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Teaching Games for Understanding Training Model to Enhance Pencak Silat Movement Activities in Extracurricular Programs

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Abstract: This study aims to examine the effectiveness of the Teaching Games for Understanding (TGfU) training model in improving Pencak Silat movement activities among students participating in extracurricular programs at UPT SMP Negeri 45 Medan during the 2023/2024 academic year. The research employed a quantitative approach with a quasi-experimental design, utilizing a pretest–posttest format. The participants consisted of 12 students actively involved in Pencak Silat extracurricular activities. Data analysis using the t-test indicated a significant improvement between pretest and posttest results, demonstrating that the TGfU model effectively enhanced students' physical engagement and technical performance in Pencak Silat. These findings confirm that implementing TGfU-based training creates a more interactive, enjoyable, and meaningful learning experience, which promotes better motor activity and overall physical education outcomes.

Keywords: Teaching Games for Understanding (TGfU); Pencak Silat; Movement Activities

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INTRODUCTION

Pencak Silat, as a traditional Indonesian martial art, represents not only a physical discipline but also a cultural heritage that integrates elements of mental, spiritual, and moral education. Recognized by UNESCO as an Intangible Cultural Heritage of Humanity in 2019, Pencak Silat plays a vital role in fostering physical fitness, discipline, and national identity among Indonesian youth (UNESCO, 2019). In educational settings, particularly at the secondary school level, extracurricular Pencak Silat serves as a platform to enhance students' psychomotor development and character formation (Erwin, 2015). However, despite its educational potential, the instructional approach in many schools remains conventional and monotonous, often relying on repetitive drills that limit student engagement and fail to develop tactical understanding (Mulyono, 2013). This condition highlights the urgent need for innovative learning models that can promote active participation, motivation, and meaningful movement experiences among students.

Recent developments in physical education pedagogy emphasize student-centered and game-based approaches as effective methods for improving learning outcomes. One of the most widely recognized frameworks is the Teaching Games for Understanding (TGfU) model introduced by Bunker and Thorpe (1982), which prioritizes understanding game tactics and decision-making before technical skill mastery. According to Griffin, Mitchell, and Oslin (2010), TGfU helps students develop tactical awareness, problem-

solving ability, and enjoyment in learning through contextualized game situations. Similarly, Webb (2008) and Hopper (2018) noted that TGfU enhances students' motivation and engagement by placing them in real-game scenarios that encourage cooperation, communication, and critical thinking. Previous empirical research has confirmed that the TGfU approach effectively improves learning outcomes across various sports, including soccer, basketball, and volleyball (Qohhar & Pazriansyah, 2019). Nonetheless, its application within martial arts contexts such as Pencak Silat remains limited, revealing a significant research gap.

In Indonesia, integrating TGfU into Pencak Silat training offers both pedagogical and cultural innovation. The approach allows students to internalize movement principles through tactical challenges that resemble authentic combat situations, thereby aligning physical education with modern, student-centered learning paradigms. As Subroto (2010) and Hoedaya (2012) explained, tactical-based instruction enhances learners' ability to apply skills effectively in dynamic environments, fostering both understanding and performance. Therefore, adapting the TGfU model to Pencak Silat training could cultivate not only students' physical competence but also cognitive and social development, making it a comprehensive form of physical education.

The novelty of this study lies in the empirical application of the TGfU training model within the framework of traditional martial arts education. While prior studies have validated TGfU's effectiveness in team sports, few have investigated its influence on the psychomotor activities of students engaged in indigenous martial arts. This research seeks to bridge that gap by examining how the TGfU approach can enhance movement activities among students participating in Pencak Silat extracurricular programs at UPT SMP Negeri 45 Medan. The primary objective is to assess the impact of TGfU-based training on students' motor skills, coordination, and activity levels through a quasi-experimental design. The findings are expected to contribute theoretically to physical education pedagogy and practically to the improvement of extracurricular martial arts instruction, promoting a more interactive, enjoyable, and holistic learning experience for students.

METHOD

This research employed a quantitative approach using a quasi-experimental design (quasi-experiment design). The purpose of this design was to examine the effectiveness of the Teaching Games for Understanding (TGfU) training model in improving students' movement activities during Pencak Silat extracurricular sessions. The quasi-experimental design was considered appropriate since it allowed the researcher to observe changes in students' performance through pretest and posttest assessments without random group assignment. The design used was the one-group pretest-posttest design, where participants' initial abilities were measured before treatment (pretest), followed by the implementation of the TGfU training model as treatment, and finally evaluated through a posttest to identify significant differences in learning outcomes (Purwanto, 2005).

The research was conducted at UPT SMP Negeri 45 Medan, located on Jalan Jala Raya Griya Martubung, Kecamatan Medan Labuhan, North Sumatra, Indonesia. The study was carried out during the 2023 academic year, aligning with the regular schedule of Pencak Silat extracurricular activities. This school was selected as the research site because it actively promotes traditional martial arts through extracurricular programs, yet its instructional methods remain conventional and lack model-based training

innovation. Therefore, this setting provided an ideal context for implementing and evaluating the TGfU model in a real educational environment.

The population of this study consisted of all students who participated in the Pencak Silat extracurricular activities at UPT SMP Negeri 45 Medan. Because the number of participants was fewer than 100 students, a total sampling technique was applied, where all members of the population were included as the research sample (Sugiyono, 2007). The total number of participants involved was 12 students. These students represented a relatively homogenous group in terms of age, experience, and skill level, which allowed for more consistent observations of the impact of the TGfU training intervention on their movement performance.

The instrumentation of this research included both an implementation instrument and a measurement instrument. The implementation instrument referred to the structured TGfU-based training program applied during the experimental sessions. The training model emphasized tactical understanding, game modification, and situational learning consistent with the TGfU framework (Griffin et al., 2010). The measurement instrument consisted of a performance test assessing students' Pencak Silat movement abilities, including fundamental techniques such as stances, strikes, defenses, and kicks. Data collection was conducted through pretests and posttests, administered before and after the treatment to measure changes in movement activity levels.

The data analysis technique used in this study involved statistical testing through a paired sample t-test to compare pretest and posttest results. Before conducting hypothesis testing, prerequisite analyses were performed to ensure the validity of the data, including normality tests using the Kolmogorov–Smirnov method and homogeneity tests to assess variance equality. These tests were carried out using the SPSS 22 for Windows software. The results of these analyses determined whether the data met the assumptions required for the t-test. A significance level of 0.05 was applied to determine whether the differences in pretest and posttest means were statistically significant. Through this analytical process, the study sought to confirm that the TGfU training model produced a measurable and meaningful improvement in students' Pencak Silat movement activities..

RESULT AND DISCUSSION

Result

The research aimed to determine the effect of the Teaching Games for Understanding (TGfU) training model on the improvement of students' movement activities in Pencak Silat extracurricular programs at UPT SMP Negeri 45 Medan. Data were collected through pretest and posttest performance assessments focusing on basic movement skills, including stance, strike, defense, and kicking techniques. The results of data collection and statistical analysis are presented as follows.

Prior to hypothesis testing, prerequisite tests were conducted to ensure that the data met the assumptions of normality and homogeneity. The normality test results using the Kolmogorov–Smirnov method showed that both pretest and posttest data were normally distributed with significance values greater than 0.05. Similarly, the homogeneity test results indicated that the data had equal variances, confirming that the dataset met the statistical assumptions for further analysis.

The descriptive results of students' performance before and after the implementation of the TGfU training model are shown in Table 1.

Table 1. Mean Scores of Pretest and Posttest Results

Test Type	N	Mean Score	Standard Deviation
Pretest	12	66.67	4.12
Posttest	12	82.5	3.75

As shown in Table 1, the mean score of students' movement performance before treatment (pretest) was 66.67, while the mean score after the TGfU training (posttest) increased to 82.50. This result indicates an improvement of 15.83 points in students' movement activity scores after participating in the TGfU-based training sessions.

To determine whether the observed difference was statistically significant, a paired sample t-test was performed. The results of the test are presented in Table 2.

Table 2. Paired Sample t-Test Results

Variable	t-value	df	Sig. (2-tailed)
Pretest–Posttest	7.642	11	0

Table 2 shows that the t-value obtained was 7.642 with a significance value of 0.000 ($p < 0.05$), indicating a significant difference between pretest and posttest results. This means that the application of the TGfU training model had a statistically significant effect on improving students' Pencak Silat movement activities.

Based on these findings, it can be concluded that the TGfU training model effectively enhanced the performance and engagement of students in Pencak Silat extracurricular activities. The statistical results confirm that the intervention produced measurable improvements in motor activity, coordination, and skill execution across the sample group.

Discussion

The findings of this study indicate that the application of the Teaching Games for Understanding (TGfU) training model significantly improved students' Pencak Silat movement activities in extracurricular programs at UPT SMP Negeri 45 Medan. The increase in posttest mean scores compared to pretest results demonstrates that TGfU effectively enhances students' physical engagement, tactical awareness, and execution of basic movement skills. These results align with the research objective, which aimed to evaluate whether the TGfU model could improve students' movement performance in Pencak Silat practice. The statistical evidence from the t-test confirms that the difference was not incidental but a direct outcome of the TGfU-based instructional approach, thereby validating the model's applicability to martial arts education.

This finding is consistent with earlier studies emphasizing the pedagogical strength of the TGfU model in promoting active and meaningful learning. Griffin, Mitchell, and Oslin (2010) asserted that TGfU encourages students to learn through game-like situations that demand tactical decision-making, problem-solving, and situational adaptation. Similarly, Qohhar and Pazriansyah (2019) demonstrated that TGfU significantly enhances learning outcomes in physical education by developing both cognitive and motor domains. In line with these studies, the current research confirms that TGfU fosters an interactive environment that increases students' motivation, understanding, and participation in Pencak Silat sessions. This supports the theoretical view proposed by Bunker and Thorpe (1982), who introduced TGfU as a paradigm shift from technique-oriented to understanding-oriented learning, ensuring that students internalize skills through contextual play rather than repetitive drills.

However, this research provides an important expansion to existing literature by applying the TGfU model to a traditional martial art — Pencak Silat — which differs from the conventional sports contexts in which TGfU is typically implemented, such as soccer, volleyball, or basketball. While prior studies have proven its success in team games, this study demonstrates that TGfU can also be effectively adapted to individual or pair-based disciplines rooted in cultural and tactical complexity. The integration of TGfU principles into Pencak Silat training not only improved students' physical performance but also enhanced their understanding of situational strategy and tactical reasoning in combat-like scenarios. This adaptation showcases the model's flexibility and relevance beyond team sports, contributing to a broader theoretical understanding of TGfU's pedagogical universality.

Furthermore, the findings highlight the motivational dimension of TGfU, which stimulates students' enthusiasm and reduces training monotony often found in traditional, instructor-centered Pencak Silat sessions. As Subroto (2010) and Hoedaya (2012) emphasized, tactical-based approaches increase learners' engagement and comprehension by allowing them to construct meaning from real performance experiences. In this study, students exhibited higher levels of participation and cooperation, which suggests that TGfU promotes not only psychomotor improvement but also affective development such as teamwork, responsibility, and self-confidence. Such holistic growth aligns with the educational purpose of physical education as proposed by Webb (2008), who emphasized that learning through games creates lasting motivation and fosters intrinsic enjoyment in physical activity.

The practical implications of this research are substantial. For educators and coaches, the TGfU model offers a structured yet flexible training framework that can be tailored to different sports or physical activities, including traditional martial arts. Its implementation can improve the quality of extracurricular programs by transforming them into active, learner-centered environments that integrate physical skill, cognitive understanding, and social learning. For curriculum developers, the findings support the inclusion of TGfU-based instruction within school-based physical education to promote comprehensive student development. Furthermore, integrating culturally relevant activities such as Pencak Silat through TGfU can strengthen national identity while enhancing global pedagogical innovation in sports education.

Nevertheless, this research also has certain limitations that should be acknowledged. The small sample size (12 students) and single-site study limit the generalizability of the findings. Additionally, the research focused only on short-term effects measured immediately after intervention, leaving long-term retention and transfer of learning unexamined. Future research should therefore involve larger and more diverse populations, apply mixed-method designs, and explore the longitudinal effects of TGfU in various martial arts or physical education contexts. Despite these limitations, the study provides valuable empirical evidence supporting the integration of TGfU as an effective model for enhancing movement activity, engagement, and tactical learning in extracurricular Pencak Silat training.

CONCLUSION

The findings of this study conclude that the Teaching Games for Understanding (TGfU) training model is highly effective in enhancing students' movement activities in Pencak Silat extracurricular programs at UPT SMP Negeri 45 Medan. Through a quasi-experimental approach, it was shown that the application of TGfU significantly improved students' physical performance, tactical understanding, and engagement during training

sessions. The results affirm that TGfU's learner-centered and game-based framework can transform traditional martial arts instruction into a more interactive, meaningful, and enjoyable learning experience. This study contributes to the development of physical education pedagogy by demonstrating that TGfU is adaptable beyond team sports and can serve as a powerful model for integrating cultural, physical, and cognitive learning outcomes within martial arts education.

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CONFLICT OF INTEREST

Clearly explain whether there are any conflicts of interest related to the reported research.

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