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DIFFERENCE BETWEEN EFFECT OF DIRECT INSTRUCTION AND TEACHING GAME FOR UNDERSTANDING APPROACH ON THE RESULT OF BASKETBALL: REVIEWED FROM STUDENTS' INTEREST

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ABSTRACT

The aim of this study is to know: i) the difference between effect of DI and TGfU, ii) the difference in the playing basketball result among student's interest, and iii) the effect of interaction between learning approaches and interest in basketball outcomes. The data collection was performed by different tests of basketball. Data retrieval was conducted with GPAI. To obtain data on students' interest questionnaires were used. The data analysis technique in this study used two-way variance analysis and Newman Keuls range test, at 5% significance level. The findings suggest there was significant difference between effect of DI and TGfU. It was also found that there was significant difference in basketball outcomes between students' interest. The results also suggested that there is a significant interaction effect between learning approach and interest in basketball game.

Keywords: *Teaching approach, game performance, assessment instrument, students' interest.*

1. INTRODUCTION

Learning is a continuous activity from planning to evaluating the learning outcomes. In learning process, learning must consider the various factors that affect the process and the product. These factors include; Competence, material, media, and assessment. After considering these factors another thing to understand is curriculum, approach, model, strategy, method, and style in learning which is spectrum of the spectrum. So that in learning cannot highlight one and

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put aside the other aspects. To compile a learning should be cascading and have a good continuity. In Indonesia there are three curriculum models taken from Forgaty (1991) that is connected, webbed, and integrated. The connected model curriculum derives a teacher-oriented or teacher-centered approach to learning, while the integrated curriculum model causes a student-oriented or student centered approach. Of the two approaches each has many models. The approach models of the teacher centered approach are Direct Instruction (DI). DI was very popular in the 1960s developed by Zig Engelmann. In DI pemas learning became a model of the most widely used approach by educators because it was easy to apply. While one model student centered approach is Teaching Games for Understanding (TGfU) and many others. The development of the TGfU approach model that focuses on meaningful games is considered more effective for students in achieving learning objectives. TGfU first appeared introduced by Bunker and Thorpe (1982).

1.1 Teaching Game for Understanding: TGfU is a goal-based pedagogical game model to generate greater understanding of all aspects of the game, while increasing the level of physical activity, involvement, student interest, and enjoyment in physical education lessons. According to Griffin, Mitchell, and Oslin (1997), simulation activities need to reflect the integrity of the game and inspire situation to focus on developing tactical skills. The meaning reflects the intended is the game forms in the simulation were a realistic situation that will be faced by students in the form of real game. Students also need to be constantly awakened and motivated to focus on the tactical issues at hand. TGfU puts emphasis on playing, where tactical and strategic issues are put forward in a modified game environment, finally students can make decisions. Putting the focus of lessons on students in game situations where cognitive skills such as tactics, decision making and problem solving are essential. TGfU is a holistic teaching approach that encourages student-based learning.

1.2 Direct Instruction: The effectiveness of physical education learning is determined by the learning approach chosen by the teacher on the basis of the teacher's knowledge of the nature of the skill or task of the movement that students will learn (Rahayu, 2013). Choosing the approach of DI model because this model is synonymous with the learning that is mostly conducted by teacher in Indonesia. DI is a learning approach that focuses on goals in achieving competence. This approach is excellent in improving students' technical skills in a learning material. Teachers of Physical Education in general have a tendency to use the same way to teach Physical Education. It is not just an impression of teaching Physical Education as a routine boring activity, but also distanced from creative and innovative learning practices (Kristiyanto, 2012).

Supporting Factors in reaching learning objectives are very much both from outside students themselves and from within students (Setiowati, 2010). Factors from outside the student self-include social economy, teachers, the proportion of study time, the environment of facilities and infrastructure and so on, while the factors that come from within the student is motivation, interest, talent, physical condition, attitude, and habit of students in learning. Interest becomes one of the factors in learning, interest related to attraction to a particular object or activity. Slameto (2003) said that interest is a sense of preference and a sense of attachment to a thing or activity, without anyone telling. Interest is essentially the acceptance of a relationship between oneself with an outer self. The stronger the relationship is the greater the interest. Students' interest in basketball differs due to many factors, both from within the students themselves and from outside the environment. Knowledge of student interest can facilitate teachers in designing learning.

This research was conducted to find out the differences between DI approach and TGfU approach; the effect among low, moderate, and high interest students; interaction between the learning approach and the student's interest to the result of playing basketball. Theoretically, this research is expected to put forward the principle of efficiency and appropriateness of using learning approach of physical education with the selection of curriculum. In addition, with this research is expected to be a reference and comparison for other researchers who conduct research in the field of physical education. The results of this study can be used to develop new theories related to the learning of physical education, especially the middle level. Practically, this research is expected to be used for the teachers in carrying out the practice of learning, so that not only develop the basic technique of playing basketball, but can improve the understanding of basketball game.

2. METHODS AND MATERIALS

2.1 Research Design

The research design used in this research is factorial 2 x 3 Factorial Design that is to know the effect of variable and combination of variable level, and the influence of interaction between the factors to the improvement of PJOK ability of basketball game material in grade XI students in SMA Negeri 1 Cipari-Cilacap regency. The experimental design based on factorial 2 x 3 is where the variables in this study include 2 manipulative independent variables (DI and TGfU approaches) and three attributive independent variables (high, moderate, and low

basketball interests) Which affects the fame of playing basketball class XI in high school.

Independent Manipulative / Independent Attributive	Learning Approaches	
	TGfU (A1)	*DI* (A2)
High Basketball Interest (B1)	A1B1	A2B1
Moderate Basketball Interest (B2)	A1B2	A2B2
Low Basketball Interest (B3)	A1B3	A2B3
Result of Playing Basketball		

Abbreviation:- A1B1: A group of students using DI approach with a high basket interest, A1B2: A group of students using DI approach with moderate basketball interest, A1B3: A group of students using DI approach with low basket interest, A2B1: A group of students using TGfU approach with high basketball interest, A2B2: A group of students using TGfU approach with moderate basket interest, A2B3: A group of students using TGfU approach with low basket interest.

2.2 Sample

Regarding the sample, Sugiyono (2009) explained that the sample is part of the number and characteristics of the population. In the process of sampling in the field of educational experimental research, there is no standard benchmark to be used as a reference in the sampling of the available population. The number of samples in this study is part of the population number that is the determination of the population by random sampling. Sampling is taken by purposive random sampling technique by giving equal opportunity to boys and girls. The population in class XI SMA Negeri 1 Cipari are as many as 180 students. Then the sampling technique is used to take 30 students divided into 2 groups.

2.3 Data Collection

To collect data from the research sample required a test tool. The right test to get results from students that accurate was by playing basketball with the actual rules. When the test is given an instrument is needed to record the student's ability to play basketball. The research instrument was a tool at the time the researchers used the method (Arikunto, 2002). In order to get the results of students' ability to play the right basketball then required an instrument that is Game Performance Assessment Instrument (GPAI) developed by Mitchell and Oslin (1999). Interest data obtained from the questionnaire which is divided into four categories.

2.3.1 Game Performance Assessment Instrument (GPAI): GPAI is a special templet that can be adapted into different types of games to assess students' abilities. Assessment was taken during pre-test and post-test. GPAI covers the

seven common components of the game: basic techniques, adjustments, decision-making, execution ability, support, protection and protection or marking.

When using GPAI, researcher identifies from seven components that were applied to the game and weigh one or more criteria in each component that indicates appropriate tactical decisions and appearances. In this study researchers focused on three aspects of appearance on each component: decisions made (appropriate or unsuitable), ability to execute (appropriate or not appropriate), and support (appropriate or inappropriate). Then observe each student in the lesson and record the suitability or incompatibility and efficiency or inefficiency of an event from the knowledge and tactical attachment to the component.

Table 1: Aspects taken from the entire component

Aspect	Criteria
Decision Made	1. Players attempt to pass the ball to an open player or a good position. 2. Players try to score points when possible.
Execution Ability	1. Reception: control the operand and adjusts the ball 2. Dribbling: Passing or deceiving your opponent 3. Passing: the ball reaches the target 4. Shooting: the ball goes into the opponent's basket.
Support	Placement of appropriate positions in attacking or defending.

3. RESULTS

Data of research result obtained from sample of 30 student of class XI SMA Negeri 1 Cipari-cilacap Regency in academic year 2015/2016 with test of basketball and GPAI measurement technique was conducted in twice before treatment (pre-test) and after treatment (post-test).

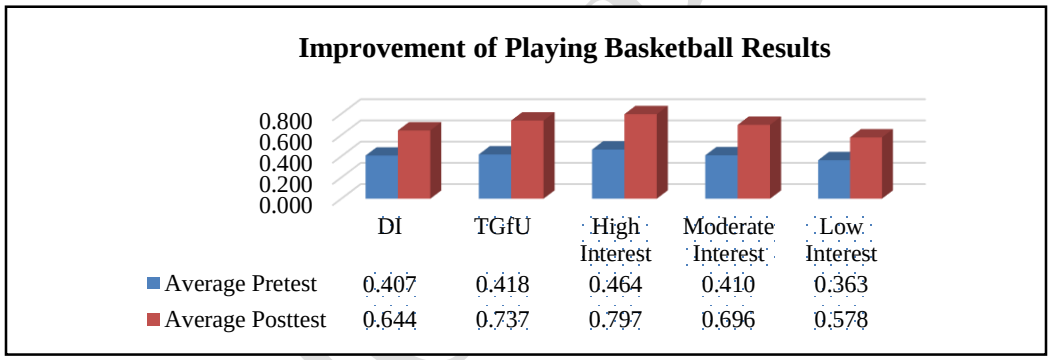
Table 2: Results of students' appearance

Attributive Variables	No.	Manipulative Variables						Total of Attributive Variables
		DI			*TgfU*			
		Pre-test	*Post-test*	*Impro-vement*	*Pre-test*	*Post-test*	*Impro-vement*	
High Interest	Number	2.319	3.590	1.271	2.318	4.379	2.061	12.607
	Average	0.464	0.718	0.254	0.464	0.876	0.412	0.333
	SD	0.022	0.062	0.053	0.017	0.049	0.038	0.094
Moderate Interest	Number	2.007	3.153	1.146	2.092	3.810	1.718	11.062
	Average	0.401	0.631	0.229	0.418	0.762	0.344	0.286
	SD	0.031	0.032	0.010	0.012	0.053	0.046	0.068
Low Interest	Number	1.775	2.911	1.137	1.857	2.868	1.011	9.412
	Average	0.355	0.582	0.227	0.371	0.574	0.202	0.215

	SD	0.022	0.049	0.035	0.013	0.058	0.055	0.045
Total of Manipulative Variables	Number	6.101	9.655	3.554	6.267	11.058	4.791	
	Average	0.407	0.644	0.237	0.418	0.737	0.319	
	SD	0.052	0.074	0.037	0.041	0.138	0.100	

From the above table it can be seen that TGfU approach has a better improvement with an average increase of 0.319 compared to the DI approach with an average increase of 0.237. While students with high basketball interest had an average increase of 0.333, students who had basketball interest were having an average increase of 0.286 and students with low basketball interests had an average increase of 0.215. For more details, hereunder a thorough description of the average value of playing basketball with GPAI measurement techniques:

Figure 1: Pre-test and post-test mean score of basketball play result of each group based on learning approach and interest rate of basketball



From the posttest result, it can be seen that TGfU group with high basketball interest has the biggest basketball playing result among the other groups that is 0.876 with the average increase of 0.412. The second group is the TGfU group with moderate basketball interest with an average of 0.762 basketball playing results with an average increase of 0.344. The third group is the DI group with a high interest in basketball that has an average of 0.718 playing basketball result with an average increase of 0.254. The fourth group is the DI group with a moderate basketball interest that has the result of playing basketball of 0.631 and has an average increase of 0.229. The fifth group is the DI group with a low basketball interest which has an average of 0.582 Basketball has an average increase of 0.227. The last group is a group of TGfU with a low basketball interest which has an average of 0.574 basketball playing with an average increase of 0.202.

DI and TGfU approach have an effect on the outcome of playing basketball. If among the groups of students who got the DI approach and with the

TGfU approach compared, it can be seen that the treatment group of the TGfU approach has an increase in basketball playing outcome of 1.34 higher than in the DI approach group. Then, if a group of students with high, moderate, and low basketball interests is comparable, it can be seen that a group of students with high basketball interests have an increase in basketball playing outcomes by 1.18 times higher than those with interest in balls Moderate basketball, and groups of students who have basketball interests are having an increase in basketball outcomes of 1.19 times higher than that of students with low basketball interests.
The effectiveness of the use of learning approaches to improving basketball outcomes is influenced by the high, moderate, and low interest in students' basketball. Based on the results of the study, it turns out that students who have high basketball interest with the approach TGfU have increased the result of playing basketball by 0.412. While students who have high basketball interest with DI approach have an increase of 0.254. Students with basketball interest in the TGfU approach have improved basketball play by 0.344 which is better than students with moderate basketball interest who use the DI approach of 0.229, while students who have low basketball interest with DI approach have increased and the result of playing basketball equal to 0.227 better than students with low basketball interest with approach of TGfU equal to 0.202.

Hypothesis testing research conducted based on data analysis and interpretation of variance analysis. The Newman-Keuls range test is taken as an average test step after analysis of variance.

Table 3. Results of ANOVA

Source	***df***	***SS***	***MS***	F_o	F_t
Treatment	1	1.001	1.001		
A	1	0.523	0.523	15.31*	2.62
B	2	0.594	0.297	8.69*	
AB	2	0.371	0.186	5.44*	
Error	24	-0.819	0.034		
Total	30	1.670			

From the results of the research indicates that the DI approach has different improvement from TGfU approach. This is evidenced from the score of *F* obtained = 15.31> *F* table = 2.62. Thus the null hypothesis (H_0) is rejected which means that the DI approach has different improvement from the acceptable TGfU approach. From the further analysis it was found that TGFU learning approach has a better improvement than DI approach, with an average increase of respectively 0.319 and 0.237.

From the result of this study showed that students who have high interest in basketball have an increase in playing basketball is different from students who have a basketball interest is, different from the students who have low interest in basketball. This is evidenced from the score *F* obtained = 8.69> *F* table = 2.62. Thus the null hypothesis (H_0) is rejected which means that students with a high basketball interest have improved basketball playing differently than students with moderate basketball interest and students who have high basketball interest and are increasingly playing different basketball than students with low basketball interest Acceptable truth.

From the result of the research showed that the interaction between the learning approach and the level of interest in basketball is very meaningful. Because *F* obtained = 5.44> *F* table = 2.62. Thus the null hypothesis is rejected. There is a significant interaction between the types of learning approaches and the level of interest in basketball.

4. DISCUSSION

In this research, both in the study of the theory, carry out the approach of learning, and in the data collection in the field and various efforts have been conducted so that the result of research really in accordance with the goals to be achieved, but with some factors as variable intervening that cannot be controlled so the research results have some weaknesses, including- this research is only conducted in SMA Negeri 01 Cipari-Cilacap regency, especially in class XI students with relatively limited sample, so this research has not enough generalized nationally.

There is a possibility that the control sample also performs the same treatment with the treated group as some of the samples are joined in the extracurricular basketball thus affecting the validity of the group treatment. During the implementation of the sample research is not placed at dormitory, so other factors that will affect the result of research, such as nutritional factors, rest, and other experiences allegedly will affect the results of research.

Control of other elements that may affect the improvement of basketball playing result, such as elements of psychological conditions in addition to students' interest, physical condition and also motion capabilities are not taken into account so that these variables will be able to influence the results of research.

5. CONCLUSION

Based on data analysis and discussion that have been disclosed, it can be concluded as follows:

There is an effect between DI and the TGfU approach to the results of playing basketball. The increasing effect of basketball playing resulted from the average DI approach was 0.254 while the average TGfU approach was 0.412. TGfU approach better effect on the results of playing basketball with a difference of 0.158.

There is a significant effect between group of students who have high basketball interest, moderate basketball interest, and low basketball interest in improving basketball learning outcomes. The average comparison of increased basketball outcomes in a group of students with high basketball interest was 1.18 times higher than that of students with moderate basketball interest, while the comparison of the average increase in basketball outcomes in interest groups Basketball is being 1.19 times higher than that of students with low basketball interest.

There is an interaction between the learning approach and basketball interest towards the result of playing basketball, because from the analysis results show that obtained *F* is greater than tabulated *F*. Based on the result of the study, it turns out that students who have high basketball interest with the approach TGfU have increased the result of playing basketball equal to 0.412 better than students with high interest in basketball with DI approach of 0.254. Students with basketball interest in the TGfU approach have a 0.344 basketball game out perform better than students with a moderate basketball interest with a DI approach of 0.229. While students who have low basketball interest with DI approach have increased the result of playing basketball equal to 0.227 better than student with low basketball interest with approach of TGfU equal to 0.202.

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