BASKETBALL-BASED LEARNING: AN INNOVATIVE METHOD IN ENGLISH LANGUAGE LEARNING IN ELEMENTARY SCHOOLS

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ABSTRACT

English language learning in elementary schools often faces challenges in enhancing student engagement and learning effectiveness. This study aims to develop and analyze the effectiveness of the Basketball-Based Learning (BBL) method in English language learning as an innovative approach that integrates physical activity with language skill reinforcement. The research method used is classroom action research (CAR) with both qualitative and quantitative approaches. The research subjects are elementary school students who participated in the BBL intervention over several sessions. Data collection was conducted through observations, interviews, and learning outcome tests to measure students' language skill development. The results indicate that the BBL method enhances motivation, active engagement, and comprehension of vocabulary and sentence structures in English. Game-based activities in BBL create an interactive and enjoyable learning environment, reducing students' anxiety in using a foreign language. These findings introduce novelty in language learning by simultaneously combining cognitive and physical aspects, offering an alternative to conventional, more passive methods. This study recommends the implementation of BBL as an innovative teaching strategy in elementary schools, particularly in fostering a more dynamic learning experience. Additionally, the research implications can be further explored in social sciences and humanities studies concerning physical activity-based learning methods as a holistic approach in primary education.

Keywords: *Basketball-Based Learning, English Language Learning, Learning Innovation, Primary Education, Student Engagement*

INTRODUCTION

English language learning at the elementary school level still faces complex and diverse challenges. One of the main issues is the low level of student engagement in the learning process, which results in suboptimal comprehension and mastery of English at an early age (Al-Ariqi & Rama, 2024; Arifatin et al., 2025). Research has shown that children learn more effectively through hands-on experiences and physical activities, yet the dominant teaching methods in elementary schools remain focused on rote memorization and conventional approaches that do not fully utilize movement-based learning (Al-Ariqi & Rama, 2024; Zhang et al., 2022). This leads to many students losing interest, feeling burdened, and ultimately struggling to develop their

English language skills (Javaid et al., 2024; Lukas & Yunus, 2021).

Moreover, most elementary schools in Indonesia have yet to implement innovative methods that effectively integrate language learning with physical activities. Research has proven that physical movement in learning can enhance memory, concentration, and students' social interactions (Lynch et al., 2022; Putra et al., 2021; Quialheiro et al., 2022). However, in practice, many educators still rely on passive teaching methods and do not incorporate physical activity-based strategies such as games or sports (Pereira Ribeiro et al., 2024; Ribeiro et al., 2024). The lack of exploration of more dynamic methods poses a challenge that needs to be addressed to make English language learning more engaging and effective for elementary school children.

One form of physical activity with potential for language learning is sports, particularly basketball, which is popular among children. Research on movement-based learning suggests that structured physical activities can enhance cognition and students' ability to absorb language concepts (Hafidhoh et al., 2024; Hasan et al., 2023; Meitei et al., 2024). However, little research has specifically examined how sports, especially basketball, can be integrated into English language teaching at the elementary school level. This research gap highlights the need for further exploration of the effectiveness of sports-based learning models in improving students' English skills at the primary level.

The approach of integrating physical activity into learning has gained attention in recent years due to its potential to enhance educational effectiveness. Olive et al. (2024) revealed that participation in physical activities can improve children's cognitive functions, including better memory retention and attention in language learning. Asad et al. (2021) emphasized that using games in learning enhances conceptual understanding more deeply compared to traditional teaching methods. Liu et al. (2022) also found that integrating sports games into language learning increases students' social engagement, which ultimately contributes to better language acquisition. However, despite the growing body of research on the benefits of physical activity in learning, there is still limited exploration of how specific sports, such as basketball, can be integrated into English language learning.

Within the movement-based learning framework, several studies have shown that structured physical activities have positive effects on children's cognitive development. Kudithipudi et al. (2022) and Shahid et al. (2023) highlighted that physical movement helps enhance the brain's capacity for learning and retaining information. Clemente-Suárez et al. (2024) and Javed et al. (2024) found that physically active children tend to have better language skills compared to their less active peers. Additionally, Sadiqzade (2025) stated that integrating physical activities into language learning not only improves students' vocabulary and grammar retention but also boosts their confidence in using a foreign language. These findings are supported by Karatas et al. (2025), who showed that movement-based methods can increase students' emotional engagement in language learning, making them more enthusiastic and motivated to learn.

Several innovative methods in English language learning have also been developed, such as Total Physical Response (TPR) (Diana et al., 2022; Xie, 2021), Gamification (González-Fernández et al., 2022; Sharma et al., 2024), and Task-Based Learning (Sedaghatkar et al., 2023). These methods emphasize the importance of student engagement in learning through more interactive means. However, studies that combine the principles of sports with language learning remain limited. Kaya & Erdem (2021) found that combining physical movement and language learning can improve students' academic performance, but this research primarily focused on secondary education. Meanwhile, a study by Jusslin et al. (2022) revealed that learning strategies incorporating physical movement can reduce students' anxiety in speaking a foreign language, which is one of the main barriers to learning English at the elementary level.

Although previous research has demonstrated the positive impact of physical activity on learning, more specific studies are needed to explore the implementation of sports as a medium for English language learning in elementary schools. Studies by Kalén et al. (2021) and Sutapa et al. (2021) suggest that sports not only enhance motor skills but can also be used as a tool to develop cognitive and language abilities. However, these studies have not specifically discussed the application of sports in English language learning at the elementary level, leaving a research gap that needs to be addressed (Shi & Feng, 2022).

Amid various innovations in English language learning, there has been little research exploring the use of basketball as a medium for language instruction in elementary schools. A teaching approach that combines basketball with English language learning is believed to create a more dynamic and enjoyable learning experience. Therefore, this study aims to introduce a new perspective by exploring the effectiveness of the Basketball-Based Learning (BBL) method in enhancing elementary school students' English language skills. By integrating cognitive, physical, and social aspects, this approach seeks not only to improve language proficiency but also to build students' confidence and social interactions in using English. This research aims to analyze the extent to which the Basketball-Based Learning method can increase student engagement, English comprehension, and how physical activities contribute to improving language learning quality. Through this study, it is expected that more effective and innovative teaching strategies will be discovered, while also contributing to the development of physical activity-based learning methods in social sciences and humanities.

RESEARCH METHOD

This study employs the Classroom Action Research (CAR) method to examine the effectiveness of the Basketball-Based Learning (BBL) method in English language learning at the elementary school level. CAR was chosen because it allows researchers to directly identify learning problems, implement innovative solutions, and evaluate their impact in a real classroom setting (Chiu, 2024). Additionally, CAR provides flexibility in adapting teaching approaches based on empirical findings throughout the study, enabling the development of more effective and

applicable educational strategies (Akimov et al., 2023; Aloizou et al., 2025; Sajja et al., 2024). The study was conducted at State Elementary School 4 Lelateng (SDN 4 Lelateng) in Jembrana, Bali. The research was carried out from February to March 2024 at the basketball court of Triatma Mulya University, also located in Jembrana, Bali. This school was selected due to its characteristics that support research, such as implementing innovative teaching methods and maintaining a learning environment that is responsive to physical activity-based approaches. Furthermore, SDN 4 Lelateng is affiliated with a university, facilitating intervention-based research and providing academic support for the implementation of the tested method (Wang et al., 2024).

The research subjects consisted of 30 fourth- and fifth-grade students. These grade levels were chosen based on the consideration that students at this stage already have a basic understanding of English but still face challenges in developing active communication skills. Additionally, children of this age group have high energy levels and respond well to movement-based learning methods (Lee-Cultura et al., 2022). Apart from the students, the study also involved two English teachers and one principal as additional informants. The English teachers were selected due to their experience in teaching English at the elementary level and their ability to provide pedagogical insights into the effectiveness of the applied method. The principal was included to understand how school policies may support or hinder the implementation of innovative teaching methods such as BBL.

This study employed two cycles of Classroom Action Research (CAR), each involving planning, implementation, observation, and reflection. In collaboration with teachers, the researcher designed Basketball-Based Learning (BBL) lessons that combined basketball activities with English content. Assessment tools—such as observation sheets, interview guides, and language tests—were developed to ensure valid evaluation. Each cycle included four sessions where students engaged in basketball while performing language tasks, like stating vocabulary or forming sentences during play. Teachers facilitated the balance between physical activity and language learning, promoting both engagement and English proficiency.

During the learning process, participatory observation was conducted to record student engagement, concept comprehension, and any challenges encountered in each session. The observations were based on the learning engagement model developed by Yang et al. (2021), which emphasizes cognitive, emotional, and behavioral aspects of student learning. Additionally, periodic reflections with teachers were conducted to evaluate the effectiveness of the implemented method and to determine necessary improvements for the next cycle. This reflection process was crucial in ensuring that the applied approach truly met the students' needs.

Data collection was carried out using three primary methods: observation, interviews, and learning outcome tests. Observations aimed to understand how students interacted with the movement-based learning method, while in-depth interviews were conducted with English teachers, the principal, and selected students to explore their experiences and perceptions of the

method. Pre-test and post-test assessments were used to measure students' progress in English language skills, including vocabulary comprehension, sentence construction ability, and confidence in speaking English. The test instruments were developed based on the English curriculum standards for elementary schools and references from the Cambridge Young Learners English Test (YLE), ensuring comparability with international standards.

To enhance the validity and reliability of the study, methodological triangulation was applied by comparing the results of observations, interviews, and learning outcome tests to obtain a more objective picture of the effectiveness of the applied method (Denzin & Lincoln, 2018). Additionally, credibility testing was conducted through member checking, where preliminary analysis results were confirmed with teachers and students to ensure that the interpretations aligned with their experiences (Levitt et al., 2021). The collected data was then analyzed using qualitative and quantitative approaches, with observational and interview data analyzed through thematic analysis, while test results were analyzed using descriptive statistics, such as calculating mean scores and percentage increases in student performance.

RESULTS AND DISCUSSION

Increased Student Motivation and Engagement in English Learning

The increase in student motivation and engagement in English learning through the Basketball-Based Learning (BBL) method was evident in classroom dynamics throughout the study. Field observations showed that students were more enthusiastic about participating in lessons compared to conventional, more passive methods. Students who were previously passive and lacked confidence began to show greater interest in the learning process. During BBL sessions, they were more physically active, communicated more frequently in English, and interacted more with their teacher. One observation noted that during gameplay, some previously reserved students became more expressive. For instance, a fourth-grade student, identified as A, stated, "I usually feel shy speaking English, but when playing, it becomes easier and more fun."

Interviews with teachers also confirmed that the BBL method significantly impacted student engagement. An English teacher at SDN 4 Lelateng Singaraja reported that this method made students more focused and enthusiastic about learning. "I see the children becoming much more excited. They even request additional learning sessions because they find learning English through games more enjoyable," the teacher shared. The teacher also added that compared to lecture-based or textbook-based teaching, BBL was more effective in maintaining students' attention for longer periods.

Furthermore, additional observations indicated that students became more confident in using English. They used newly learned vocabulary more frequently in the context of the game, such as shouting instructions in English to their teammates. Even students who were usually reluctant to speak English showed greater courage in constructing simple sentences during

gameplay. This phenomenon can be explained by Benlahcene et al. (2021), which asserts that active student engagement in learning is influenced by the fulfillment of three basic psychological needs: autonomy, competence, and relatedness.

In the context of this study, the BBL method provided students with a sense of autonomy as they had the freedom to explore and use English in a more flexible setting. Additionally, by directly engaging in the game, students experienced an increase in competence as they could immediately see the results of their efforts in understanding and using the new language. Finally, team interaction and game dynamics strengthened students' sense of relatedness, creating a more supportive and inclusive learning environment.

Previous research also supports these findings. Fredricks, Gill et al. (2025) stated that learning methods that accommodate intrinsic engagement, such as game-based learning, have been proven to enhance students' motivation to learn. An engaging and interactive learning environment helps students become more cognitively and emotionally involved in the learning process, ultimately improving their learning outcomes. In this case, integrating physical activity with English language learning through BBL provided a more comprehensive learning experience, linking cognitive, emotional, and social aspects in a coherent activity.

Enhancement of Vocabulary Comprehension and Sentence Structure

The findings indicate that the Basketball-Based Learning (BBL) method significantly contributed to improving students' vocabulary comprehension and sentence structure. Data from pre-test and post-test assessments showed a notable improvement among most participants. Before the BBL intervention, many students struggled to recall and use vocabulary in the appropriate context. Grammar errors were also frequently found in their written and spoken responses. However, after several BBL sessions, their understanding improved, as reflected in the reduced number of vocabulary and grammar errors.

Below is a comparison of pre-test and post-test results before and after implementing the BBL method:

Table 1 Comparison of Pre-Test and Post-Test Results

Assessment Indicator	Pre-Test Average (%)	Post-Test Average (%)	Improvement (%)
Vocabulary Comprehension	58	83	25
Sentence Structure Use	52	79	27
Speaking Fluency	45	74	29
Grammar Error Reduction	40	76	36

Source: Research Analysis Results, 2024

From the table above, it is evident that vocabulary comprehension improved from an average of 58% in the pre-test to 83% in the post-test. Students found it easier to recall vocabulary linked to physical activities in basketball, such as "pass," "shoot," "jump," and "dribble." Additionally, their sentence structure improved, with scores rising from 52% to 79%.

Observations revealed that students who previously struggled to remember vocabulary found it easier to retain words learned through physical movement. For example, when the teacher gave instructions in English during the game, students did not just hear and see the words but also experienced them through actions. In an interview, a student identified as R stated, "*If I just sit and learn, I forget quickly. But when I move and play basketball, the words are easier to remember.*"

This phenomenon can be explained through the Embodied Cognition Theory by Barsalou (2008), which emphasizes that physical involvement in learning processes can strengthen memory and concept comprehension. In this context, the movements students performed while playing basketball were not just physical activities but also served as memory reinforcements for the vocabulary they learned. According to Glenberg (2008), learning methods that involve multisensory interactions—such as hearing, seeing, and moving simultaneously—have been proven to enhance long-term memory retention.

Additionally, the significant reduction in grammar errors after the BBL intervention suggests that this method helped students better understand English sentence structures. During gameplay, they were required to use simple sentences to communicate with their teammates, such as "*Can you pass the ball to me?*" or "*I will shoot now.*" Through repeated use in a fun and meaningful context, they more easily grasped how words are structured into correct sentences. Previous research supports these findings. According to Ji et al. (2022), a learning environment rich in interaction and active engagement accelerates language acquisition. The BBL method created a conducive environment where students were naturally encouraged to communicate in English without feeling pressured. This aligns with Panjeti-Madan & Ranganathan (2023) findings, which state that children's language learning is more effective when linked to activities involving physical and social exploration. In summary, these research findings reinforce the idea that physical activity-based learning methods such as BBL can be an effective approach to improving English proficiency at the elementary school level. This approach not only enhances students' academic abilities but also creates a more enjoyable and immersive learning experience.

Interactive and Enjoyable Learning Environment

The Basketball-Based Learning (BBL) method has brought significant changes in creating a more interactive and enjoyable learning environment. Observations showed that students displayed more positive expressions when participating in lessons using this method compared to traditional methods that relied heavily on lectures and written exercises. The classroom became more lively, filled with enthusiasm, where students actively participated in discussions and game activities. They smiled more, laughed, and showed enthusiasm in every learning session. Teachers involved in this research also reported that the classroom atmosphere became more dynamic and collaborative. One interviewed teacher stated, "Usually, during English lessons, some students tend to be passive and shy about speaking. However, with BBL, they appear more confident. Even students who are usually quiet started trying to speak in English

without fear." This testimony was reinforced by direct classroom observations, where students were more willing to attempt speaking English in the context of the game without worrying about making mistakes.

Furthermore, field observations indicated that students experienced less anxiety when using English in game-based activities. In conventional methods, students often felt pressured to answer correctly, whereas in the BBL method, they learned English naturally through peer interactions. This aligns with Patra et al. (2022), which states that the lower a student's anxiety level in learning a second language, the more effective their language acquisition process will be. In the context of BBL, the pressure to perform perfectly is reduced because language is used in a relaxed and enjoyable environment.

Additionally, research by Y.-F. Yang et al. (2024) suggests that games in language learning can create a low-stress learning environment, ultimately boosting students' confidence in speaking English. In BBL, the game element keeps students focused on the activity and the communication happening during the game, rather than on the mistakes they make. This contrasts with traditional methods, which often emphasize grammatical accuracy, increasing anxiety and inhibiting students' willingness to speak.

One student stated in an interview, "I used to be afraid of making mistakes when speaking English, but now I feel more comfortable. If I make a mistake, my friends don't laugh at me; they help me instead." This statement highlights that BBL not only builds students' confidence in speaking English but also fosters a sense of camaraderie and social support in the classroom.

These findings also align with the Communicative Language Teaching (CLT) approach, which emphasizes the importance of a communicative and interaction-based learning environment to enhance students' language skills. In BBL, students learn through real communication with their peers rather than passively memorizing grammar rules. This helps them understand the language in a more authentic and meaningful context.

Basketball-Based Learning as an Alternative Active Learning Method

The Basketball-Based Learning (BBL) approach has proven effective in making English learning more engaging for elementary students compared to traditional textbook methods. Teachers observed increased student enthusiasm and participation, noting that previously passive learners became more active and excited. Students also responded positively, expressing that learning through games felt more fun and less boring. Observations confirmed that BBL encouraged movement, interaction, and focus, creating a lively and collaborative classroom atmosphere unlike the often dull environment of conventional methods.

The Basketball-Based Learning (BBL) approach has a strong foundation in Experiential Learning Theory, developed by Kolb (Devi & Thendral, 2023). This theory emphasizes that direct experience plays a crucial role in enhancing student understanding and retention since effective learning occurs through a cycle involving concrete experience, reflection, abstract conceptualization, and active experimentation. In the context of BBL, this theory serves as the

basis for designing a learning strategy that engages not only cognition but also physical and social interactions. The learning process in this approach begins with concrete experience, where students directly engage in learning through basketball activities combined with English tasks. For example, while playing, they are required to say English vocabulary before making a throw or construct sentences when receiving a pass. This physical experience not only makes learning more exciting but also increases student engagement in the learning process.

The next stage is reflective observation, where students reflect on their experiences after the game session ends. This reflection process can be facilitated through discussions with teachers and peers to evaluate how they used English in the game, what they understood, and what challenges they faced. Such reflective discussions help students recognize their learning patterns and identify areas for improvement. Following this is abstract conceptualization, where students begin connecting their experiences with the English concepts being taught. At this stage, they understand how vocabulary, sentence structures, or grammatical rules apply in different situations. For example, they realize that verbs used in the game can be structured into more complex sentences or that the communication patterns in the game can be applied to daily conversations.

Finally, the active experimentation stage allows students to apply the concepts they have learned in other situations. They can try using the vocabulary and language structures they have learned in conversations outside the classroom, both in interactions with friends and in other game activities. This way, learning does not stop in the classroom but continues into everyday life, naturally reinforcing their English comprehension and skills. An experience-based approach like BBL enables students to learn through action and reflection simultaneously, ultimately improving their understanding of the language they are learning. This is also consistent with Malin & Rind (2022) research, which states that experience-based learning is more effective than conventional methods that focus solely on one-way knowledge transfer from teacher to student.

Furthermore, implementing this method supports the kinesthetic learning concept, which emphasizes that most elementary school children grasp material more easily when engaged in physical activities (Y.-F. Yang et al., 2024). Students do not just hear or read information but also experience and feel it through movement, interaction, and play.

Implications for the Development of Teaching Methods in Elementary Schools

The implementation of Basketball-Based Learning (BBL) in English language learning at the elementary school level has provided new insights for teachers and school administrators regarding the effectiveness of activity-based teaching methods. Interviews with teachers indicate that this method not only enhances student engagement in English lessons but also has the potential to be applied to various other subjects. One teacher stated, "This approach greatly helps in increasing student participation. I see that similar methods could be applied in other subjects, such as mathematics or science, to make abstract concepts easier to understand in a more engaging way."

Additionally, the school principal also acknowledged that teaching methods like BBL could support more inclusive and activity-based educational policies. In an interview, they stated, "We are always looking for innovations in teaching so that children become more active and do not just sit still listening to the teacher talk. BBL is a great example of how learning can be both enjoyable and effective. If possible, we would like to adapt this approach into school policies so that it can be implemented across various classes."

Field observations reinforce these findings. In classes that applied the BBL method, students demonstrated greater interest in learning compared to those using conventional methods. They were more actively engaged in interactions, displayed greater confidence in speaking, and were able to understand the material more effectively. This suggests that teaching methods integrating physical activities can boost motivation and enrich students' learning experiences.

Conceptually, this approach aligns with the Holistic Education Approach developed by Nedungadi et al. (2024), which emphasizes the importance of integrating cognitive, physical, and socio-emotional aspects in education. According to Nedungadi et al. (2024), holistic learning enables children to develop comprehensively, not only in academics but also in social, emotional, and physical skills. This model of education highlights that active and socially interactive learning experiences help children better grasp concepts while building their self-confidence.

Furthermore, research in education has shown that activity-based learning positively impacts brain development and children's cognitive abilities. Sufuentes et al. (2024), explains that physical activity stimulates the release of neurochemicals that enhance cognitive function and memory retention. This is also supported by the Embodied Cognition Theory developed by Barsalou (2008), which suggests that sensory and motor experiences play a crucial role in understanding abstract concepts. In this context, games in BBL serve not only as entertainment tools but also as integral components of an effective learning process.

The implications of these findings for the development of teaching methods in elementary schools are vast. The adoption of BBL and other activity-based methods could be incorporated into school policies to support more inclusive and interactive learning. Teachers can adapt this method to suit the subjects they teach, while schools can provide the necessary training and resources to optimize its implementation.

CONCLUSION

Basketball-Based Learning (BBL) has proven to be an innovative method that enhances the effectiveness of English language learning in elementary schools by integrating physical activity into the language learning process. This study's findings show that the BBL intervention significantly improved students' vocabulary comprehension and sentence structure skills, facilitated by a more interactive and enjoyable learning environment. The success of this method was demonstrated through pre-test and post-test results, which reflected improvements in

students' English proficiency, as well as observations indicating active student participation in each learning session. Moreover, the reduction in student anxiety when using English during gameplay suggests that this approach fosters a more supportive and low-pressure learning atmosphere. These findings reinforce the idea that direct experiences through physical movement can strengthen cognitive processes in language learning, as explained by the Embodied Cognition Theory and Experiential Learning Theory. Thus, BBL not only benefits cognitive aspects but also supports students' social and emotional development. Furthermore, the multisensory engagement in BBL facilitates stronger memory retention and deeper comprehension of language material. The study's findings also have broader implications for the development of teaching methods in elementary schools. Teachers can adapt similar approaches to various subjects to create more contextual and engaging learning experiences for students. Additionally, this approach aligns with the activity-based education paradigm, which emphasizes the importance of physical engagement in fostering more holistic learning. Therefore, Basketball-Based Learning can serve as an effective alternative for elementary schools seeking to implement more dynamic teaching methods that cater to children's developmental characteristics.

ETHICAL STATEMENT AND DISCLOSURE

This study was conducted in accordance with established ethical principles, including informed consent, protection of informants' confidentiality, and respect for local cultural values. Special consideration was given to participants from vulnerable groups to ensure their safety, comfort, and equal rights to participate. No external funding was received, and the authors declare no conflict of interest. All data and information presented were collected through valid research methods and have been verified to ensure their accuracy and reliability. The use of artificial intelligence (AI) was limited to technical assistance for writing and language editing, without influencing the scientific substance of the work. The authors express their gratitude to the informants for their valuable insights, and to the anonymous reviewers for their constructive feedback on an earlier version of this manuscript. The authors take full responsibility for the content and conclusions of this article.

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