable: testor1

Table 5: 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	testor1 - testor2	.0250	.2653	.0593	-.0992	.1492	.421	19	.678

Modeling Skill Shooting Model:
Validation of basketball training experts, instructional media experts, and basketball coaches based on the table below:

Tabel 6: Results of the feasibility analysis model

No	Dimension	Indicator	Min. Score	Max. Score	Score total	Percentage
1	Material shooting training model in basketball	Purpose of shooting training	15	60	52	86,67
		Quality of shooting training	30	120	104	86,67
		Variation of shooting training	45	180	164	91,11
2	Method of shooting training model in basketball	Systematics of shooting training model	24	96	86	89,58
		Effectiveness of shooting training model	21	84	79	94,05
		Attraction of shooting training model	15	60	50	83,33
					total	**88,57**

The above table described that the mean score of data analysis from the three experts are 88,87%. It means that the model of shooting training is appropriate to use.

Table 7: Instructional media expert

No	Dimension	Indicator	Min. Score	Max. Score	Score total	Percentage
1	Technical quality from	Picture quality of a basketball shooting exercise model	15	60	47	78,33

No	Dimension	Indicator	Min. Score	Max. Score	Score total	Percentage
	the video basketball shooting exercise model	Sound quality of a basketball shooting exercise model	15	60	54	90,00
		Music quality video basketball shooting practice model	15	60	56	93,33
2	Video function of basketball shooting exercise model	The psychological function of the basketball shooting training model is viewed from the eternal angle.	30	120	112	93,33
		The psychological function of the video basketball training model is viewed from an affective angle	15	60	55	91,67
		The psychological function of the basketball shooting training model is viewed from a cognitive angle	15	60	51	85,00
		The psychological function of the basketball shooting training model is viewed from a Imagination angle	15	60	53	88,33
		The psychological function of the basketball shooting training model is viewed from a Motivation angle	15	60	49	81,67
		The sociocultural model training video shooting basketball	15	60	48	80,00
		total	**105**	**420**	**579**	**87,17**

The above table described the mean score of data analysis from the instructional media experts are 87,17%. It means that the model of shooting training is appropriate to use.

Table 8: Validation results for basketball coaches taken based on national qualifications

No	Dimension	Indicator	Min. Score	Max. Score	Score total	Percentage
1	Material shooting training model in basketball	Purpose of shooting training	27	108	100	92,59
		Quality of shooting training	27	108	97	89,81
		Variation of shooting training	30	120	104	86,67
2	Method of shooting training model in basketball	Systematics of shooting training model	21	84	72	85,71
		Effectiveness of shooting training model	21	84	80	95,24
		Attraction of shooting training model	24	96	80	83,33
		Mean	**150**	**600**	**533**	**88,89**

The above table described that the mean score of data analysis from Coach validation of the basketball shooting training model are 86,17%. It mean that the model of shooting training is appropriate to use.

Shooting is a basic technique in basketball games with the aim of inserting the ball into the opponent's basket to get a number or point. (Ahmadi, 2007) points that shooting is an attempt to put the ball into the opponent's basket. While, according to (Wessel, 2000) shooting is a very important skill in basketball games. Basic techniques like dribbling, defending, and rebounding can lead you to get a great chance of making a score, but still you have to shoot. Shooting in basketball games can be considered as the most important ability between other basic engineering abilities. Shooting is an important basic technique in basketball games, because shooting is the only way for basketball players to get numbers or points.

In the process of developing shooting on basketball games, many parties or experts are involved to design the right method, so that the aim of this shooting technique produces maximum results. The parties involved included experts in basketball training and learning which were then discussed in detail through the stages**.**

CONCLUSION:

Shooting training models are very effective and suitable for use. Therefore, this shooting training model can be considered to be the main model for organizing shooting exercises at clubs in West Nusa Tenggara in general and Mataram in particular. Furthermore, this model has implications for improving the achievements of basketball games at the regional, national and international levels

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