Journal of Indonesian Physical Education and Sport
P-ISSN 2442-4900 | E-ISSN 2461-1271
Vol. 9, No.1, Juni 2023, page 20-27

THE INFLUENCE OF D-I-A LEARNING METHODS (DELEVERY, INTERACTION, ASSESSMENT) AND LEARNING MOTIVATION ON SEPAKTAKRAW LEARNING OUTCOMES

Jufrianis[1], Dedi Ahmadi[2], Muhammad Syahrul Rizal[3], Kasman Ediputra[4]
Physical Education Health and recreation, Pahlawan University
Email: jufrianis93@gmail.com

ABSTRACT

This research aims to determine the effect of the D-I-A learning method (Delevery, Interaktion and Assessment) on sepaktakraw learning outcomes. The research sample consisted of 64 people who were students of physical education, health and recreation at Pahlawan University using a 2 x 2 treatment by level research design. The data were analyzed using analysis of variance (ANOVA) and continued with the Tukey test at a significance level of $\alpha = 0.05$. The results of the research show (1) in general, there are differences between the D-I-A Learning Method (Delevery, Interation, Assessment) on sepaktakraw learning outcomes (F_O7,55>4,00 F_t), (2) there is an interaction between the D-I-A learning method (Delevery, Interaktion and Assessment) on sepaktakraw learning outcomes (F_O14,53>4,00 F_t), (3) in students with high motivation towards learning sepaktakraw (4) there is a significant influence on the results of learning sepaktakraw with the D-I-A (Delevery, Interation, Assessment) method of (Q_O2,16< 5,13 Q_t). The conclusion of this research is that there is a significant influence of the D-I-A learning method (Delevery, Interation, Assessment) and Motivation on the sepaktakraw learning outcomes of Physical Education Health and Recreation students at Pahlawan Tuanku Tambusai University.

Keywords: Sepaktakraw learning outcomes, learning methods, D-I-A (Delevery, Interaktion and Assessment).

INTRODUCTION

Learning good sepaktakraw techniques can produce good technical skills. The achievement of motor skills that are appropriate to the period of development is determined by various aspects. Aspects that influence motor skills learning can be classified into 3 categories. "This category includes student/learner factors, characteristics of the skills being learned and the environment. These three factors play a significant role in improving motor skills (Edwards, 2011: 9).

The skills learned and the environment are interrelated to create good motor skills. Students in this case are the characteristics of students such as age, physical and mental condition. The movement skills being studied have different characteristics, which can be used as a reference in determining the type of method that suits the characteristics of the movement skills to be studied. Movement learning is also influenced by the environment, in this case the environment in question is natural conditions, facilities and infrastructure, which support the movement learning process.

The problem that often occurs in the physical learning process, based on experience and the results of observations made, is that teachers do not understand the characteristics and mental

DOI: https://doi.org/10.21009/JIPES.091.04

state of students, and the characteristics of the material so that the information the teacher has in determining the appropriate method difficult to do so that the result of sepaktakraw learning does not meet expectations.

This learning problem occurs in Physical Education Health and Recreation students at Pahlawan Tuanku Tambusai University, namely in one of the basic sepaktakraw technique materials, students still have not mastered the sepaktakraw technique well, mastery of a motor skill is influenced by the processes that occur during movement learning, according to (Rahyubi , 2012 : 209) There are several things that influence the motor learning process, including individual factors, environment, equipment or facilities, and teachers (facilities).

Individual factors that influence the football dribbling learning process include students' physical condition, talent, D-I-A (Delevery, Interaction and Assessment) interest in participating in learning. "Individuals are born with diverse potential, and develop in line with their respective ages (Samsudin, 2014: 12). Talent, interest D-I-A (Delevery, Interaction and Assessment) is a description of student motor movements. Knowing the student's motor condition can help lecturers treat and apply various appropriate learning methods. Therefore, teachers must be able to apply appropriate methods The movement learning that students will learn is adjusted to the student's movement development and student motoric development. The development of movement that occurs during early adolescence can be a reference for teachers in determining and applying appropriate methods for students, because by knowing that at junior high school age students are in early adolescence, teachers can find out what developments occur during this period. . At this age level, physical education programs are seen as a place to learn fair play and good sportsmanship. Students want to learn to be active, which proves the use of their free time. Most students also want to play in a team.

Students in their early teens experience various changes, such as physical, mental and social changes. The physical changes that occur during adolescence for both boys and girls are explained by Tangkudung, Puberty (adolescence) usually appears at the age of 10-14 years and in girls it is characterized by menstruation-menarche. In boys, puberty begins later, characterized by changes in voice and genital enlargement (Tangkudung, 2006: p. 106). These changes are classified as changes in the function of organs during adolescence, starting from the functioning of several reproductive organs, which of course affects the mental and attitude of students at this age. The development of social attitudes during this period is explained by Hurlock (2008: 214) as follows: During adolescence, social development shifts towards new social groupings by having various different groups such as close friends, small groups, large groups, organized groups and gang groups. The influence given by group activities at this age tends to be negative, because of curiosity and feeling that he has grown up so that at this age he also has a tendency to avoid adult supervision.

The D-I-A (Delevery, Interaktion and Assessment) learning method is a choice that suits the characteristics of students today, group learning can also increase students' extrinsic motivation for the learning they are doing, because motivation is one aspect of the student's self which plays a role in improving the learning outcomes carried out. The D-I-A (Delevery, Interaktion and Assessment) learning method provides opportunities for lecturers to adapt to students' conditions, material characteristics and the teacher's abilities in order to obtain good movement learning outcomes. Slavin (2010: 4) said, D-I-A (Delevery, Interaktion and Assessment) learning refers to various a type of teaching method where students work together with lecturers to carry out active, innovative and productive learning.The various types of D-I-A (Delevery, Interaktion and Assessment) methods provide lecturers with many choices to

DOI: https://doi.org/10.21009/JIPES.091.04

determine which type of model is appropriate to the material and characteristics of the material being studied.

This method provides quizzes/tests as a means to compete, the more tests each individual completes, the more influence the group/team's achievements will have. Based on this, this method has a tendency to increase students' motivation because learning activities are carried out as a team so that friends can provide D-I-A (Delevery, Interaction and Assessment) support to other students for victory and ultimately maximum learning achievement.

Motivation is an urge within humans to do something, to learn. The desire or urge to learn is what is called motivation (Sardiman, 2014: 40). Students' desires and encouragement in responding to learning are different, so that students' views or attitudes towards learning vary. Varied or various There are various types of student motivation in responding to learning, so teachers must create learning scenarios that suit student characteristics, both students with high motivation and students with low motivation. Teachers must be able to develop learning plans that support each student's characteristics.

Students at this age are starting to be able to think in a structured way, so it is very appropriate if at this age students are given learning methods that encourage students to think scientifically. Learning methods that can direct students to think scientifically include the inquiry learning method. This method directs students on how to solve a learning problem and find a solution to the learning problem with the concept of scientific thinking based on the teacher's direction and guidance.

The methods used to achieve learning objectives must be truly appropriate to the characteristics of students. Using the right method can improve and maximize the learning outcomes carried out, thus it is necessary to conduct scientific research to prove the suitability of a learning method with the characteristics of students who experience learning problems.

Based on these problems, research in terms of suitability between learning methods and characteristics in accordance with student development and The condition of students' skills in dealing with relatively difficult material requires immediate research to obtain learning outcomes that are in line with expectations using the D-I-A learning method (Delevery, Interaktion and Assessment) and learning motivation regarding sepaktakraw learning outcomes.

METHODOLOGY

In accordance with the problems described in the problem formulation, this research aims to determine: 1) differences in sepaktakraw learning outcomes between students taught using the D-I-A method (Delevery, Interaktion and Assessment) 2) interactions between the D-I-A learning method (Delevery, Interaktion and Assessment) on sepaktakraw learning outcomes; 3) differences in sepaktakraw learning outcomes for students with high motivation who are taught using the D-I-A method (Delevery, Interaktion and Assessment) and 4) differences in sepaktakraw learning outcomes for students with low motivation who are taught using the D-I-A method (Delevery, Interaktion and Assessment).

The research was carried out at the sepaktakraw field at Pahlawan University for 16 meetings. The research method used is an experimental method using a 2 x 2 treatment by level design. The instrument used to obtain sepaktakraw learning outcomes is using an assessment rubric and for motivation a questionnaire is used.

Hypothesis testing is in accordance with the treatment by level 2 x 2 research design, so hypothesis testing is carried out using two-way analysis of variance (ANOVA). However, before the analysis is carried out, descriptive analysis will first be carried out, namely describing the

DOI: https://doi.org/10.21009/JIPES.091.04

JIPES
Journal of Indonesian Physical Education and Sport
P-ISSN 2442-4900 | E-ISSN 2461-1271
Vol. 9, No.1, Juni 2023, page 20-27

raw data in the form of frequency distribution tables and visualization using histogram graphic images. After that, analysis requirements tests were carried out, namely normality tests and homogeneity tests between groups. Only after that was the hypothesis tested using two-way analysis of variance (ANOVA) and further tested using the Tukey test.

RESEARCH RESULTS AND DISCUSSION

Based on the research data, calculations were carried out manually using two-way ANOVA and analysis results were obtained as in table 04 and further tests using the Tukey Test in table 05 below.

Table 04. ANOVA Calculation Results for Sepaktakraw Learning Outcome Scores (α = 0.05)

Sumber Varians	**Db**	**JK**	**RJK**	**Fcount**	**Ftableα = 0.05**
Antar A Between B AxB interactions	1 1 1	50,06 87,06 15,46	50,06 89,06 15,56	7,55 23,77 14,53	4,00
In	60	77,25	7,95	-	-
Total	63	41,94	-	-	-

Table 05. Results of Advanced Calculations using the Tukey Test

No	**The group that Compared to**	**Qcount**	**Qtable**	**Information**
1	A_1 with A2	3,41	3,35	Significant
2	A_1B_1 with A_2B1	6,56	4,05	Significant
3	A_1B_2 with A_2B2	1,06		Not significant

DISCUSSION

1. Differences in Sepaktakraw Learning Results between D-I-A Learning Methods (Delevery, Interation, Assessment)

From the results of variance analysis at the significance level α = 0.05 in the source column of variance between A, F is obtained$_{count}$= 7,55 and F_{table}= 4,00 up to F_{count}> Ftableuntil H_0 rejected, which means that overall there is a real difference between the D-I-A (Delevery, Interaktion and Assessment) method on sepaktakraw learning outcomes. This is confirmed by further tests, namely the Tukey test, it is known that Q_{count}3,89> 3,85 Q_{table}, this means that there are significant differences in sepaktakraw learning outcomes between students taught using the D-I-A method (Delevery, Interaktion and Assessment). To find out which method contributes to better soccer dribbling learning outcomes, it can be seen from the average score of the two

DOI: https://doi.org/10.21009/JIPES.091.04

JIPES
Journal of Indonesian Physical Education and Sport
P-ISSN 2442-4900 | E-ISSN 2461-1271
Vol. 9, No.1, Juni 2023, page 20-27

groups.

The average score of sepaktakraw learning outcomes taught using D-I-A (Delevery, Interaktion and Assessment) is $\bar{X}$= 29.94 higher than the average score of sepaktakraw learning outcomes taught using the D-I-A (Delevery, Interaktion and Assessment) method of .00. Based on these results, it can be concluded that the sepaktakraw learning outcomes of students taught with D-I-A (Delevery, Interaktion and Assessment) is better than those taught using the method without D-I-A (Delevery, Interaktion and Assessment) The high learning outcomes of D-I-A (Delevery, Interaktion and Assessment) in the group of students taught using D-I-A (Delevery, Interaktion and Assessment)) because students are given the opportunity to develop their thinking skills and the opportunity to explore the movements in sepaktakraw and understand by getting their own conclusions about a material from the learning activities carried out. Studying in groups with scientific learning concepts helps students with low abilities because students with high abilities can provide an overview of how to think scientifically and apply in a movement that they have conceptually understood and learned so as to help students with low abilities in learning.

2. Interaction between the D-I-A Learning Method (Delevery, Interaktion and Assessment) on Sepaktakraw Learning Outcomes

Based on the results of variant analysis regarding the interaction between the D-I-A learning method (Delevery, Interaktion and Assessment) on sepaktakraw learning outcomes, it can be seen in table 4 of the anava calculations above, that the value of Fcountinteraction F(AxB) = 14.53 and F_{table}= 4,00 up to F_{count}> F_{table}which means H0 rejected. This shows that there is an interaction between the learning method used and motivation on sepaktakraw learning outcomes. Interaction implies that there is cooperation between two or more independent variables in influencing the dependent variable. The significance of this interaction will have implications for the form of interaction that occurs. This means that the interaction effect will have important meaning if testing is carried out on simple effects from each level of treatment. This means that sepaktakraw learning outcomes are determined by differences in learning methods and students' level of motivation. Because there was a significant interaction, to see the magnitude of the difference in the contribution of each experimental group to the dependent variable, a further test was carried out using Tukey's formulation which aimed to see the simple effect of each treatment class.

3. Differences in sepaktakraw learning outcomes between groups of students with high motivation who were taught using the inquiry learning method and the cooperative learning method

The third hypothesis is based on the results of further tests using the Tukey test at the α = 0.05 level to obtain the Q $value_{count}$= 6.56, while Q_{table}= 4,05 (Q_{count}> Q_{table}). Thus the third hypothesis (H_0) which stated that there was no difference in sepaktakraw learning outcomes for students who had high motivation between students taught using the inquiry learning method and those taught using the cooperative learning method was rejected. Statistical test (Q_{count}6,56>4,05 Q_{table}) shows that there is a significant difference in sepaktakraw learning outcomes in the group of students who have high motivation between those taught using the inquiry learning method and students taught using the cooperative learning method.

The average score results show that the average score of sepaktakraw learning outcomes for students who have high motivation who are taught using the D-I-A (Delevery, Interaktion and Assessment) method ($\bar{X}$ = 33.00) is higher than the group of students who are taught using the D-I-A method (Delevery, Interaction and Assessment) ($\bar{X}$= 28.38). Based on this, it can be

DOI: https://doi.org/10.21009/JIPES.091.04

concluded that for students who have high motivation the learning outcomes of sepaktakraw who are taught using D-I-A (Delevery, Interaktion and Assessment) are better than students who are taught without using the D-I-A (Delevery, Interaktion and Assessment) method.

4. Differences in Sepaktakraw Learning Outcomes in Groups of Students with Low Motivation Who Were Taught Using the Inquiry Learning Method and the Cooperative Learning Method

The fourth hypothesis is based on the results of further tests using the Tukey test at the $\alpha = 0.05$ level to obtain the Q value$_{count}$= 1.06 while Q_{table}= 4,05 ($Q_{count} > Q_{table}$). Thus the hypothesis (H_0) is accepted, which means there is no significant difference between sepaktakraw learning outcomes for students who have low motivation between students taught using the D-I-A (Delevery, Interaktion and Assessment) method. The average score results show that the average score of sepaktakraw learning outcomes for students who have low motivation who are taught using the D-I-A (Delevery, Interaktion and Assessment) method ($\bar{X}$ = 26.88) is lower than the group of students with low motivation who are taught using D-I-A (Delevery, Interaction and Assessment) method ($\bar{X}$ = 27.63) but with an insignificant difference so that based on statistical tests it shows that there is no significant difference. Based on this, it can be concluded that for students who have low motivation, the results of sepaktakraw learning who are taught using the D-I-A method (Delevery, Interaktion and Assessment) do not provide significant differences in results compared to students who are taught without using the D-I-A method (Delevery, Interaktion and Assessment).).

CONCLUSION

Based on the data obtained from the results of analysis and testing of research hypotheses, it can be concluded: 1) students who are taught using the D-I-A (Delevery, Interaktion and Assessment) method have better sepaktakraw learning outcomes than students who are taught without the D-I-A (Delevery) method , Interaction and Assessment); 2) there is an interaction between the D-I-A learning model (Delevery, Interaktion and Assessment) on sepaktakraw learning outcomes; 3) for students with high motivation, students who are taught using the D-I-A method (Delevery, Interaktion and Assessment) have better sepaktakraw learning outcomes than students who are not taught using the D-I-A method (Delevery, Interaktion and Assessment); and 4) for students with motivation low, students who were taught using the D-I-A method (Delevery, Interaktion and Assessment) had no significant differences in sepaktakraw learning outcomes.

DOI: https://doi.org/10.21009/JIPES.091.04

REFERENCE

A.M, Sardiman. D-I-A Interaction (Delevery, Interaction and Assessment) Teaching and Learning. Jakarta: Rajawali Press, 2014.

Edwards, William H. Motor Learning And Control : From Theory to Practice. California: Wadsworth, 2011.

Hurlock, Elizabeth B. Developmental Psychology: A Life Span Approach, ed. Ridwan Max Sianggaran. Jakarta: Erlangga, 2008.

Rahyubi, Heri. Learning Theories and Applications of Motor Learning: Description and Critical Review. Bandung: Nusa Media, 2012.

Samsudin. Sports and Health Physical Education Curriculum Design. Jakarta: Litera Predana Media Group, .

Slavin, Robert E. Cooperative Learning: Theory, Research and Practice translated by Narulita Yusron. Bandung: Nusa Media, 2010.

Tangkudung, James, Physiology (Jakarta: Smart Jaya, 2006), p.106.