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Active Play as Cultural Pedagogy: Enhancing Participation and Fitness in Elementary Physical Education

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Abstract

Background of study: Physical Education, Sports, and Health play a strategic role in students' holistic development. Yet, low participation rates driven by conventional and monotonous instructional models remain a primary challenge in elementary education.
Aims and scope of paper: This study aims to analyze and synthesize the effectiveness of active game-based learning as a pedagogical strategy to enhance student participation and physical fitness.
Methods: The research employs a qualitative descriptive literature review, examining scientific articles from academic databases, including Google Scholar, Garuda, and SINTA, published between 2020 and 2025.
Results: The findings show that integrating active games increases student participation by enhancing motivation, enthusiasm, and social interaction. These engaging activities also improve physical fitness components, such as endurance, strength, and agility, through intensive yet enjoyable movement. As a result, the learning process becomes more innovative, inclusive, and meaningful.
Conclusion: In conclusion, active game-based learning is an effective strategy for delivering high-quality physical education. Teachers are advised to systematically integrate these methods to support optimal student engagement and sustainable physical fitness development.

Keywords: Active Games; Physical Fitness; Student Participation; Physical Education; Elementary School

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INTRODUCTION

Physical Education, Sports, and Health (PJOK) is a strategic subject that supports the comprehensive physical, mental, and social development of students (Anwar et al., 2025; Aprilianto et al., 2022). Through these activities, students master motor skills and physical fitness while internalizing essential values like sportsmanship and cooperation (Jadwiszczak et al., 2025). At the elementary level, PJOK serves as a fundamental foundation for developing active and healthy lifestyle habits from an early age (Wijaya et al., 2026). Therefore, learning programs must be designed in an engaging manner that aligns with children's developmental characteristics to ensure effective outcomes.

Beyond physical movement, PJOK plays a vital role in fostering social-emotional growth and overall mental well-being in students (Syaukani et al., 2026). Recent literature highlights that modern educational approaches must adapt to counter the rising prevalence of sedentary lifestyles among children (Galuscan et al., 2025; Syaukani et al., 2026). Technology and digital habits have significantly reduced the frequency of daily physical activities, creating a challenge for educators to keep students active. Optimizing fitness through innovative and active approaches is essential for ensuring a healthy.

However, the implementation of PJOK in many elementary schools still faces significant obstacles, particularly low student participation. Conventional and monotonous learning models are often identified as primary factors that leave students feeling bored and unmotivated during class (Zhao & Wang, 2025). This lack of engagement results in low levels of physical activity during school hours, which directly leads to less than optimal fitness outcomes (Herold et al., 2025). Addressing these issues requires a fundamental shift toward more participatory and dynamic instructional strategies that can recapture student interest.

Elementary school-aged children naturally possess a strong preference for play, movement, and environmental exploration (David et al., 2025). Consequently, an active game-based learning approach is considered highly appropriate for increasing student engagement in the classroom. Such methods create a fun, interactive, and challenging learning environment that significantly boosts student motivation and participation (Adhikari et al., 2025). Furthermore, active games contribute directly to improving basic movement skills and physical fitness through dynamic physical activities.

Previous scientific literature has explored various game-based interventions, including the use of traditional games to increase student interest (Hunt et al., 2025). Other studies have implemented modified sports, such as 3-on-3 volleyball, to enhance specific learning outcomes in elementary settings (Ghorbel et al., 2025; Tokay & Akil, 2025). Additionally, the impact of virtual reality-based physical education programs on student fitness has been investigated in recent years. Cooperative learning models based on games have also been shown to increase student participation in PJOK activities effectively.

Specific active games, such as the use of active dice, have been shown to improve components of physical fitness like endurance and motor skills (Vondrak et al., 2025). Research indicates that active play provides a more enjoyable experience, allowing students to engage in higher-intensity activity without feeling overwhelmed (Habring et al., 2025). This approach also allows students to learn contextually through direct experience during the game-based learning process. By understanding the purpose of each movement, students find the learning process more meaningful and effective for their development.

Despite these findings, most previous research has remained fragmented, focusing only on specific game types or isolated motor skills. Comprehensive studies that integrate active game-based learning as a systematic pedagogical strategy for both participation and fitness are still limited (Camacho-Sánchez et al., 2023). Previous research also tends to position games merely as a secondary learning medium rather than a core, sustainable instructional strategy. This identifies a critical research gap that necessitates a more in-depth examination through a systematic literature review approach.

The purpose of this study is to analyze and synthesize research findings related to active game-based PJOK learning as a strategy to increase participation and fitness. This research offers novelty by synthesizing various scientific findings to provide a comprehensive overview of the effectiveness of such approaches. The study is expected to provide theoretical and practical contributions to the development of innovative and participatory physical education models. The scope specifically targets elementary school students and the systematic integration of active play to support sustainable fitness development.

METHODS

This study applies a literature review to examine research findings on active, play-based Physical Education, Sports, and Health (PJOK) learning (Tamata & Mohammadnezhad, 2023). This methodology is specifically designed to provide a comprehensive conceptual understanding by analyzing and synthesizing prior scientific findings on student engagement. The researcher uses a qualitative framework to organize the gathered information into coherent, systematic pedagogical themes. The entire research procedure is structured into four distinct stages to ensure a robust, relevant synthesis that addresses current educational challenges.

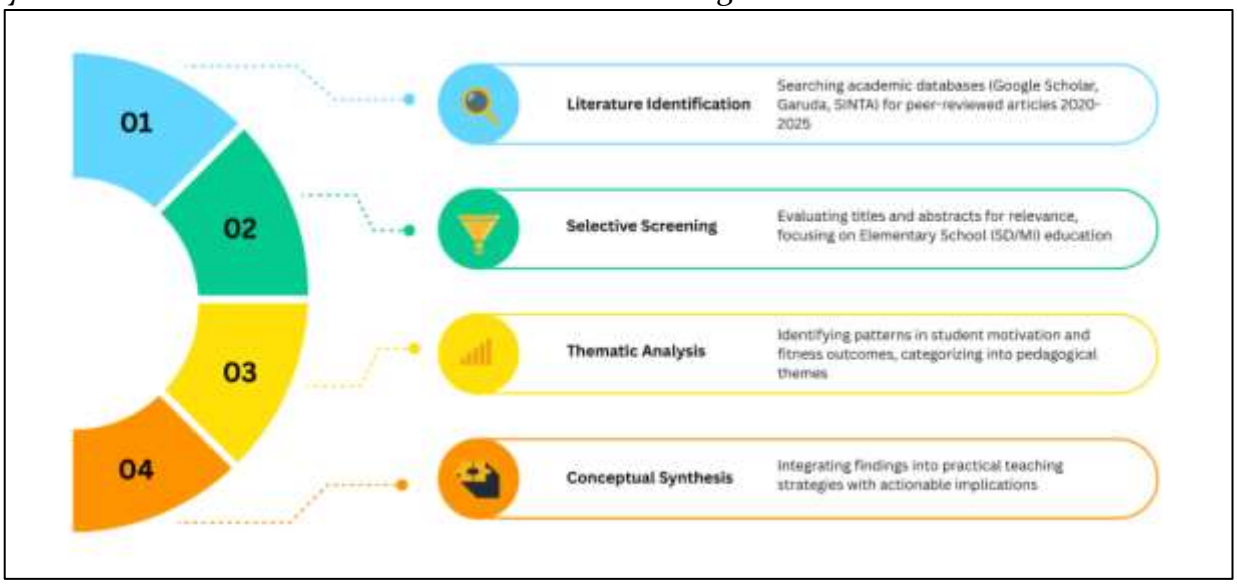

Figure 1. Literature Review Research Flow

The first stage of the research flow is literature identification, which involves a comprehensive search across prominent academic databases. These databases include Google Scholar, Garuda, and SINTA-indexed journals to ensure the quality and credibility of the data sources. The search is restricted to peer-reviewed articles published between 2020 and 2025. This initial step is crucial for gathering the most recent scientific evidence that reflects modern trends in physical education and sports development.

Following the identification phase, the researcher conducts selective screening to evaluate the relevance of the retrieved documents. This evaluation process primarily focuses on analyzing titles and abstracts to ensure they align with the core research objectives. Specifically, the screening criteria prioritize studies conducted within the context of Elementary School (SD/MI) education. By applying these strict filters, the study ensures that the analyzed data accurately represent the developmental characteristics and needs of primary-level students.

The third stage involves thematic analysis, where the researcher identifies significant patterns in student motivation and physical fitness outcomes. Findings from the selected literature are carefully compared and contrasted to find commonalities regarding the effectiveness of active games. These data are then categorized into specific pedagogical themes to facilitate a structured interpretation of the learning outcomes. This analytical process is vital for uncovering how play-based strategies contribute to overall student participation and active involvement.

The final stage of the methodology is conceptual synthesis, which integrates all findings into practical and applicable teaching strategies. This process aims to generate actionable implications that can be directly implemented by physical education teachers in real-world classroom settings. Beyond mere data description, this synthesis offers innovative solutions to improve students' fitness and interest in learning sustainably.

RESULTS AND DISCUSSION

The systematic review of literature published between 2020 and 2025 demonstrates that active game-based Physical Education, Sports, and Health (PJOK) learning acts as a significant catalyst for improving student outcomes in primary education. Empirical evidence gathered from national and international databases indicates a consistent positive correlation between the implementation of dynamic play and the elevation of student engagement levels. This shift from traditional, instructor-led drills toward student-centered, interactive frameworks reflects a modern pedagogical evolution aimed at addressing the diverse needs of primary school learners. The synthesized data suggest that when games are integrated systematically, they move beyond mere entertainment to become core instructional tools for holistic physical development.

To provide a structured overview of the evidence analyzed in this study, the following table summarizes key research findings from influential studies conducted within the last five years. This synthesis highlights the specific interventions used and the primary metrics affected by game-based strategies.

Table 1. Synthesis of Key Research Findings on Active Game-Based PJOK

Author (Year)	Core Intervention / Game Type	Primary Findings & Outcomes
(Bae, 2023)	Virtual reality-based physical education	Significant improvement in physical fitness metrics.
(Djaelani et al., 2025)	Game-based learning model implementation	Increased interest and participation in SDN 190 Cisaranten Kidul.
(Hapiz & Kusumawardani, 2025)	Active play-based jumping skills	Enhanced locomotor skills and jumping performance in 3rd grade.
(Lisvianto et al., 2024)	"Dadu Lempar" (Active Dice) games	Notable increase in physical fitness and motor coordination.
(Sibero et al., 2024)	Traditional game-based learning	Enhanced student interest and mental well-being.

The Psychosocial Impact on Student Participation

A primary challenge identified in the literature is the prevalence of low student participation caused by conventional, monotonous instructional models. Research suggests that students often find repetitive drills unmotivating, leading to boredom and a lack of active engagement during school hours. Active game-based learning addresses this issue by creating a fun, competitive, and challenging environment that captures students' intrinsic interest. By transforming physical education into an interactive experience, educators can significantly reduce disengagement and foster a more enthusiastic classroom atmosphere.

Beyond mere participation, active games promote critical social-emotional development through structured interaction (Özcan & Sakız, 2025). Students engaged in play-based PJOK must communicate, cooperate, and practice healthy competition to achieve common goals. This collaborative environment allows students to practice essential social skills that support their overall growth beyond the athletic field (Aslam et al., 2025). Furthermore, the inclusive nature of well-designed games allows previously passive students to find roles that suit their abilities, thereby increasing the overall participation rate across diverse student populations.

The role of motivation in physical education cannot be overstated, as it serves as the engine for long-term healthy lifestyle habits (Mulyana et al., 2024). A literature review reveals that games designed with adaptive challenges can sustain student interest more effectively than one-size-fits-all drills. When students feel a sense of autonomy and success within a game, their commitment to the activity increases. This sustained engagement is vital for overcoming the sedentary habits that have become common in the modern digital era.

Enhancing Physical Fitness and Motor Skills

The contribution of active games to physical fitness is well documented across several physiological domains. Activities involving running, jumping, and dynamic movement have been shown to improve cardiovascular endurance, strength, and agility. For instance, specific interventions, such as jumping games or active dice games, force students to perform high-intensity tasks in a playful context. This methodology allows students to reach optimal levels of physical exertion without the psychological burden or fatigue associated with traditional exercise.

The development of motor skills is another critical benefit of game-based PJOK learning in primary schools. Active play provides students with opportunities to practice locomotor, non-locomotor, and manipulative skills in dynamic environments. Research by Hapiz & Kusumawardani (2025) specifically highlights how game-based models can improve jumping skills, a fundamental skill in children's motor development. By integrating these movements into games, students learn to coordinate their bodies more effectively as they respond to changing game situations.

Furthermore, game-based learning supports contextual understanding, where students learn the purpose and application of physical movements through direct experience. Instead of memorizing techniques in isolation, students apply them to solve problems or achieve objectives within the game. This meaningful learning process ensures that the physical skills acquired are more likely to be retained and applied in other contexts. Consequently, active play serves not only as a medium for exercise but also as a sophisticated pedagogical strategy for comprehensive motor education.

Theoretical and Practical Implications

The synthesis of findings suggests an interdependent relationship between participation, physical activity levels, and fitness outcomes. When student participation increases, the frequency and intensity of physical activity follow, which ultimately leads to enhanced physical fitness. This cycle highlights the importance of the "participation first" approach, where educators prioritize engagement to achieve physiological goals. Therefore, the curriculum should place a high priority on variety and inclusivity to sustain this positive feedback loop.

For educators, these findings imply a need for a systematic shift in instructional planning and classroom management. Teachers must be skilled in selecting, adapting, and designing games that align with the specific developmental needs of elementary school students. Effective management of game-based environments requires a balance between structured rules and the freedom for students to explore movement. By adopting these strategies, teachers can move away from being traditional drill sergeants to becoming facilitators of active, joyful learning.

Moreover, integrating technology, such as virtual reality-based programs, offers new avenues to enhance fitness in the modern classroom. While traditional games remain foundational, innovative digital tools can offer personalized challenges tailored to individual fitness levels. This hybrid approach could be particularly effective in engaging students who are highly influenced by digital culture. However, the core principle remains the same: movement must be active, dynamic, and fun to ensure sustainable student development.

CONCLUSION

The comprehensive analysis conducted in this study confirms that active game-based Physical Education, Sports, and Health (PJOK) learning serves as a vital pedagogical strategy for simultaneously elevating student participation and physical fitness in primary education. The findings demonstrate that integrating dynamic play into the curriculum fosters a holistic environment in which physical engagement is intrinsically linked to greater social-emotional motivation and enthusiasm. This approach effectively improves core fitness components, including endurance, strength, agility, and motor skill development, by providing high-intensity activity through a medium that is both inclusive and contextually meaningful. This research significantly contributes to the existing body of knowledge by synthesizing fragmented findings into a cohesive argument for positioning games as a systematic and sustainable instructional framework rather than a mere secondary medium. The implications of these results suggest a critical need for educators to shift from conventional, monotonous models toward interactive, student-centered strategies to combat rising sedentary lifestyles among children. While this review provides a robust conceptual foundation, future research should prioritize empirical field-based investigations to validate these findings across diverse socioeconomic settings and long-term student health cycles.

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AUTHOR CONTRIBUTIONS AND DECLARATIONS

FN contributed to the research design, data collection and analysis through literature review, and drafting the initial draft of the manuscript. AYR contributed to providing conceptual direction, conducting content review and validation, and editing and refining the manuscript.

All authors have read and approved the final version of the manuscript. All authors declare that this work is original work, free from plagiarism (with a similarity level of no more than 15%), has met the ethical standards of scientific publication, and is willing to be responsible for all consequences if in the future it is discovered that there is a violation of these provisions.

REFERENCES

Adhikari, N. P., Budhathoki, J. K., & Adhikari, S. (2025). Student Motivation in the Classroom: Practical Techniques and Strategies. Cognition, 7(1), 67-75. https://doi.org/10.3126/cognition.v7i1.74765

Anwar, C., Rozi, F., & Binti Hasan, S. N. (2025). Politics of Inclusion and Adaptive Physical Education: A Systematic Review of Policy Implementation for Students with Special Needs. International Journal of Social and Political Sciences, 2(3), 186-202. https://doi.org/10.69812/ijsps.v2i3.145

Aprilianto, D., Raharjo, B. B., & Nasuka, N. (2022). The Role of Physical Education, Sports, and Health Subject Teacher Deliberations for Junior High Schools in Bandar Lampung City in Supporting Teacher Competence. Journal of Physical Education and Sports, 11(2), 282-290. https://doi.org/10.15294/jpes.v11i2.67986

Aslam, S., Shi, Y., & Zhao, C. (2025). Addressing physical skills and mental health: the role of modern teaching approaches in non-athlete university PE programs. Frontiers in Psychology, Volume 16-2025. https://doi.org/10.3389/fpsyg.2025.1664027

Bae, M.-H. (2023). The Effect of a Virtual Reality-Based Physical Education Program on Physical Fitness among Elementary School Students. Iranian Journal of Public Health, 52(2), 371-380. https://doi.org/10.18502/ijph.v52i2.11890

Camacho-Sánchez, R., Manzano-León, A., Rodríguez-Ferrer, J. M., Serna, J., & Lavega-Burgués, P. (2023). Game-Based Learning and Gamification in Physical Education: A Systematic Review. In Education Sciences (Vol. 13, Nomor 2, hal. 183). https://doi.org/10.3390/educsci13020183

David, J., Glaser, M., & Witlox, F. (2025). Pedaling towards autonomy: a multidisciplinary exploration on children's independent cycling mobility. Transport Reviews, 1-23. https://doi.org/10.1080/01441647.2025.2602185

Djaelani, M. Y., Fachturahman, M. F., & Noor, A. P. (2025). Implementasi Model Pembelajaran PJOK Berbasis Permainan: Studi Kasus Di SDN 190 Cisaranten Kidul, Kota Bandung. Jurnal Olahraga Indragiri, 9(2), 120-130. https://doi.org/10.61672/joi.v9i2.3292

Galuscan, A., Dumitrescu, R., & Sava-Rosianu, R. (2025). Modern Approaches to Children's Oral Health: Contemporary Risk Factors and the Influence of Parental Education (A. Zawiślak (ed.)). IntechOpen. https://doi.org/10.5772/intechopen.1009211

Ghorbel, Ahmed, Trabelsi, Omar, Yaakoubi, Mohamed, Souissi, Mohamed Abdelkader, & Gharbi, Adnene. (2025). Flipped classroom approach for gymnastics learning in physical education: A quasi-experimental study. International Journal of Sports Science & Coaching, 20(1), 300-312. https://doi.org/10.1177/17479541241301382

Habring, M. A., Friday, P. J., Schwartz, A., Abbas, H. I., Beemer, L. R., & Hasson, R. E. (2025). Energy expenditure and enjoyment of instructor-led exercise videos for children ages 7-13. Plos one, 20(10), e0333283. https://doi.org/10.1371/journal.pone.0333283

Hapiz, M., & Kusumawardani, S. (2025). Meningkatkan Keterampilan Lompat Sebagai Gerak Dasar Lokomotor Melalui Model Pembelajaran PTK Berbasis Permainan Pada Siswa Kelas 3 SD: Studi PTK Dengan Pendekatan Kualitatif. SEMNASFIP, 2(2), 2526-2538.

Herold, F., Ludyga, S., Mavilidi, M. F., Benzing, V., Vazou, S., Tomporowski, P. D., & Pesce, C. (2025). The Other Side of the Coin - A Call to Investigate the Influence of Reduced Levels of Physical Activity on Children's Cognition. Educational Psychology Review, 37(3), 62. https://doi.org/10.1007/s10648-025-10031-5

Hunt, Jessica H, Taub, Michelle, Marino, Matthew, Holman, Kenneth, & Womack-Adams, Kelly. (2025). Increasing Student Engagement, Fraction Knowledge, and STEM Interest Through Game-Based Intervention. Journal of Special Education Technology, 40(4), 480-492. https://doi.org/10.1177/01626434251314014

Jadwiszczak, M., Wawrzyniak, S., & Pezdek, K. (2025). More than movement: a systematic review of moral and social development in adolescents physical education. BMC Public Health, 25(1), 2076. https://doi.org/10.1186/s12889-025-23169-2

Lisvianto, J. D., Wijaya, A., & Alifia, E. (2024). Upaya Peningkatan Kebugaran Jasmani Melalui Metode Permainan Aktif Dadu Lempar Pada Siswa Kelas II SDN Sidoklumpuk Sidoarjo. Jumper: Jurnal Mahasiswa Pendidikan Olahraga, 4(3), 509-517. https://doi.org/10.55081/jumper.v4i3.1107

Mulyana, A., Lestari, D., Pratiwi, D., Rohmah, N. M., Tri, N., Agustina, N. N. A., & Hefty, S. (2024). Menumbuhkan Gaya Hidup Sehat Sejak Dini Melalui Pendidikan Jasmani, Olahraga, Dan Kesehatan. Jurnal Bintang Pendidikan Indonesia, 2(2 SE-Articles), 321-333. https://doi.org/10.55606/jubpi.v2i2.2998

Özcan, S., & Sakız, H. (2025). Improving social-emotional skills for inclusion through traditional child games. Children and Youth Services Review, 173, 108299. https://doi.org/https://doi.org/10.1016/j.childyouth.2025.108299

Sibero, F. A. T., Siregar, S., Sitorus, D., & Saragih, C. (2024). Survei Tentang Meningkatkan Minat Belajar Siswa SD dalam Pembelajaran PJOK Melalui Permainan Tradisional. Journal of Creative Student Research, 2(5), 252-261. https://doi.org/10.55606/jcsr-politama.v2i5.4420

Syaukani, A. A., Mohd Hashim, A. H., & Sudarmanto, E. (2026). Beyond Fun and Games: Cultivating Socio-Emotional Abilities Through Cooperative Learning with Traditional Games. Journal of Holistic Sports and Physical Education, 1(1), 42-51. https://doi.org/10.23917/jhspe.16426

Tamata, A. T., & Mohammadnezhad, M. (2023). A systematic review study on the factors affecting shortage of nursing workforce in the hospitals. Nursing Open, 10(3), 1247-1257. https://doi.org/https://doi.org/10.1002/nop2.1434

Tokay, B., & Akil, M. (2025). Tactical-game and technical approach: the importance of sport type and method in developing metacognitive control and awareness in school going children. Current Psychology, 44(12), 11460-11471. https://doi.org/10.1007/s12144-025-07935-4

Vondrak, J., Kasik, V., Grepl, J., Kuboskova, T., Augustynek, M., Kubicek, J., Benešová, T., & Nilius, P. (2025). Enhancing neurocognitive rehabilitation with smart cubes: Design, technology, and programmable games. Results in Engineering, 27, 106069. https://doi.org/https://doi.org/10.1016/j.rineng.2025.106069

Wijaya, P. B., Judijanto, L., & Sepriano, S. (2026). Dasar-Dasar Pendidikan Jasmani. PT. Sonpedia Publishing Indonesia.

Zhao, X., & Wang, D. (2025). Unpacking the Antecedents of Boredom and Its Impact on University Learners' Engagement in Languages Other Than English: A Qualitative Study in the Distance Online Learning Context. International Journal of Applied Linguistics, 35(3), 1121-1133. https://doi.org/https://doi.org/10.1111/ijal.12680