

# THE EFFECT OF MOTOR ABILITY AND VISUALIZATION TO THE LEARNING OUTCOMES IN SEPAKTAKRAW

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**Submission date:** 21-Nov-2020 07:57AM (UTC+0700)

**Submission ID:** 1452847365

**File name:** INTERNASIONAL\_MALANG.pdf (709.07K)

**Word count:** 2439

**Character count:** 13117

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**THE EFFECT OF MOTOR ABILITY AND VISUALIZATION TO THE  
LEARNING OUTCOMES IN SEPAKTAKRAW**

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**Abstract:** This study aims to determine: (1) the effect of conventional teaching methods and visualization of the learning outcomes sepaktakraw skills, (2) the effect of high and low motor ability to the learning outcomes sepaktakraw skills, (3) interaction with motor ability teaching methods to the learning outcomes sepaktakraw skills. This research uses experimental methods to design 2 x 2 factorial design number of samples in this study with 61 students. Data collection techniques with a series of skills tests sepaktakraw. Data analysis technique is the analysis of variance (ANOVA) on  $\alpha = 0.05$  significance level.

**Keywords:** Visualization, Motor Ability, Learning Outcomes, Sepaktakraw

Physical education is part of the education program is also developing three main domains, namely: psychomotor, affective, and cognitive. The development of the psychomotor domain in physical education is usually associated with the goal of developing physical fitness and motor ability attainment. Teaching duties within the territory of psychomotor, usually divided into two main objectives, namely objectives related to the development of motor ability attainment and improvement of physical fitness. Both of these goals, by experts regarded as surplus contained in physical education lessons. Learning motor ability in physical education aims to master skills in various sports and is therefore physical education teacher has a unique responsibility is to develop the motor ability. In relation to the issue of the implementation of physical education, the necessary means or strategies in the teaching skills of the sport movement. One strategy is to try innovations in teaching methods.

In creating innovation teaching motor ability, teachers or lecturers should understand the concept of skill itself. The term can be translated more operational skills, for example, is associated with a sports skills, for example: Skilled in sepaktakraw; sepaktakraw players are considered skilled if (1) can place the ball accurately at the desired place, (2) good punch technique so efficient in power, (3) can use these techniques in all conditions and a variety of opponents. Referring to the three important skills or performances, can be described as follows; when a player is able to place the ball accurately, it demonstrates the effectiveness of quality. Then, when the player has to do it the right way in accordance with the demands of the technique, it shows the quality of efficiency. When a player can use the punch in all game conditions that showed the quality of adaptation. Based on the principles of the movement skills, the authors conducted a study related to the strengthening of the visualization of the students in achieving the learning outcomes sepaktakraw skills at the level of motor ability.

**METHOD** **2**

The method used in this study is the experimental method, namely; a method that uses experimentation activities or treatment. With the existence of such treatment will be

visible causality of the influence of the implementation of the treatment given. The design used in this experiment is a 2 x 2 factorial design samples are 61 male students.

The population was male student of Penjaskesrek UN PGRI Kediri. The sampling technique is the randomized group design with the following way; students are given tests of motor ability, and then be ranked. The ability of students above the mean is a high motor students group then who are below the mean is a low motor students group. Afterwards each group were randomized to be placed on each cell that eventually every cell numbered among others: (1) Cell A1B1 = 16 students (2) Cell A2B1 = 15 students (3) Cell A1B2 = 14 students and (4) Cell A2B2 = 16 students. The data required in this research are: (a) the data of motor ability of students; and (b) learning outcomes data sepaktakraw skills. To obtain the data of motor ability used Barrow General Motor ability Test, whereas to obtain a sepaktakraw learning outcomes used a series of skills tests Verducci. The data in this study is an analysis of variance (ANOVA) and Tukey test continued with  $\alpha = 0.05$  at significance level. This research was conducted at the Penjaskesrek UN PGRI Kediri.

## RESULTS

Hypothesis testing using the technical analysis of variance (ANOVA) in 15 both directions. ANOVA calculation can be found in appendix, a summary appears in the following table:

**Table 1. Summary of Results of ANOVA calculation**

Variance Source	JK	dk	RJK	Fh	Ft
Inter Column (A)	130.414	1	130.414	0.204	
Inter Line (B)	2428.295	1	2428.295	3.806	
Interaction (AxB)	460.922	1	460.922	0.722	4,01
In Group (Error)	36365.385	57	637,989		
Total	39385.016				

Specifically:

dk : Degrees of Freedom  
JK : Sum of Squares  
RJK : Average Number Squares  
Fh : F Observation Value  
Ft : F Table Value

- 1) F value count between conventional learning methods and visualization acquired  $F_h = 0.204$  smaller than  $F_t$ , ( $p < 0.05$ ) = 4.01 means there is no difference.
- 2) F value count among the groups of high and low motor ability acquired  $F_h = 3.806$  smaller than  $F_t$ , ( $p < 0.05$ ) = 4.01 means there is no difference.
- 3) F value count interaction study method of motor ability acquired  $F_h = 0.722$  smaller than  $F_t$ , ( $p < 0.05$ ) = 4.01 means that there is no interaction between the method of learning and motor ability.

**Table 2. Results of Two-Way ANOVA calculation by 0,05 at Significance Level for Service Skills**

Variance Source	JK	db	RJK	Fh	Ft
Inter Column (A)	21.836	1	21.836	5.9793*	
Inter Line (B)	13.311	1	13.311	3.6450	4,01
Interaction (AxB)	1.961	1	1.961	0.5370	

Variance Source	JK	db	RJK	Fh	Ft
In Group (Error)	208.1369	57	3.652		
Total	245.246				

F value count between Learning Methods acquired  $F_h = 5.9793$  bigger than  $F_t$ , ( $p < 0.05$ ) = 4.01; means that there are significant differences between the conventional method and the method of visualization of the short service skills learning outcomes. Hypothesis testing results indicate that the two methods did not differ, this means the research hypothesis is not verified, it is possible because the factors bottleneck in research experiments. Some things that allegedly led to the hypothesis is not proven possible because:

- 1) The timing of the experiment is limited to scheduled practice sepaktakraw course of 90 minutes, once a week, 16 sessions, so the frequency to master the skills of sepaktakraw which has a high difficulty factor (complex) is still low. In the calculation for learning outcomes service skills proven there are significant differences.
- 2) The use of the ball sepaktakraw feather types, it is also very decisive result sepaktakraw skills tests. ball slower pace so that the type of test target distance away (pitch towards the back), as serve, smash and passing requires a large force (a factor difficult to obtain a high score).
- 3) Limitations shoes are used when less standardized tests, because the students wear their own shoes. From this small allows occurred score in the assessment of learning outcomes sepaktakraw skills then it affected the results.

## DISCUSSION

### Effect of Motor ability Against Sepaktakraw Skills Learning Outcomes

For students who have a high motor ability, will have the potential to perform better motor ability than those who have low motor ability. In other words, a high motor ability can quickly master the skills of the motion, in this case sepaktakraw skills. For students who have a low motor ability in the learning process less potential to master the complex motor ability. Very low motor ability take a long time compared to students who have a high motor ability. With such characteristics, the low motor ability are very precise when using visualization methods.

Thus it can be assumed that learning sepaktakraw skills using visualization methods would be more effective than the conventional teaching methods to students who have poor motor ability. Conventional teaching methods and visualization has different characteristics. In the implementation of visualization teaching methods emphasize the provision of learning materials to strengthen the concept of motion, it is very important to be able to master the subject matter is complex. In this case the person's motor ability are not so dominant in learning a skill motion.

### Effect of Method of Teaching "Conventional - Visualization" Against Sepaktakraw Skills Learning Outcomes.

Methods of presentation in learning skills is a blend of learning phasing of motion, techniques and instructional strategies, which can make it easier for students learns skills taught. The more precise method is used, the more easy for students to learn that skill. The more students the opportunity to practice the more skilled. To eliminate the error needs to take into account the feedback, so that improved performance

capabilities. In this study developed a model providing feedback to enable the visualization of strengthening the concept of motion the students will learn more robust.

The learning process that occurs in the cognitive stage are as follows: students observe demonstrations visualization such a way that they acquire roundness observation of movements that organized the impact they will understand the movement. While students using conventional methods limited observations gained. From the point of hearing as a second modality of observation, with visualization of the process of memory, which imbibe or capturing impressions, and then save the impressions that, in the warehouse or the memory of their brains.

At this stage of fixation or exercise phase, impressions strengthening reproduced visualization back to train. Movement sequences set will simplify the process of retention. Besides learning processes mentioned above at this stage there is also a process of thinking through three steps, namely: first, the establishment of understanding, this happens through a process of describing or identifying characteristics of movement, classify characteristic same movement and abstracted the movement- the movement; second, the formation of opinions, it is laying the relationship between two or more movements; Third, the establishment of the decision, it is the conclusion that such a decision. The decision is the result of a reasonable performance in the form of a new opinion formed based on the logic that already exist, as they follow all of the learning process that starts from observation, vision, hearing on the explanation and demonstration sepaktakraw movement, then at the end of the thought process they make a decision on the sepaktakraw movement. This is a decision that will be reproduced on the fixation stage. For students who use the visualization method, the above occurred a strengthening of the concept of task units that are part of sepaktakraw skills, this is due to a clearer delineation through sense empowerment.

The learning process that occurs in the fixation stage or exercise, the students try to do what has been obtained in the learning process of cognitive stages, namely memory reproducing impressions that turn out to be a decision on the process of thinking. Students who use the methods of studying visualization get the full experience of moving from task sepaktakraw skills. Students planning to compare the patterns they produce on the stage of the cognitive and movement they do. Then do improvements based on the feedback they receive. Each part or sequential stimulus-response study can not be separated from the context visualization obtained. Besides the students use visualization methods to get a clear concept of motion on is taught. With the help of teachers, students can improve fault movement.

The learning process that occurs in the autonomous stage students get training experience to launch and harmonize the movement, so that the movement was done unwittingly. They receive informative feedback on the overall movement longer, thus allegedly giving more effective visualization. The advantage gained by providing visualization are: (1) in terms of legal practice, they get more reinforcement for a given teaching assignments because optimization of multiple senses, (2) they are more get the chance take advantage of the knowledge of the feedback, (3) to obtain insight, they are faster, (4) they get more references making it easier to take decisions. The framework leads to an allegation that the effect of visualization is more effective than without visualization (conventional) to the learning outcomes sepaktakraw skills.

#### **Interaction between Motor ability and Visualization Method**

Visualization method in principle is very effective in strengthening the concept of the cognitive phase of learning the skills, effectiveness at this stage affects more effectively in the fixation stage. From these principles means that visualization is the



strengthening of engineering teaching through the effectiveness of the stimulus to the senses of students. In this study, students who have poor motor ability would be better with by given visualization because this method the material can be taught in a way that for those poor motor ability may well follow.

## CONCLUSION

From the research and interpretation can be deduced, while the conclusions in this study are as follows: Sepaktakraw skills learning outcomes showed no significant difference between the conventional group and visualization. But by testing the learning outcomes short service which is technically simpler mastery, use visualization method showed a better effect than the method without using the visualization of the short service skills learning outcomes.

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