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OPTIMISING LOCOMOTOR BASIC MOTION LEARNING OUTCOMES THROUGH THE "MOTION CIRCUIT" PLAYING MODEL FOR GRADE 3 STUDENTS

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Abstract Developing basic locomotor skills is crucial for elementary students, yet conventional teaching methods at SDN 1 Boyolali have led to low engagement and suboptimal outcomes. This study explores the "Motion Circuit" play-based model as a solution, using fun and interactive activities to create a more engaging learning environment for locomotor skills. Through Classroom Action Research (CAR), the model is applied in planning, action, observation, and reflection cycles, allowing for real-time assessment and refinement of teaching strategies. CAR's structured, collaborative approach supports skill acquisition and effective learning, which the "Motion Circuit" model aims to achieve at SDN 1 Boyolali. Over two research cycles, results showed a significant increase in competencies across affective, cognitive, and psychomotor domains, with outcomes of 100% affective, 82.86% cognitive, and 97.14% psychomotor benchmarks achieved by Cycle II. This engaging model proved highly effective for improving student motivation, comprehension, and physical skills, making it a valuable alternative to traditional Physical Education methods by promoting skill acquisition and a positive learning attitude.

Keywords: Basic locomotor skills; Elementary students; Engagement in learning; Educational innovation

INTRODUCTION

Developing basic movement skills, especially locomotor skills such as running, jumping, and jumping, is essential for elementary school students. These skills are fundamental for more complex physical activities and sports (Siregar et al., 2021). An engaging and effective instructional approach is needed to improve the learning outcomes of these critical motor skills. One promising strategy is to use a play-based learning model, which has been shown to stimulate students' interest and improve skill acquisition (Donnelly & Mueller, 2018). In this study, we investigated the impact of the application of the play-based model "Motion Circuit" on the learning outcomes of basic locomotor motor skills for grade 3 students of SDN 1 Boyolali. Previous studies have shown the benefits of combining fun games and activities to improve the learning of basic locomotor skills among elementary school students (Handayani, 2020).

A special model that stands out is "Motion Circuits," a play-based approach that incorporates motion-based activities designed to optimise the learning of locomotive skills in 3rd graders (Hernawan et al., 2019).

The "Motion Circuit" approach engages students in a fun and active learning process (Jariono et al., 2021). It discusses some challenges faced in physical education programs, such as limited school facilities, inadequate models for teaching basic motor skills, and improving teachers' understanding of motor skills development (Arufe-Giráldez et al., 2023). The "Motion Circuit" play-based approach addresses these challenges by creating an engaging and dynamic learning environment for students.

In Physical Education lessons, learning is mostly carried out through practical activities in the field (Humphries et al., 2002). Physical Education is crucial in supporting students' physical, psychological, and motor skills development while promoting values such as sportsmanship and healthy lifestyle habits (Annisa Ibnus, 2020). Teachers are responsible for imparting these basic movement skills to elementary school students (Ramadan et al., 2020). However, at SDN 1 Boyolali, the conventional teaching methods used in Physical Education, especially for third-grade

students, have produced suboptimal results for locomotor skills such as walking, running, and jumping.

Recent observations show that students struggle to understand these basic locomotor skills, directly affecting their learning outcomes. In the formative assessment, only 60% of the 35 students achieved the minimum level of competence, with 14 students still needing an improvement in their ability to perform locomotor movement variations. Although third-grade students at SDN 1 Boyolali generally show good moral and behavioural qualities, their enthusiasm for PJOK lessons—especially those focusing on locomotor skills—remains low.

The repetitive and monotonous approach to teaching has led to boredom, reducing their motivation and, consequently, their performance in this field. An innovative approach is needed to overcome this problem. The game model "Motion Circuit" is proposed as a solution to create a more engaging and dynamic learning environment. This model is expected to increase students' interest, motivation, and overall performance in learning locomotive skills by incorporating fun and interactive activities.

METHOD

The proposed game-based model, known as the "Motion Circuit," involves engaging movement-focused activities aimed at enhancing students' interest and improving their mastery of locomotor skills. Research shows that play-based learning strategies like this model can effectively promote skill acquisition and increase student motivation.

Given the context and challenges identified, adopting research methods that allow for the observation, evaluation, and direct refinement of this innovative approach in a real classroom setting is essential. The research method used for this research is Classroom Action Research. Classroom Action Research is designed for practical, classroom-based interventions to improve teaching and learning processes (Asnawati et al., 2021). Classroom Action Research involves repeated cycles of planning, action, observation, and reflection, making it an ideal approach to testing the effectiveness of the "Motion Circuit" model (Reddy et al., 2017). Through Classroom Action Research, researchers can apply new teaching models, closely observe student performance, and assess qualitative factors (such as engagement and

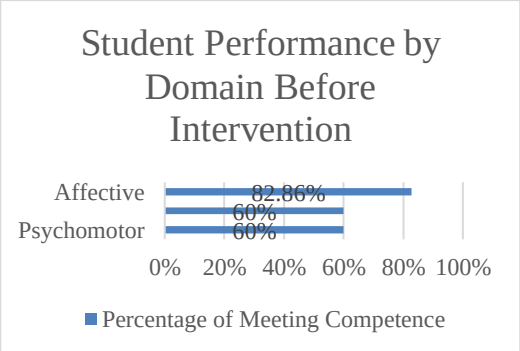
motivation) and quantitative outcomes (such as skill acquisition and assessment). In addition, Classroom Action Research allows for teacher collaboration and continuous refinement of teaching strategies based on data collected during each cycle. This research method will allow researchers to systematically evaluate the impact of the "Motion Circuit" model and make appropriate adjustments to optimise students' outcomes in developing locomotor skills. Thus, the Classroom Action Research is aligned with the need to improve instructional methods and provide a structured framework for continuous improvement, ensuring that the "Motion Circuit" model effectively addresses the challenges of teaching locomotor skills at SDN 1 Boyolali.

RESULT AND DISCUSSION

The study was conducted over two cycles, with significant improvements in each cycle in three assessed domains: affective, cognitive, and psychomotor. This domain is used to evaluate the effectiveness of the "Motion Circuit" play model in improving students' locomotor motor skills.

Pre-cycle (Initial Conditions):

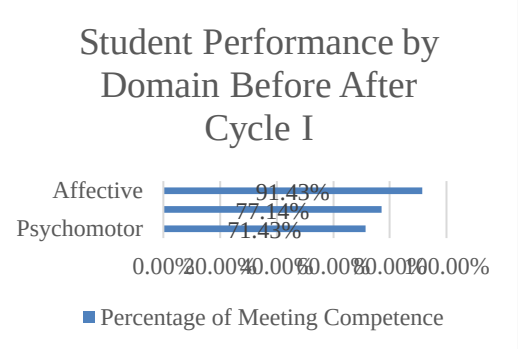
Prior to the implementation of the intervention, baseline data was collected to assess the initial performance of students in each domain. Of the 35 students, 82.86% met the minimum level of competence in the affective realm, which measures students' attitudes, motivations, and engagement during the learning process. However, only 60% of students achieve the minimum cognitive and psychomotor requirements. The cognitive domain assesses students' understanding and knowledge of locomotor skills, while the psychomotor domain evaluates their actual movement performance, such as running, jumping, and walking. These preliminary results highlight gaps in learning, especially in the cognitive and psychomotor domains, which point to the need for more effective instructional methods to improve their skills.



Cycle I:

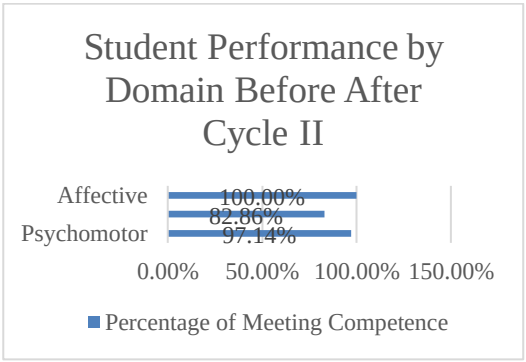
After applying the play-based learning model "Motion Circuit" in the first cycle, there was a noticeable

improvement in student outcomes, especially in the affective realm. 91.43% of students achieved the minimum level of competence in the affective realm, showing increased enthusiasm and engagement during learning activities. However, while improvements were also seen in the cognitive and psychomotor domains, the targets still needed to be fully met. In the cognitive domain, 77.14% of students understood locomotor skills adequately, while 71.43% met the required psychomotor domain standards. These results show that the "Motion Circuit" model positively affects student learning. However, additional instructional strategy refinement is needed to achieve the desired outcomes in all domains.



Cycle II:

After adjustments based on reflection from Cycle I, further improvements were made to the teaching approach in the second cycle. As a result, student performance improved substantially across all domains. All 35 students (100%) achieved targets in the affective realm, demonstrating that the play-based model effectively kept students engaged and motivated. In the cognitive domain, 82.86% of students met the required standards, indicating an improved understanding of basic locomotor skills. Finally, the psychomotor domain showed the most significant improvement, with 97.14% of students achieving the minimum level of competence. The result shows that the "Motion Circuit" model is very effective in increasing students' engagement and understanding of the material and improving the physical performance of their locomotor movements.



Overall, the results show that the "Motion Circuit" game model effectively addresses the initial learning gap observed in the pre-cycle phase. This model substantially improves all three domains — affective, cognitive, and psychomotor — by making students'

learning process more engaging, dynamic, and physically interactive. The results show that the "Motion Circuit" play model effectively improves students' learning outcomes in basic locomotor motor skills across affective, cognitive, and psychomotor domains. The gradual improvement observed from the pre-cycle phase to Cycle I and, finally, Cycle II reflects the impact of the play-based approach in addressing the early learning gap and fostering a more engaging and practical learning environment.

Affective Domain: The affective domain, which measures students' attitudes, motivation, and engagement, shows the most consistent and remarkable improvement during the study. Initially, 82.86% of students met the minimum competencies in this domain, but in Cycle II, this number increased to 100%. The results show that the "Motion Circuit" model successfully engages students by introducing a fun and active learning experience, likely to keep them motivated and attentive during the lesson. Play-based learning, which integrates movement and interaction, is naturally appealing to students at the elementary level, making the learning process more enjoyable and less monotonous (Ilgaz et al., 2018). As students become more emotionally involved in lessons, their willingness to participate and their overall enthusiasm increases, leading to better learning outcomes in other domains (Wang, 2019).

Cognitive Domain: In the cognitive domain, which focuses on students' understanding and knowledge of locomotor skills, this study shows a significant improvement from pre-cycle to Cycle II. Initially, only 60% of students achieved the minimum level of competence in this domain, indicating that traditional teaching methods must convey the necessary theoretical knowledge about locomotor movements. After the first cycle using the "Motion Circuit" model, cognitive performance rose to 77.14%, and in Cycle II, this figure increased to 82.86%. The hands-on nature of circuit-based activities helps students better internalize and understand the concepts being taught (Gilang et al., 2020).

Psychomotor Domain: The psychomotor domain assesses a student's physical ability to perform locomotor movements and shows significant progress. The domain saw a noticeable increase to 71.43% in Cycle I and a

significant increase to 97.14% in Cycle II. This dramatic increase underscores the effectiveness of the "Motion Circuit" model in encouraging the development of motor skills. Play-based learning models, especially those involving movement circuits, provide repetitive practice opportunities in a fun context, allowing students to perfect their motor skills through trial and error in a less formal and stress-free environment (Cavanaugh, 2016). The varied activities on the circuit also help students engage different muscle groups and practice coordination, leading to better overall performance in locomotive tasks (O'Shea et al., 2020). In addition, the interactive and competitive nature of the circuit likely motivates students to strive for better physical execution of each skill (Ardanari et al., 2023).

Comparing Cycles I and II: The difference between Cycles I and II is clear. Despite improvements in Cycle I, the cognitive and psychomotor domains did not fully meet the desired targets. The difference may be due to the model's novelty, as students need time to adjust to the new learning structure through play. The improvements in Cycle II show that as students become more familiar with the "Motion Circuit" approach, they can better understand locomotor movement's conceptual and practical aspects. The iterative nature of the Classroom Action Research (CAR) model also plays a role in this success. Reflection and adjustments between cycles allow teachers to refine instructional strategies and address specific weaknesses observed during the first cycle, leading to better outcomes in the second cycle (Yusron et al., 2023).

The success of the "Motion Circuit" model is in line with broader educational research, which emphasises the benefits of play-based and active learning in early education settings. By integrating movement into lessons, students can improve their physical abilities and increase cognitive and emotional engagement (Armstrong & Sutherland, 2020). Learning movement is especially important in physical Education, where motor skills are the foundation for future sports and physical activity (Nesbitt & Bullard, 2021). This model shows that learning can be educational and fun, promoting more holistic student development. The findings suggest that more than traditional passive teaching methods may be required to foster a comprehensive understanding of basic

movement skills. A shift towards more dynamic and student-centred teaching approaches, such as the "Gerak Circuit" model, can be a viable solution to improve educational outcomes, especially in Physical Education (Setiawan et al., 2020). The model's success in this study highlights the importance of innovation in teaching methods to better meet diverse students' needs and learning styles.

The significant improvement in the affective, cognitive, and psychomotor domains through the implementation of the "Motion Circuit" model supports the theory of physical literacy, which emphasizes the importance of developing fundamental movement skills, knowledge, and motivation for lifelong participation in physical activities, while also demonstrating that a game-based learning approach is an effective strategy for enhancing physical literacy in elementary school students (Ardiana, 2024). Enhancing professional and pedagogic competencies, along with work discipline, significantly improves the performance of Physical Education teachers, highlighting the importance of teacher competence in effectively implementing innovative teaching models like "Motion Circuit" to boost students' physical literacy (Inggar Maizan et al., 2022).

CONCLUSION

In conclusion, significant improvements in all domains affective, cognitive, and psychomotor confirmed that the "Motion Circuit" play model effectively improved students' basic locomotor skills. The interactive and engaging nature of the model fosters greater student motivation, deeper understanding, and better physical performance. As a result, this approach can serve as a valuable alternative to more traditional teaching methods, especially in Physical Education. By creating a fun and active learning environment, this model promotes skill acquisition and maintains a positive attitude towards learning that can benefit students' overall development

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