

## EFFECTIVENESS OF SHOOTING BASKETBALL MODEL BASED OF DRILL AT FACULTY OF SPORT SCIENCE OF STATE UNIVERSITY OF MEDAN

Ibrahim<sup>1</sup>, Moch. Asmawi<sup>2</sup>, Iman Sulaiman<sup>3</sup>

State Univesity of Medan

State University of Jakarta

[sembiring.76cece@gmail.com](mailto:sembiring.76cece@gmail.com)

[mochasmawi@unj.ac.id](mailto:mochasmawi@unj.ac.id)

[imamsulaiman@unj.ac.id](mailto:imamsulaiman@unj.ac.id)

### Abstrak

*The purpose of this research is to get an overview of the implementation of basketball-based shooting learning on the students, to produce basketball shooting learning model, and to develop conceptual model and procedural model of shooting set shoot learning, jump shoot and basketball shoot layup and also to know effectiveness of efficient model. This research and development use Research & Development (R & D) development method from Borg and Gall. Group trials were conducted on second semester students who took basic basketball courses consisting of 4 classes totaling 120 people, 60 treatment groups and 60 as control groups with eight (8) meetings. The effectiveness test of the learning model uses shooting skill set shoot skill instruments, jump shoot and basketball shoot layup using portofolio (process assessment). Analysis of research data using t test with a significance level of 0.05. Data analysis for shoot shooting set obtained an average value of pretest 50.43 and posttest 75.57 t-count ratio and t-table  $-188.500 < 1.67065$ , while the jump shoot obtained the average value of pretest 57.55 and posttest 82,85 t-count comparisons and t-tables  $-89,235 < 1,67065$  and for shoot layups, the average pretest score is 48,02 and posttest 73,17 t-count ratio and t-table  $-167,667 < 1,67065$ , significance (2-tailed) 0.000 with a significance level of 0.05 then of the three  $H_0$  rejected. Based on the data analysis, it can be said that the set shoot, jump shoot and drill layup-based learning models for students are developed, effective and can improve the results of basketball shooting learning.*

**Keywords:** *Effectiveness, Shooting Basketball Model, Based of Drill*

The learning process has a very important position in the effort to achieve the goal, because the model is a way or path that is followed accordingly, and harmonious to present a thing, so that will be achieved an effective and efficient learning objectives. Teachers and lecturers of physical education are required to be innovative, creative teachers to support the learning process of physical education, sports and health in schools and universities especially basketball games.

A lecturer in basketball subjects in Physical Education Program of Health and Recreation Faculty of Sport Science has 2 lecturers, one lecturer has competence in his field and one lecturer is less competent in his field. In the process of learning and learning that lasted so far has not been done optimally. Implementation of dominant learning and learning process using conventional methods such as by using lecture method, command and assignment.

In carrying out the learning process that occurs, it causes boredom, less active, creative and fun. This is due to the monotony in the implementation of basketball learning, especially shooting given by educators, including: 1) Learning patterns in the field that still use conventional models lead to low competencies produced 2) The assessment pattern carried out by the lecturer still refers to the results assessment, not using assessment of process and results 3) In the implementation of the

teaching program plan or learning syllabus, the lecturer has a teaching syllabus, but in reality it is not yet fully a reference for lecturers 5) the use of media, models and tools that increase students' interest in learning has not been held. 6) The level of competency of students who have received teaching for the previous students through recapitulation in two classes (60 people) who have received the teaching of basketball subjects in shooting material for 2012-2013 are as follows: (A) Very good = 8 people (B) 18 people. (C) 32 people. (E) 2 persons total = 60 people. For 2013 - 2014 majoring in Physical Education Health Recreation include: (A) Very good = 6 people (B) 15 people (C) 38 people (E) 1 person Total 60 students.

From the results of the preliminary study described above, it can be concluded that the level of competence of students from 120 people is low, so the innovation of developing learning models is needed that can stimulate and provide opportunities for students to be more active, creative, fun. Nur Miftahul Fuad, Siti Zubaidah, et al said that Besides, in order to develop students' thinking skills, it is necessary to use mind map learning models. The need to use a learning model to develop students' thinking skills.

Based on the results of the analysis that has been done, it is considered necessary to improve creativity and innovation and good skills in the learning process of basketball shooting for these students, the researchers took the initiative to develop learning models for drill-based basketball shooting in students.

In the early part of R & D comes from the observation of various symptoms that emerged in the education community that demanded the handling of long-term educational products, namely a process strived to produce products that have validity in its development.

While Borg and Gall defines research development as follows: Educational Research and development (R & D) is a process used to develop and validate educational products. The steps of this process are usually referred to as the R & D cycle, which consists of studying research findings pertinent to the product to be developed, developing the products based on these findings, field testing it in the setting where it will be used eventually, and revising it to correct the deficiencies found in the field-testing stage. In more rigorous programs of R&D, this cycle is repeated until the field-test data indicate that the product meets its behaviorally defined objectives.

The development research process is circular or twisted starting from the analysis activity, designing, evaluating and revising to the desired goal.

Prawiradilaga defines the model as a graphic display, regular or systematized work procedures, and contains the following description or explanation. According to Smith, the model is a mental picture that helps a person to understand something that cannot be seen and experienced directly.

In an effort to achieve learning objectives need to be created a system environment (condition) learning more conducive. "Teaching is an effort to create an enabling environment for learning." Learning process is effective if all students are actively involved mentally, physically, and socially. Therefore, teachers are said to be the driving force of learning journey and student learning facilitators who are expected to be able to monitor the overall level experienced by the students.

Winkel defines learning as a mental / psychic activity that takes place in an active interaction with the environment, which results in a number of changes in knowledge-understanding, skills and values of attitudes where changes are relatively constant and traceable.

Learning also interpreted by Matt Berry and practically Chris Hodgson is learning is a description of behavior change permanently. Danim and Khairil mention the learning characteristics include: (a) learning with the process of aims (b) learning as an internal experience (c) learning as an active process (d) learning is multidimensional (e) learning is an individual process.

Basketball is one of the most popular sports in the world. Its aged fans feel that basketball is a fun sport, competitive, educational, entertaining and healthy.

Sport games, especially basketball need to be followed and checked as well in PE teaching process. Besides estimation of learned motor skills in basketball, educator estimates motor achievements. Motor achievements represent a link between motor skills and motor abilities in order to achieve personal best result.

The basketball game has the basic techniques of the game: (1) passing and catching (throwing the ball and catching the ball), (2) Dribbling, (3) Shooting (firing the ball into the basket), (4) Pivot (resting on one leg).

In basic motion with the ball, shooting or shooting is a very important skill in addition to basic techniques such as operand, dribbling, surviving, because with a shot will get a great chance to make a number, especially close-range shot or by closing as close to the ring as possible with a shot lay-up. (Wissel, 1996).

Raiola G, Altavilla G, et al. Saying "you become good shooters" being a good shooter should take days to practice in order to gain shooting skills the good one.

### **Set Shoot Technique**

Shooting is one of the facets from which children report deriving the most fun and about which they feel best performing. Gomez "In fact, the free throw accounts for 20% of the points scored during a game and is therefore, a very important skill to achieve high-level performance". For close-range shots requiring wrist and finger elongation gives a stronger boost, whereas in long-distance shooting requires a boost from both legs, back and shoulders.

### **Jump Shoot technique**

Shooting while jumping (Jump Shoot) Shooting technique while jumping is often used compared to other shots. According to Raoul R. D. Oudejans, et al. Saying: Various aspects of the jump shot have been investigated in previous studies, such as the effects of shooting distance on the ball release height, release angle and release speed, the consequences of fatigue on joint angles and ball flight, the consequences of an opponent on joint angles and ball flight, and visual control. All of these studies are primarily focused on the final shooting phase of the jump shot. This shot is difficult to block because it is done at the highest point of the jump.

Artur Struzik, Bogdan Pietraszewski. dkk said: As a result, the two legged jump shot has become more frequent, amounting to over 70% of all the shots during a game, which necessitates a greater performance level for athletes. released. blocked because it is done at the highest point of the jump.

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### **Lay Up Shot Technique**

Lay up shoot is the safest and most effective shot if the player holding the ball is not shadowed by the opponent. The lay-up, a shot taken using the backboard in close to the basketball, is the most basic shot in basketball. (Lay-ups, shots taken by using boards near the basket, this is the most basic opportunity in basketball.

Lay-up shoot is an effective type of shot because it is done and the distance is as close as possible to the basket. This can benefits the shooter, because shooting from a great distance can be approached by jumping-step-jump. At this last jump in the position as high as possible with the basketball, continued with inserting the ball. Lay-up shoot is an effective type of shot because it is done and the distance is as close as possible to the basket.

### **Drill Method**

According to Syaiful Sagala, the drill method is a method of training, or training method which is a good way of teaching to instill certain habits. Also as a means to obtain an agility, accuracy, opportunity and skill ". Then Abdul Rahman Shaleh "The hallmark of this method (drill method) is an activity in the form of repeated repetition so that the stimulus and response associations become very strong and not easy to forget. Thus formed a skill (knowledge) that at any time ready to be used by the concerned ".

The characteristic feature of this method is the repetitive activity that is repeated many times from the same thing. Whereas in his book Winarno Surakhmad, the drill method is also called an exercise intended to obtain agility and training skills for what is learned, because only by doing it practically a knowledge can be refined and prepared to be prepared.

### METHOD

The purpose of this research is to solve the problems that occur in learning by developing learning models for drill-based basketball shooting in students. Research methods used in this dissertation are Research and Development (R & D) research and development methods, research used to create new products and / or develop existing products based on needs analysis in the field. The chosen development design refers to the development proposed by Borg and Gall

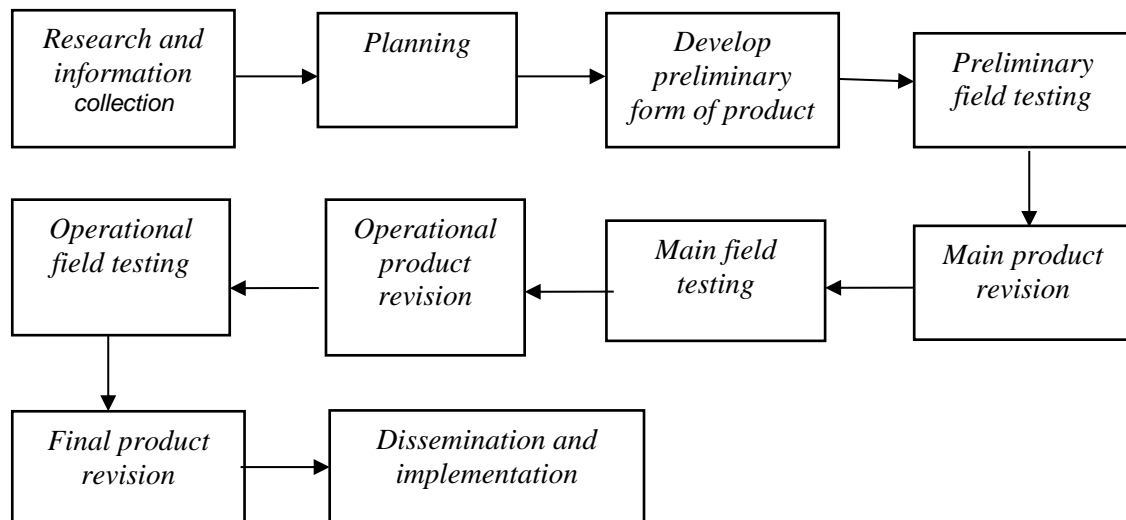


Figure 4. R & D Research Steps by Borg and Gall

### RESULTS AND DISCUSSION

The result of the development of shooting set shoot learning model, jump shoot and lay up shoot basketball-based drill at State University of Medan on the students of Physical Education Department of Health and Recreation 2nd semester A and B class, taking basketball course with 60 students as a treatment group and a control group of 60 people. This assessment uses a small sample in the initial trial of 20 students.

Of the 45 learning models tested to small groups, it is feasible to be tested in large groups based on expert / expert test into 31 shoot Set shot learning model, Jump shot and drill-based shoot layup. Prior to treatment of research subjects in initial tests using a porto folio test instrument (process assessment) that has been validated before and after treatment experts.

**Effectiveness of Set Shoot Model**

**Table 2. Test the Differences Effectiveness of Shooting Learning Model with Set Shoot technique on Basketball.**

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre Test	50,43	60	7,072	,913
	Post Test	75,57	60	6,985	,902

**Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	Pre Test & Post Test	60	,989	,000

**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 Test - Post Test	-25,133	1,033	,133	-25,400	-24,867	-188,500	59	,000

Based on the df (degree of freedom) on the paired samples test table where T Paired uses the formula  $N - 1$  so that the result obtained is  $60 - 1 = 59$ . Then the value of t arithmetic results obtained at -188,500 which means when compared with t table which obtained smaller ie  $-188,500 < 1.67065$ , but in this discussion can be seen again on the significant value obtained that is 0.000 which means  $H_0$  is rejected. For that based on the data obtained can be said that shooting learning model with Set Shoot technique effectively and can improve shooting learning in basketball.

**Effectiveness of Jump Shoot Model**

**Table 3. Test the Differences Effectiveness of Shooting Learning Model by technique Jump Shoot on Basketball**

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre Test	57,55	60	10,604	1,369
	Post Test	82,83	60	10,155	1,311

**Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	Pre Test & Post Test	60	,979	,000

**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 Test - Post Test	-25,283	2,195	,283	-25,850	-24,716	-89,235	59	,000	

Based on the df (degree of freedom) in the paired samples test table where T Paired uses the formula  $N - 1$  so that the results obtained are  $60 - 1 = 59$ . Then the t count value produces a result of -89.235 which means when compared to t table which is smaller, namely  $-89.235 < 1.67065$ , but in this discussion can be seen again in the significant value obtained that is equal to 0,000, which means that  $H_0$  is rejected. For that based on the data obtained can be said that shooting learning model with Jump Shoot technique effectively and can improve shooting learning in basketball.

**Table 4. Test of Difference in Effectiveness of Shooting Learning Models with Lay Up Shoot techniques on Basketball.**

**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Pre Test	48,02	60	7,317	,945
Post Test	73,17	60	7,093	,916

**Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 Pre Test & Post Test	60	,987	,000

**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 Test - Post Test	-25,150	1,162	,150	-25,450	-24,850	-167,667	59	,000	

Based on the df (degree of freedom) in the paired samples test table where T Paired uses the formula  $N - 1$  so that the results obtained are  $60 - 1 = 59$ . Then the t count results in a result of -167.667 which means when compared to t table the smaller one is  $-167,667 < 1.67065$ , but in this discussion it can be seen again at the significant value obtained which is equal to 0,000 which means that  $H_0$  is rejected. Therefore, based on the data obtained, it can be said that the shooting learning model with shoot lay-up technique is effective and can improve shooting learning in basketball. Based

on the acquisition of effectiveness test scores, it can be concluded that the shooting model of basketball-based drill on students can and is suitable for use in learning shooting at students and effective in improving basketball shooting skills.

The learning model of shooting drill-based basketball on students developed and made by researchers is a product aims to help lecturers, teachers and trainers in learning basketball shooting skills and as a reference for learning models.

Shooting learning model for drill-based basketball for students is made based on the level of need in learning activities in the Health and Recreation Physical Education Study Program of Unimed's Faculty of Sport Sciences which is more advanced in applying the Cognitive aspects. This product after review and evaluation where there are some advantages and disadvantages that need to be improved again, some of the benefits of this product include:

1. Learning model focuses on applying Cognitive aspect as student psychomotor supporter.
2. As a reference learning model Shooting basketball-based drill on students
3. A combination of shooting set shoot, jump shoot and lay up shoot.
4. On the execution of motion tasks starting from an easy level to a difficult level
5. In various motion tasks combine between learning shooting combination of physical exercise (psychomotor), effective ability and cognitive ability of learners.
6. Students feel enthusiastic about learning
7. Increasingly enthusiastic listening to the instruction from the instructor, teacher and trainer.
8. Model of drill-based basketball-based shooting lessons developed, effective and efficient in terms of time, media and cost.
9. Assist lecturers, teachers and trainers in improving motion control shooting set shoot, jump shoot and lay up shoot.
10. Contribution to science, especially learning to basketball shooting for elementary, junior high school, high school and college students.
11. Basically the development of shooting, jump shoot shooting set learning and drill-based basketball layup shoots on students has met the criteria for the application of a learning model, namely: syntax, social system, reaction principle, support system, and instrumental and accompanying impact. So this model can improve shooting skills in Health and Recreation Physical Education classes A and B Unimed sports science faculty.
12. In general, the lecturers desperately need a variety of varied shooting learning models, especially the use of simple media and various forms of basic motion in improving the basic techniques in accordance with the rules of shooting set shoot, jump shoot and lay up shoot basketball.

### **CONCLUSION**

The learning model of basketball-based basketball shooting is a model that contains various shooting set shoot, jump shoot and shoot-related shoot-based shoot that students, elementary, junior high school, university and society who just got to know basketball.

Research This development resulted in a product of basketball shooting learning model in drill-related students related to basic shooting motion techniques, namely: 1) form of drill-based shoot model on student 10 variation of learning 2) form of jump shoot model drill-based on students 10 variation of learning 3) form of drill-covered shoot layup model on student 11 variation of learning.

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