

Utilization of Physical Literacy-Based Teaching Games for Understanding (TGfU) Learning Model for Improving the Basic Moves Skills of Second Grade Students of Elementary School

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ABSTRACT: This research aims to: 1) determine the basic moves skills of second-grade students at Muhammadiyah Sidorejo Elementary School, Semin, through the implementation of a physical literacy-based Physical Education (PE) learning model and 2) determine and improve the basic movement skills of second-grade students at Muhammadiyah Sidorejo Elementary School, Semin after participating in learning with TGfU model based on physical literacy in each cycle. The type of this research was Classroom Action Research (CAR) used the Kemmis & McTaggart model. The research subjects were 23 students at Muhammadiyah Sidorejo Elementary School, Semin. This research was conducted in two cycles, focusing on the implementation of PE learning with a physical literacy-based TGfU model to improve basic moves skills. The data collection technique employed a quantitative approach, with data obtained through a pre-test and a post-test. The instrument used the Test of Gross Motor Development-2 (TGMD-2), which covered locomotor skills and object-control skills. The data analysis technique used NormReferenced Assessment (PAN), with categorization based on the mean and standard deviation to determine the scoring criteria using Microsoft Excel 2021. The research findings reveal that 43% of students are in the "High" level, while 10 students that previously in the "Low" level improve to the "High" level. The overall average score increases to 75.04, exceeding the Minimum Competency (KKM) threshold of 70. The number of students achieving scores above the KKM increases to 16 out of a total of 23 students. This means that: 1) there is an improvement in the basic moves skills of second-grade students after the implementation of the TGfU learning model based on physical literacy, 2) second-grade students show an increase in the comprehension and implementation of physical literacy after the implementation of TGfU learning based on physical literacy.

KEYWORDS: Basic Moves, Elementary School, Physical Education, Physical Literacy, TGfU

INTRODUCTION

The rapid advancement of technology has profoundly transformed children's daily routines, shifting them from physically active play toward increasingly sedentary behaviors. The pervasive use of digital devices, social media platforms, and online gaming has significantly diminished children's participation in physical activity, thereby impeding the development of their fundamental movement skills (Murdani, 2023; Purwijayanti, 2021). Empirical evidence indicates that prolonged exposure to gadgets exerts detrimental effects on both motor development and overall health in children (Rusmianto, 2020; Goodway, 2019). This phenomenon is especially alarming for elementary school students, who are in the critical developmental stage often referred to as the "golden age" of growth and motor skill acquisition (Widiarti, 2021; Usup, 2022).

Physical Education (PE) constitutes a crucial component in fostering students' physical literacy and motor competence (Battista, 2019). In the Indonesian context, however, PE in elementary schools is frequently marginalized, receiving considerably less emphasis than core academic subjects such as mathematics and language (Paramitha, 2018; Romero, 2017). Field observations at Muhammadiyah Sidorejo Elementary School, Semin, revealed that second-grade students had limited opportunities to cultivate their motor skills, a condition attributable to the absence of specialized PE instructors, insufficient pedagogical variation, and the prevailing prioritization of academic achievement over physical development. Findings from the Test of Gross Motor Development-2 (TGMD-2) further substantiated these concerns, indicating that 57% of the students exhibited deficient levels of fundamental movement skills, with only 3 out of 23 surpassing the minimum mastery criterion (KKM = 70).

Fundamental movement skills (FMS) encompassing locomotor, non-locomotor, and manipulative abilities constitute the essential foundation for children's sustained engagement in physical activity across the lifespan (Nugraha, 2022; Rathunde, 2020).

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Inadequate development of these skills can predispose children to long-term challenges in achieving physical competence and maintaining overall health (Wainwright, 2020). Addressing this concern necessitates the implementation of innovative pedagogical models that effectively integrate physical literacy with game-based learning strategies. Physical literacy, as conceptualized by the International Physical Literacy Association (2020) and further elaborated by Lundvall (2021), encompasses a holistic constellation of attributes, including motivation, confidence, physical competence, and knowledge, which collectively enable individuals to engage meaningfully and consistently in physical activity throughout their lives.

One pedagogical approach that has gained considerable attention is the *Teaching Games for Understanding* (TGfU) model, which prioritizes tactical awareness, decision-making, and comprehension of the underlying “why” of movement prior to emphasizing technical execution (Bunker & Thorpe, 1982; Pan, 2023). When integrated with the principles of physical literacy, TGfU offers rich and meaningful movement experiences that simultaneously nurture cognitive and physical dimensions of learning (Prayadi, 2024; Romi, 2016). Such an approach holds significant promise for advancing students’ motor development while concurrently fostering enjoyment, sustained engagement, and lifelong participation in physical activity (Gustiawati, 2017). Therefore, this study aims to investigate:

1. How are the fundamental movement skills of second-grade students at Muhammadiyah Sidorejo Elementary School, Semin after the implementation of a Physical Literacy-based TGfU learning model?
2. How does the Physical Literacy-based TGfU learning model improve students’ fundamental movement skills across learning cycles?

By addressing these research problems, the study is expected to contribute to the development of more effective PE practices in elementary schools, particularly in contexts where traditional methods have not sufficiently supported students’ motor development.

RESEARCH METHODS

This study employed a Classroom Action Research (CAR) design, also known as Penelitian Tindakan Kelas (PTK), which is appropriate for addressing practical classroom problems through systematic interventions (Kemmis & McTaggart, 1988; Anwar, 2014). CAR is characterized by its cyclical process of planning, acting, observing, and reflecting, enabling continuous improvement of teaching practices. The research was collaborative and participatory, involving the researcher as the main implementer and the classroom teacher as collaborator and evaluator.

The intervention followed the Kemmis & McTaggart model, consisting of three cycles. Each cycle included two learning sessions, structured around the development of fundamental movement skills (FMS) through the Teaching Games for Understanding (TGfU) model integrated with physical literacy principles. At the beginning of the study, a pre-test using the Test of Gross Motor Development-2 (TGMD-2) was administered to identify students’ initial motor abilities. Each cycle concluded with a post-test and reflection stage, guiding improvements for subsequent cycles. The intervention was terminated once the set indicators were achieved (mean score ≥ 70 and at least 50% of students meeting the mastery criteria).

RESULTS

The study aimed to examine the improvement of second-grade students’ fundamental movement skills (FMS) through the implementation of a Physical Literacy-based Teaching Games for Understanding (TGfU) learning model at Muhammadiyah Sidorejo Elementary School, Semin. Results are presented from the pre-test (pre-action) and three cycles of intervention using the Test of Gross Motor Development-2 (TGMD-2).

Pre-Action (Pre-Test)

Prior to the intervention, both observational data and TGMD-2 assessments revealed that students’ fundamental movement skills were substantially below the expected standard. Of the 23 students assessed, only 3 (13%) achieved scores surpassing the minimum mastery criterion (KKM = 70), whereas the majority exhibited markedly low performance, with an average score of 47.78 and 57% categorized within the “low” classification. These findings underscore the inadequacy of structured Physical Education instruction and highlight the absence of physical literacy components within the school’s pedagogical practices.

Cycle 1 Results

The first cycle introduced TGfU-based activities focusing on locomotor (walking), non-locomotor (bending), and simple manipulative (throwing and catching) movements.

- 1) The average score increased to 66.57.
- 2) 9 students (39%) achieved scores ≥ 70 , while 14 students remained below KKM.
- 3) Distribution: 9% in “very high,” 26% in “high,” 13% in “moderate,” and 52% still in “low” category.

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Although improvements were observed compared to the pre-test, over half of the students were still in the low category, highlighting the need for further instructional adjustments.

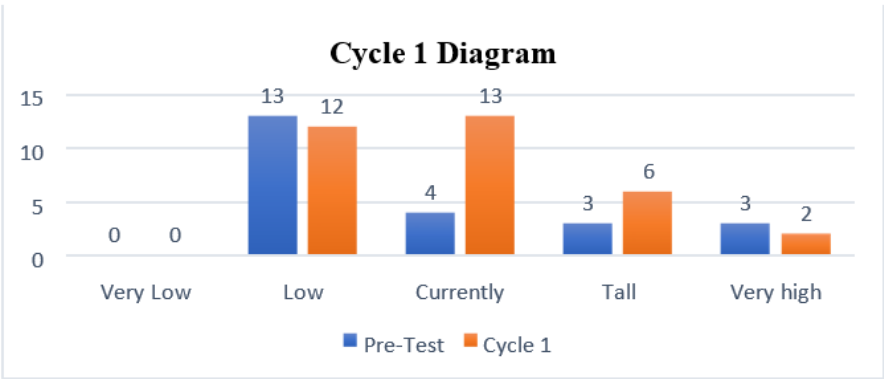


Figure 1. Cycle 1 Comparison Diagram

Cycle 2 Results

In the second cycle, activities were optimized by enhancing physical literacy elements such as motivation, confidence, and more contextual game variations.

- 1) The mean score increased significantly to 75.04.
- 2) 16 students (70%) achieved scores ≥ 70 , surpassing the success indicator of at least 50% mastery.
- 3) Distribution: 43% in “high,” 26% in “moderate,” 26% in “low,” and 4% in “very low.”

Compared to Cycle 1, the number of students in the low category decreased, and overall performance improved, indicating the effectiveness of the revised learning strategies.

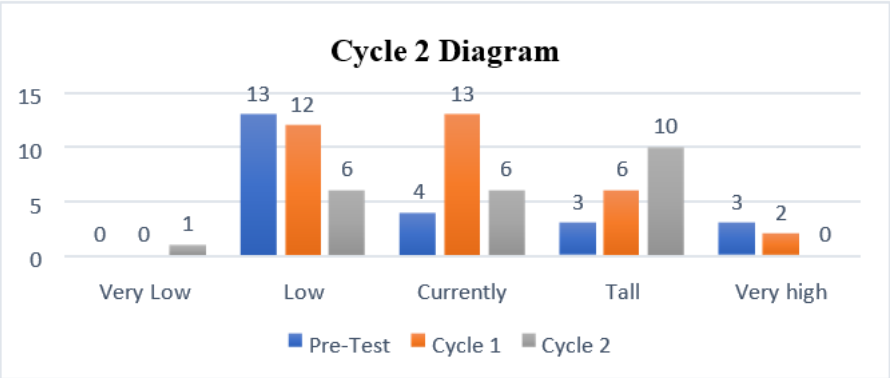


Figure 2. Cycle 2 Comparison Diagram

Summary of Improvements

The results across cycles demonstrated a consistent upward trend in students’ FMS:

- 1) From a mean score of 47.78 (pre-test) $\rightarrow$ 66.57 (Cycle 1) $\rightarrow$ 75.04 (Cycle 2).
- 2) Percentage of students achieving mastery (≥ 70): from 13% (pre-test) $\rightarrow$ 39% (Cycle 1) $\rightarrow$ 70% (Cycle 2).

This indicates that the integration of TGfU with physical literacy principles effectively enhanced students’ locomotor, nonlocomotor, and manipulative skills.

DISCUSSION

The findings of this study demonstrate that the application of a Physical Literacy-based Teaching Games for Understanding (TGfU) model significantly improved the fundamental movement skills (FMS) of second-grade students at Muhammadiyah Sidorejo Elementary School, Semin. Prior to the intervention, students’ average score ($M = 47.78$) was categorized as low, with only 13% achieving the minimum mastery criteria ($KKM = 70$). After two cycles of implementation, the mean score increased to 75.04, with 70% of students meeting the mastery criteria. These results indicate that the integration of TGfU and physical literacy effectively enhances students’ locomotor, non-locomotor, and manipulative skills.

Improvement of Fundamental Movement Skills after TGfU-based Physical Literacy

The pre-test data revealed that the majority of students had limited mastery of basic motor patterns, a finding consistent with previous research showing that lack of structured physical education and excessive screen use hinder motor development in children (Goodway, 2019; Murdani, 2023). Following the intervention, the distribution of performance categories shifted

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substantially, from 57% in the “low” category during pre-test to 43% in the “high” category by the end of Cycle 2. This shift suggests that TGfU-based physical literacy provides both structured practice and contextualized play, enabling students to experience meaningful learning.

These results align with Carl’s (2022) systematic review, which concluded that structured physical literacy interventions enhance both motor competence and motivation in children. The focus on motivation, confidence, and understanding core dimensions of physical literacy (Lundvall, 2021; International Physical Literacy Association, 2020) proved to be key factors in sustaining student engagement.

Improvement across Cycles

The progression from Cycle 1 (M = 66.57, 39% mastery) to Cycle 2 (M = 75.04, 70% mastery) illustrates the iterative effectiveness of Classroom Action Research (Kemmis & McTaggart, 1988). Modifications made after Cycle 1 such as diversifying game variations, providing individualized feedback, and optimizing time management resulted in significantly higher mastery levels. These improvements are consistent with Hammam’s (2024) study, which demonstrated that playful learning strategies improved mastery rates from 66% in Cycle 1 to 83.33% in Cycle 2, and with Shakespeare’s (2017) findings on the use of simple modified teaching aids that increased mastery from 30% pre-cycle to 87% by Cycle 2.

The uniqueness of this study lies in combining TGfU with physical literacy, making the intervention more holistic than models focusing solely on skill drills. TGfU promotes tactical awareness and decision-making (Bunker & Thorpe, 1982; Pan, 2023), while physical literacy develops motivation, confidence, and lifelong engagement in physical activity (Prayadi, 2024; Romi, 2016). This synergy led to not only improved motor competence but also enhanced participation and enjoyment, as observed in students’ enthusiasm during activities such as “Three Zones Movement Mission” and “Three Challenges Arena.”

Implications

The study’s results highlight the importance of adopting innovative pedagogical models in elementary physical education. The TGfU-based physical literacy model addresses not only physical skill development but also cognitive and affective domains, offering a comprehensive approach to child development. In contexts where PE often receives less emphasis than academic subjects, this model can ensure that students achieve essential motor competence, forming the basis for lifelong physical activity.

CONCLUSIONS

The findings confirm that the Physical Literacy-based TGfU model is an effective approach to improving elementary school students’ motor development. The model’s emphasis on meaningful play, tactical awareness, and the affective dimensions of physical literacy (motivation and confidence) made the learning process more engaging, enjoyable, and developmentally appropriate. Thus, the research hypothesis (H₁) is accepted, as the intervention fulfilled all three success indicators set in this study.

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