The Effect of Teaching Games for Understanding (TGFU) Learning Model and Problem-Based Learning (PBL) Model towards the Social Skills and Basketball Playing Skills

Ahmad Nur Sa'bani[1], Nurhadi Santoso[2]

[1,2] Department of Sport Science, Faculty of Sport and Health Science, Yogyakarta State University, Yogyakarta, Indonesia

ABSTRACT: This research aims to determine: (1) the effect of the Teaching Games for Understanding (TGfU) learning model towards the students' social skills, (2) the effect of the Teaching Games for Understanding (TGfU) learning model towards the basketball playing skills, (3) the effect of the Problem Based Learning (PBL) learning model towards the students' social skills, and (4) the effect of the Problem Based Learning (PBL) learning model towards the basketball playing skills. The type of this research was a quasi-experiment using a 2x2 factorial design. The research subjects were 72 eleventh grade students of SMA N 1 Yogyakarta (Yogyakarta 1 High School) from 2 classes: Class XI F 3 with the TGfU model treatment while class XI F 9 with the PBL model. The social skills instrument used the Social Skills Rating System (SSRS) Instrument, and the basketball playing skills instrument used the Game Performance Assessment Instrument (GPAI) test. The data analysis technique used ANCOVA. The research findings reveal that: 1) there is an effect of the Teaching Games For Understanding (TGfU) learning model towards the improving social skills of the students with a significance value of $0.042 < 0.05$ and a percentage of 5.1%. 2) There is an effect of the Teaching Games For Understanding (TGfU) learning model towards the improving basketball playing skills of students with a significance value of 0.000 & $0.000 < 0.05$ and a percentage of 59.9% skills, 110% performance. 3) There is an effect of the Problem Based Learning (PBL) learning model towards the improving social skills of students with a significance value of $0.012 < 0.05$ and a percentage of 5.3%. 4) There is no effect of the Problem Based Learning (PBL) learning model towards the improving social skills of students with a significance value of 0.907 & $0.298 > 0.05$ and a percentage of 0.92% skills, 13.9% performance.

KEYWORD: TGfU, PBL, Social Skills, Playing Skills, Basketball

I. INTRODUCTION

Education is crucial in developing a nation's quality of life since it is fundamental to social, economic, and cultural establishment. A well-distributed education contributes to working opportunity equity, lessening social injustice, and constructing a more inclusive and just society. By enhancing education quality, people can establish more competent workforces, advance research and development, and set smarter and higher-quality people that are projected to elevate their living quality. The attempt to shape students' character in school starts with creating a good environment for them to inflict respect, appreciation, and mutual help on each other (Firdausi & Taufina, 2020). It will succeed when the goal gets the realization and students get involved in society. It indeed agreed with Nurhayati (2020) that as social beings, one needs others to survive, thus it is important for children to have positive social behaviour.

Social skills are the ability possessed by a person to interact and communicate with others. People acquire these skills through a learning process, which later is used to build relationships with their environment. As stated by Kusadi (2020), social skills owned by an individual can be the foundation for establishing good relationships and solving problems to generate good relationships with each other. Social interaction skills are developed from an early age within education in the school environment. As Wulandari (2022) stated, social skills are acquired in several ways. The most common process is learning from peers. In addition, social interaction skills generation is mandatory in the school environment.

Nonetheless, social skills in physical education classes are taught in the class. Physical education allows pupils to participate in physical activities that help them build social skills and communicate well with others. Physical education on the body is the most

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popular and considered a unique contribution of physical education, which includes physical fitness, motor skills, and knowledge of physical fitness and motor skills, all of which lead to an understanding of an active and healthy lifestyle throughout life (Jayul and Irwanto, 2020).

Based on observations collected using basketball game materials, students in class XI at SMA Negeri 1 Yogyakarta were less eager to participate in class activities. The teacher focused most of the class on dull shooting and passing techniques. Teachers should be able to deliver effective, efficient, and inventive teaching to meet several competency-related goals or requirements.

The implementation of monotonous and conventional learning tends to affect student learning outcomes. Using conventional learning models cannot maximize student motor skills and learning outcomes. Learning carried out with good models and approaches not only covers psychomotor and affective aspects but also can also provide cognitive aspects in critical thinking. Based on the analysis of learning outcomes of class XI students of SMA Negeri 1 Yogyakarta on basketball game material, most are still below <50%, meaning that the achievement of student learning outcomes on basketball game material has not met the Learning Objective Achievement Criteria (KKTP).

Teaching Games for Understanding (TGfU) and Problem-Based Learning (PBL) are two learning strategies used to solve the problem. The implementation of this TGfU learning model provides researchers with an overview of how the TGfU learning model will affect students' social skills because the TGfU learning model requires students to work together, communicate, and interact with one another, thereby indirectly improving social skills and basketball playing skills. In line with the realities of the field, students frequently struggle to understand how to play basketball, making it difficult for them to master the basketball curriculum. It is compounded by classifying each student into a group, which, if left alone, will struggle to welcome new students. In addition to this paradigm, another learning model utilized to help with physical education learning is the PBL learning model.

This Problem-Based Learning approach was invented using the concepts proposed by Jerome Bruner. According to (Zulfa, 2023), issue-based learning is taught by presenting a problem, asking questions, and facilitating investigations and discussions. Students with strong academic standing and innovative classes can benefit from the PBL model. The benefits of this methodology include the ability to build student independence by addressing problems that are relevant to students' lives. This demonstrates that PBL is a learning paradigm focused on students' issues. Teachers and students, or students and other students, work together to tackle the difficulties discussed in this concept, which goes beyond merely imparting knowledge.

Based on the explanation above, the researcher attempted to test the Teaching Games for Understanding (TGfU) and Problem-Based Learning (PBL) learning models to evaluate how they affected students' social skills and basketball playing abilities. The TGfU and PBL learning models are intended to enhance students' social skills. They comprehend the concepts of the content being taught and reduce learning challenges to achieve positive learning outcomes. Basketball playing abilities are what this study refers to as learning outcomes.

II. METHOD

This is a quasi-experimental design study, meaning that all intact participants (intact group) will be treated. This study was carried out in the city of Yogyakarta, Special Region Province. Specifically, it was carried out in SMA Negeri 1 Yogyakarta. This study ran from July to August 2024, with four meetings in total. The meetings consist of one the initial test (pretest), three treatment, and one final test (post-test). The subjects are the primary source of research data, including data on the variables researched. The subjects in this study were class XI students from SMA Negeri 1 Yogyakarta, divided into F3 class and F9 class, with 72 students in total. A research instrument is a tool or test used to gather information. This study used Social Scale Rating System (SSRS). Assessment using SSRS focused on various areas. Game Performance Assessment Instrument (GPAI) was used to administer both the Social Skills Test and the Basketball Skills Test.

III. RESULT AND DISCUSSION RESULT

The results of this study cover (1) data result descriptions, (2) prerequisite analysis test, and (3) hypothetic test.

1. Data result descriptions

The data of this study are in pretest and post-test data, which are a general description of each variable related to the study. This study was conducted at SMA Negeri 1 Yogyakarta in 11 graders, classes F3 and F9, totalling 36 students in each class. The pretest data collection began on July 18-19, while the post-test data collection was on August 1-2. The treatment was carried out in three times meetings within 2 weeks.

2. Prerequisite analysis test result

   a. Normality test

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The normality test in this study used the Shapiro-Wilk method. The results of the data normality test contained in each analysis group were carried out using the SPSS version 25.00 for Windows software program with a significance level of 5% or 0.05. The data summary is presented in Table 1 as follows:

Table 1: Normality test result

Variables		Classes	Normality
Social Pretest		TGfU	0.203
		PBL	0.588
Social Post-test		TGfU	0.050
		PBL	0.095
Basketball Skills Pretest	Involvement	TGfU	0.750
		PBL	0.212
	Appearance	TGfU	0.116
		PBL	0.849
Basketball Skills Posttest	Involvement	TGfU	0.138
		PBL	0.195
	Appearance	TGfU	0.808
		PBL	0.444

According to the statistical analysis of the normality test performed using the Shapiro-Wilk test, in all pretest and posttest data of social skills and basketball skills, the results of the data normality test obtained a significance value of $p > 0.05$, indicating that the data is normally distributed. After the research data has been pronounced normal, it will be examined to ensure homogeneity.

b. Homogeneity test

The homogeneity test determines if the data has equal variation or is homogeneous. The homogeneity rule states that if the p-value exceeds 0.05, the test is considered homogeneous. A p-value <0.05 indicates that the test is not homogeneous. Table 2 shows the homogeneity test results for the pretest and post-test of social skills and basketball games:

Table 2: Homogeneity test result

Variables		Homogeneity
Social Pretest		0.256
Social Post-test		0.058
Basketball Skills Pretest	Involvement	0.70
	Appearance	0.771
Basketball Skills Post-test	Involvement	0.186
	Appearance	0.611

Based on the statistical analysis of the homogeneity test conducted using the Levene Test. Both pretest and posttest results based on mean findings indicate higher than <0.05, indicating homogeneous variance within the data set. Thus, the population has the same variance and is homogeneous.

c. Hypothetic test

The hypothesis in this study was investigated using a paired sample test and an independent t-test with SPSS 25. The similarities between the pretest – post-test scores of students in the TGfU and PBL groups can be determined by comparing the post-test scores of each group. After performing a normality and homogeneity test on the pretest – post-test data, it was discovered that the distribution of the pretest – post-test scores was normally and homogeneously distributed, so parametric test statistics, specifically the t-test, were used for testing with a significance level of 5%.

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Table 3 t-Test pretest and post-test results

Variable		Sig. (2-tailed)	Mean			Percentage %
			Pretest	Posttest	Dif.	
Pretest – Post-test Social TGfU		0.042	72.73	76.5	3.76	5.1%
*Pretest – Post-tes*t Social PBL		0.012	73.52	77.43	3.90	5.3%
Pretest – Posttest basketball skills TGfU	Skills	0.000	11.81	18.89	7.08	59.9%
	Performance	0.000	1.46	3.09	1.63	110%
Pretest – Post test basketball skills PBL	Skills	0.907	15.00	15.14	0.13	0.92%
	Performance	0.298	2.11	2.41	0.29	13.9%

i. The influence of the Teaching Games For Understanding (TGfU) learning model on students' improving social skills.

Based on the results of the analysis in Table 3 above, it implied that the Sig value (2-tailed) in the pretest and posttest of the TGfU class social has a mean difference of 3.76 or, if expressed as a percentage of 5.1% and a significance value of 0.042 <0.05 indicates that there is a significant difference. Thus, the alternative hypothesis (Ha) shows that "There is an influence of the Teaching Games For Understanding (TGfU) learning model on improving social skills in students." **Accepted**.

ii. The influence of the Teaching Games For Understanding (TGfU) learning model on students' improving basketball skills.

Based on the results of the analysis in Table 3 above, it implied that the Sig value (2-tailed) in the pretest and posttest of basketball skills, both playing involvement and playing performance of the TGfU class, have a mean difference of 7.08 for skills and 1.63 for playing performance, or if expressed as a percentage of 59.9% and 110% and the significance value for both is 0.000 <0.05, indicating that there is a significant difference. Thus, the alternative hypothesis (Ha) said that "There is an influence of the Teaching Games For Understanding (TGfU) learning model on improving basketball playing skills in students." **Accepted**.

iii. The influence of the Problem-Based Learning (PBL) learning model on students' improving social skills.

Based on the analysis results in Table 3 above, it implied that the Sig value (2-tailed) in the pretest and post-test of PBL class social skills has a mean difference of 3.90 or, if presented as 5.3% and a significance value of 0.012 <0.05. indicating that there is a significant difference. Thus, the alternative hypothesis (Ha) said that "There is an influence of the Problem-Based Learning (PBL) learning model on improving social skills in students." **Accepted**.

iv. The influence of the Problem-Based Learning (PBL) learning model on students' improving basketball skills.

Based on the results of the analysis in Table 3 above, it implies that the Sig (2-tailed) value in the pretest and posttest of basketball skills, both playing involvement and playing performance of the PBL class, has a mean difference of
0.13 for skills and 0.29 for playing performance or if presented as 0.92% and 13.9% and a significance value of 0.907> 0.05 for skills and 0.298> 0.05 for performance shows that there is no significant difference. Thus, the alternative hypothesis (Ho) stated that "There is no effect of the Problem-Based Learning (PBL) learning model on improving social skills in students." **Accepted**.

DISCUSSION

The TGfU learning model influence for the students' social skills.

According to the findings of the analysis, the TGfU learning model has an impact on increasing students' social skills, as evidenced by the results of the t-test done on the pretest and post-test results of social skills using the Social Scale Rating System (SSRS) questionnaire. The SSRS assessment focusses on various categories, including Social Skills, which is made up of sub-indicators such as cooperation, assertiveness, empathy, and self-control. The Teaching Games for Understanding (TGfU) learning paradigm can help students enhance their social skills since it emphasises learning through games and real-world settings that encourage students to interact.

The influence of the Teaching Games For Understanding (TGfU) learning model on improving basketball playing skills.

According to the analysis findings, the TGfU learning paradigm influences and enhances students' social skills. This fact is supported by the results of the t-test on the pretest and post-test results of basketball playing skills using the Game Performance Assessment Instrument (GPAI). In other words, this learning style has a big influence on students' basketball skills. This effect is

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expected to occur since the TGfU learning model is novel for pupils. The students feel eager and love learning basketball while using the game-drill-game strategy. GPAI is a tool for assessing game-playing skills and tactical knowledge in TGfUbased games. GPAI works by observing player performance in real-game circumstances and assessing characteristics such as decision-making, team support, and tactical awareness. According to Webb (2009), TGfU is not the only pedagogical approach for teaching the game, but it is beneficial in terms of student learning results. This reasoning leads to the conclusion that the adoption of the TGfU model in learning has an impact on student skill development, knowledge, and playing performance. Awareness of game tactics or techniques must be aimed at improving playing abilities. As a result of the above discussion, it is possible to conclude that TGfU learning can help XI-grade students enhance their basketball skills.

The influence of the Problem-Based Learning (PBL) learning model on improving social skills in students.

According to the results of the data analysis, the PBL learning approach improves students' social skills. Problem-Based Learning (PBL) in Physical Education and Health (PEH) in secondary schools (SHS) is a method that places a premium on solving real-world problems as the primary learning objective. PBL requires students to solve real-world problems or difficulties through study, discussion, and cooperation. Students, for example, may be challenged to build a fitness program suitable for different age groups or to devise a game plan to encourage teamwork. This method not only helps students build a thorough understanding of sports and health ideas, but it also encourages critical and creative thinking. The link between PBL and high school students' social skills is quite important. The PBL approach encourages students to work in groups, discuss ideas, and collaborate while developing solutions to issues. Deep (2019) found that students who participated in PBL improved significantly in communication and cooperation abilities. Participation in PBL projects allows students to engage more actively, share ideas, and settle problems constructively. This study discovered that the PBL method not only increases students' conceptual comprehension but also their social skills, which are essential for career success.

The influence of the Problem-Based Learning (PBL) learning model on improving social skills in students.

The data analysis utilizing the t-test revealed that PBL did not significantly improve basketball skills. PBL frequently focuses on solving theoretical problems and real-world scenarios that need investigation and analysis. Basketball, on the other hand, is a practical skill that requires extensive physical training. PBL may be less effective in this setting since technical skills like dribbling, shooting, and passing necessitate a lot of hands-on practice and repetition, which is incomprehensible through discussion and problem-solving alone. PBL can assist coaches in better understanding and implementing holistic ideas in training exercises. PBL promotes athletes to solve real-world problems, collaborate, and put theory into practice. As a result, combining PBL with other learning approaches, such as Direct Instruction, which focuses on technique demonstration and practical exercises, can be more effective at improving basketball abilities. This combination enables students to master not just the strategies and ideas underlying the game, but also the technical abilities required to succeed on the court.

IV. CONCLUSIONS

The conclusion in this study is divided into four parts, including:

1. The Teaching Games for Understanding (TGfU) learning paradigm influences students' social skills.
2. The Teaching Games for Understanding (TGfU) learning approach has an impact on basketball skill development.
3. The problem-based learning (PBL) paradigm has an impact on students' social skills.
4. There is no effect of the Problem-Based Learning (PBL) learning approach on basketball abilities.

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