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Teaching Basketball to School-Aged Students: A Systematic Analysis of Instructional Methods in Physical Education

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ABSTRACT

This systematic review examines the instructional strategies applied in teaching basketball to school-aged children within Indonesian physical education (PE) settings. Although traditional methods centered on repetitive drills remain widespread, they often fall short in promoting comprehensive understanding and active student participation. In contrast, contemporary approaches such as Teaching Games for Understanding (TGfU) and Sport Education (SE) prioritize tactical awareness, decision-making, and student engagement, aligning with Indonesia's educational emphasis on Higher-Order Thinking Skills (HOTS). By reviewing ten highly cited SCOPUS-indexed studies published between 2020 and 2025, this study evaluates the impact of various pedagogical models. The results consistently show that TGfU contributes to improved technical abilities, game comprehension, and student enthusiasm. Moreover, integrating TGfU with unstructured practice or SE produces greater gains in performance and involvement compared to using each method in isolation. These findings provide practical guidance for educators and curriculum designers aiming to enhance basketball teaching through interactive, student-centered learning frameworks.

INTRODUCTION

Basketball is one of the most widely played team sports in school physical education (PE) programs, including in Indonesia (1). As a fast-paced and strategic game, it provides meaningful opportunities for students to develop not only physical skills such as coordination, endurance, and agility, but also cognitive and social competencies like decision-making, communication, and teamwork (2). In the Indonesian educational context, basketball is frequently included in the PE curriculum at the elementary and secondary levels. However, the effectiveness of how it is taught varies significantly depending on the instructional approach used by teachers (3).

Traditional teaching methods, which often focus on drills and isolated technical skills, are still commonly used in many Indonesian schools (4). These approaches tend to be teacher-centered and may limit students' engagement and ability to understand the game holistically. In contrast, modern pedagogical models such as Teaching Games for Understanding (TGfU) and Sport Education (SE) emphasize student involvement, tactical thinking, and game sense by situating learning within modified gameplay (5). These models align with the current educational shift in Indonesia toward developing Higher-Order Thinking Skills (HOTS) and promoting inclusive, student-centered learning (6).

Despite their potential, innovative instructional methods like TGfU and SE are not yet widely adopted or systematically applied across schools in Indonesia (7). There is a clear need to analyze and compare different teaching strategies to identify those that most effectively support student learning in basketball (8).This study aims to examine various instructional methods used in Indonesian PE classes, with a focus on improving game performance, decision-making, and student engagement. By doing so, it seeks to provide insights that can guide teachers, policymakers, and curriculum developers in enhancing the quality of basketball instruction within the national education system.

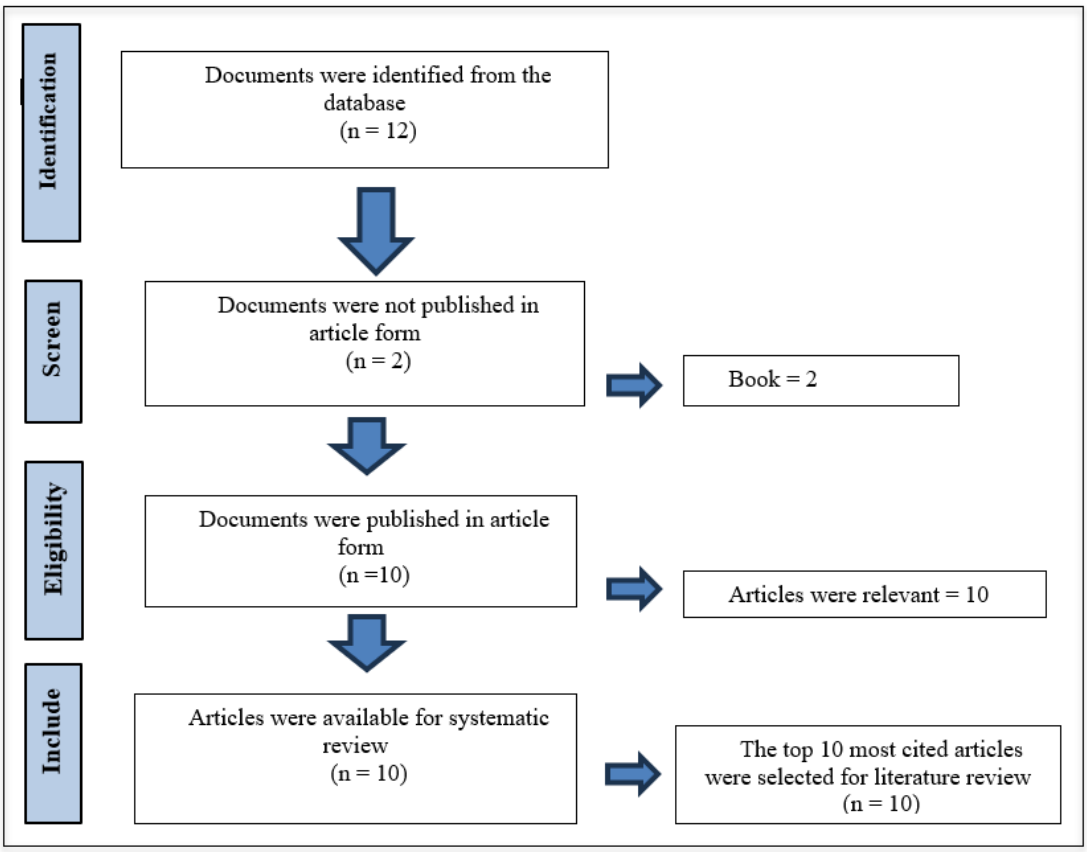
RESEARCH METHOD

This study uses a systematic review approach to collect and analyze various studies related to basketball teaching methods in physical education For this systematic review study, the researcher

used a single database. The researcher selected the SCOPUS database because, according to SCOPUS's own index, the research papers there are of high quality. The Keyword tgfu OR "teaching games for understanding" AND basketball AND "physical education" were employed in the course of gathering data for this investigation. On May 16, 2025, data was gathered directly from the SCOPUS website.Each article was analyzed in depth to understand the teaching methods used, the results obtained, and the recommendations given. The review's inclusion requirements include research papers that are either previously published or in press, written in English, presented as articles, and published between 2020 and 2025. The exclusion criteria include research documents published outside the 2020–2025 range, documents not written in English, those not published in the form of articles, and documents that are still in press.

On the Other hand,the SCOPUS internet feature was also used by researchers to screen terms. The researcher used the SCOPUS website function to filter the keywords to make sure the identified research aligned with the study's goals. The SCOPUS website's data identification results led to the selection of the keywords "Physical Education," "TGfU," and "Basketball" as limits.

1.1 Preferred Reporting Items for Systematic Review



RESULTS AND DISCUSSION

1.

Author	Years	Research Purposes	Study Design	Results
Nopembri, et. al.	2019	To enhance students' Higher Order Thinking Skills (HOTS) by utilizing the Teaching Game for	Experimental study *(Classroom Action Research (CAR) design.)*	The findings show that the TGfU approach was successful in improving students' skills and game comprehension, as

Author	Years	Research Purposes	Study Design	Results
		Understanding (TGfU) approach as a learning tool.		evidenced by the fact that students' average scores in the Skill Execution Index (SEI), Decision-Making Index (DMI), and Support Index (SI) rose from the first to the second cycle.
Gomez, et. al.	2022	Examines the motivating atmosphere variable following the adoption of two basketball Teaching Units in Secondary Education,	A quasi-experimental design incorporating control (conventional model) and experimental (TGfU) groups was employed.	The study shows that by generating a more favorable motivating environment, a TGfU-based educational method used in Physical Education classrooms might increase student motivation.
Ferraz, et. al.	2024	Enhance physical fitness, health, and general well-being in persons.	Using a single-group intervention and a quasi-experimental pre-test/post-test approach.	Students indicated enjoyment and a favorable attitude toward physical education, despite the fact that motivation scores did not alter much.
Koekoek, et. al.	2019	Examine how students' assessments of the tactical elements of a basketball game situation are accurate and in agreement with one another.	Cmparative Experimental	Video-enriched discussions seem to be beneficial in encouraging reflective thinking and cooperative learning in game-based learning, even if they might not immediately enhance tactical decision-making.
Tangkudung, et. al.	2022	Contribute to a clearer understanding of the pedagogical strategies used in (TgfU) during live game situations.	A quasi-experimental mixed-methods design featuring a pre-test and post-test approach.	The positive effects of TGfU highlight its value as an effective teaching strategy that fosters skill development and motivation in physical education.
Gil, et. al.	2019	Examine the impact of a teaching program that uses comprehensive questioning to enhance decision-making.	Intervention Based	ecision-making skills improved more significantly in students who received questioning throughout the training activities than in those who did not.
Koekoek, et.	2022	Using game-based	An empirical	The approach emphasizes

Author	Years	Research Purposes	Study Design	Results
al.		methods akin to Teaching Games for Understanding (TGfU) and Game Sense, investigate and offer an organized pedagogical framework for teaching and learning customized games in physical education and sports.	experimental or observational study.	student-centered learning, encouraging exploration, decision-making, and skill development within realistic and engaging sports contexts.
Praxedes, et. al.	2021	analyze the effect of a unit of basketball based onTeaching Games for Understanding model combined with a program of unstructured practice	Experimental Study	Combining TGfU-based basketball instruction with unstructured practice enhances decision-making and skill execution more effectively than exposure to only regular Physical Education lessons.
Waffak, et. al.	2022	Evaluate the effectiveness of a basketball learning model using the TGfU approach in enhancing higher-order thinking skills (HOTS) and decreasing bullying.	Quantitative Approach.	The basketball learning paradigm developed at TGfU has a positive effect on students' psychomotor, affective, and cognitive outcomes.
Guijarro, et.al.	2022	Evaluate whether combining SE with TGfU influences game performance and involvement differently than using SE by itself.	Comparative intervention study using a quasi-experimental.	Compared to students taught with SE alone, those in the SE and TGfU combined intervention showed significantly greater improvement in game performance

The results of this study confirm the effectiveness of the Teaching Games for Understanding (TGfU) approach in improving the quality of basketball learning in physical education environments. Ongoing enhancements in students' gaming proficiency, decision-making capabilities, and favorable dispositions towards physical education classes demonstrate that this methodology influences not just cognitive and psychomotor dimensions but also the affective domain of pupils. The combination of TGfU with other strategies such as unstructured practice and the Sport Education (SE) model provided more optimal results, highlighting the importance of flexibility in pedagogical approaches to adapt to students' needs. These findings will be discussed further in three aspects, as follows:

The findings indicated that the Teaching Games for Understanding (TGfU) approach led to consistent improvements in students' technical abilities and comprehension of the game. This was evidenced by the rise in the Skill Execution Index (SEI), Decision-Making Index (DMI), and Support Index (SI) scores between the first and second cycles (9). By situating learning within authentic game scenarios, TGfU enabled students to enhance not only their technical execution but also their decision-making skills and

ability to collaborate with teammates (16). This context-rich approach provided more realistic gameplay experiences, fostering a deeper grasp of tactical concepts.

Even though the motivation scores did not increase significantly in numerical terms, students demonstrated positive attitudes and expressed enjoyment during physical education lessons that applied the TGfU approach (13). This indicates that TGfU fosters a more engaging, stimulating, and inclusive learning environment. Such an atmosphere is crucial for sustaining students' interest in physical activity and promoting active involvement. By emphasizing a student-centered framework, TGfU empowers learners to take ownership of their learning process, which in turn helps to reinforce their intrinsic motivation (15).

The results further reveal that integrating TGfU with unstructured practice or the Sport Education (SE) model yields more effective outcomes than applying a single model in isolation (16). Merging a game-based instructional approach with independent practice beyond the classroom allows students to freely explore and reinforce their acquired skills in more flexible settings (12). Similarly, the combination of TGfU and SE led to greater improvements in game performance than using SE alone(18). These findings highlight the value of blending complementary pedagogical strategies to create a more dynamic and impactful learning experience(14).

CONCLUSION

This systematic review emphasizes the importance of thoughtfully designed instructional methods for teaching basketball to school-aged students in physical education programs. By analyzing a range of pedagogical strategies from conventional drill-based techniques to modern, game-oriented models it becomes clear that student engagement, skill development, and tactical awareness are best achieved through approaches that are both age-appropriate and context-sensitive.The evidence suggests that learner-centered methods, particularly the Teaching Games for Understanding (TGfU) model and collaborative learning frameworks, contribute significantly to improving students' comprehension, motivation, and sustained interest in the sport. These approaches not only build physical skills but also support cognitive growth and social interaction, aligning well with the overarching aims of physical education. Although traditional methods still play a role in developing basic motor abilities, integrating them with more interactive and student-driven techniques offers a more well-rounded educational experience. Educators are encouraged to adopt flexible, inclusive, and reflective teaching practices that cater to the varying needs of their students. Further studies are needed to examine the long-term effects of different instructional strategies and to explore how technological tools and culturally responsive practices can further enhance basketball instruction in schools.

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