

Game-Based Educational Approach: The Role of Snakes and Ladders in Enhancing Students' Active Participation in Thematic Learning at Elementary Schools

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ABSTRACT

Objective: This study aims to analyze the role of educational play tools in the form of the snakes and ladders game in increasing students' active participation in thematic learning at elementary schools. Active student participation is one of the important indicators in the success of the teaching and learning process, especially in the thematic approach which requires full involvement of students. Educational games such as snakes and ladders have the potential to become alternative media that are fun, interactive, and meaningful in delivering learning material. **Method:** This study uses a qualitative approach with a case study method in one third-grade class of an elementary school in Bogor. Data collection techniques were carried out through classroom observations, interviews with teachers, and documentation of learning activities. **Results:** The results showed that the structured use of the snakes and ladders game was able to create a more lively learning atmosphere, increase enthusiasm, students' courage in expressing opinions, and collaboration among peers. **Novelty:** Thus, the snakes and ladders game as an educational approach not only increases active participation, but also strengthens conceptual understanding in comprehensive thematic learning. This study recommends the integration of educational games into student-centered learning strategies to enhance learning effectiveness at the elementary level.

INTRODUCTION

Education at the elementary school (SD) level plays a very strategic role in shaping the foundation of students' knowledge, attitudes, and skills [1], [2], [3], [4], [5]. The current curriculum emphasizes the importance of an integrated thematic approach, where various subjects are combined into a theme so that students can understand the interconnection between concepts comprehensively and contextually. Thematic learning emphasizes a holistic, meaningful, and life-relevant learning experience for students [6], [7], [8], [9], [10]. However, its implementation in the field often encounters various challenges, especially regarding the low level of active student participation during the learning process.

In practice, thematic learning in classrooms often faces obstacles, particularly concerning students' low active participation. Many students appear passive, less enthusiastic, and merely receive information in a one-way manner from the teacher. This shows that the methods and media used have not fully stimulated student engagement. In fact, active participation is a crucial indicator of effective learning, as it allows students not only to understand the material but also to develop critical thinking, cooperation, and communication skills [11].

Active student participation is a vital element in student-centered learning. When students are actively engaged – by asking questions, answering, discussing, or working

in groups—they are not merely recipients of information but become subjects who construct their own understanding. Unfortunately, in practice at many elementary schools, learning is still dominated by lecture-based or teacher-centered approaches. As a result, students become passive, easily bored, and less emotionally or intellectually involved in the learning process.

This phenomenon indicates a need for more innovative and engaging learning methods and media to increase student participation. One potential strategy is through educational game-based approaches. Games as learning media have advantages due to their fun nature, encouragement of interaction, and engagement of cognitive, affective, and psychomotor aspects simultaneously. According to [12], children are in the concrete operational stage, where they learn most effectively through direct, exploratory, and manipulative experiences. Meanwhile, [13] emphasizes that learning is optimal in social contexts through interaction with the environment and peers. Therefore, group-based games help not only in conceptual understanding but also in strengthening students' social-emotional aspects.

One form of educational game that is easy to apply in thematic learning is snakes and ladders. This traditional game can be modified into an educational, interactive, and enjoyable learning medium. By integrating subject material into the game's squares, teachers can deliver content in a more engaging way. Students are challenged to answer questions or complete tasks in each step of the game, indirectly encouraging their active participation in learning. This approach aligns with the principles of active learning as stated by [14], who argues that students learn best when they are physically and mentally involved in the learning process. Snakes and ladders not only stimulate thinking activities but also create a competitively healthy atmosphere, build confidence, and increase student motivation.

Using snakes and ladders in thematic learning also offers additional advantages, such as strengthening social interaction among students, fostering cooperation, and developing both cognitive and affective aspects. A fun and dynamic learning environment makes students feel comfortable exploring ideas, expressing opinions, and participating in discussions. Thus, this game increases students' physical, mental, and emotional engagement.

However, the use of educational games such as snakes and ladders is not yet common in most elementary schools. Many teachers are still hesitant to use game media due to concerns that it may not be serious enough or may fail to deliver the content effectively. In fact, with proper design and planning, games can be highly effective tools for delivering learning messages and achieving desired educational goals.

Given this potential, an in-depth study is needed on the role of snakes and ladders in increasing students' active participation in thematic learning in elementary schools. This study is expected to provide concrete insights into how traditional games can be developed into effective learning aids and positively impact student learning processes and outcomes. This research also aims to contribute to educational practice at the

elementary level, especially in developing innovative, contextual, and enjoyable learning methods for children.

Research Problems

Based on the background described, the research questions are as follows:

1. How is the educational snakes and ladders game implemented in thematic learning at elementary schools?
2. What is the role of snakes and ladders in increasing students' active participation during thematic learning?
3. What are the challenges and solutions in using snakes and ladders as a learning medium in class?

Research Objectives

The objectives of this research are to:

1. Describe the process of implementing the educational snakes and ladders game in thematic learning at elementary schools.
2. Analyze the role of the game in encouraging and increasing students' active participation during learning.
3. Identify various challenges faced by teachers in implementing snakes and ladders and solutions to optimize its use.

RESEARCH METHOD

This study uses a qualitative approach with a case study method because it aims to explore in depth the implementation of the snakes and ladders educational game in thematic learning and its impact on students' active participation in real classroom settings. This approach is considered most suitable because it allows researchers to understand the complex dynamics of learning interactions, view learning contexts holistically, and obtain descriptive and naturalistic data. The research was conducted at SD Tunas Harapan, Bogor, purposively selected for its implementation of innovative learning approaches and support for using educational games in the classroom, especially in integrated thematic learning for third grade.

Research subjects consisted of one third-grade teacher and all 24 students in the class. The teacher was selected as the main informant due to their key role in designing, managing, and evaluating learning using game media, while students were direct participants in the observed learning activities. Data were collected over approximately four weeks through several techniques: observation, interviews, and documentation. Observations were made directly during the learning process to record how snakes and ladders were used and how students responded and participated. In-depth interviews were conducted with the teacher to explore the background of using the media, implementation strategies, perceptions of its impact, and challenges encountered. Documentation included teacher notes, teaching materials, student work, and photographs of learning activities as supporting evidence.

All collected data were analyzed using Miles and Huberman's qualitative analysis techniques, including three main stages: data reduction, data display, and conclusion

drawing or verification. Data reduction was conducted by selecting and simplifying the data based on the research focus. Data were presented in descriptive narratives and simple tables for easier understanding. Conclusions were drawn gradually based on emerging patterns from observations, interviews, and documentation. To maintain data validity, the researcher used triangulation by comparing and confirming data from various sources and methods. With this approach, the results are expected to provide a comprehensive picture of the role of snakes and ladders in promoting students' active participation in thematic learning and contribute to primary school teaching practices.

RESULTS AND DISCUSSION

The results of the study conducted in a third-grade class at SD Tunas Harapan, Bogor, show that the application of the snakes and ladders educational game in thematic learning has a positive impact on students' active participation. The teacher modified the game by inserting thematic questions into each game square, covering subjects such as Indonesian, Science, and Social Studies. During the learning process, students were divided into small groups and took turns rolling dice and answering questions based on the square number they landed on. The learning atmosphere became more lively, dynamic, and interactive. Students appeared more enthusiastic, focused, and actively engaged in answering questions, discussing, and supporting their groups.

The increase in active participation was significant. Before implementation, students were generally passive listeners. After using snakes and ladders, more than 70% of students became actively involved in asking questions, answering, and discussing. This demonstrates the game's ability to stimulate curiosity, increase motivation, and build students' confidence in expressing ideas.

This improvement aligns with [12] constructivist theory, which states that children learn actively through direct interaction with their environment, and games are an effective form of concrete learning experience for elementary students. The game provides enjoyable exploration space for students to build knowledge through social interaction, critical thinking, and question reflection. [13] concept of the Zone of Proximal Development (ZPD) also supports this, where students learn better with slightly challenging tasks supported by teachers or peers. In the game, more capable students help others, creating collaborative learning.

Moreover, [14] active learning theory is also relevant, emphasizing students' physical, mental, and emotional involvement when they engage in games versus passive lectures.

However, several challenges were found during implementation. One major issue was limited class time—planned 30-minute games often exceeded due to student enthusiasm. Some students also struggled to understand game rules and questions, especially those with limited reading or comprehension skills. The teacher addressed this by dividing students into smaller groups with separate boards, simplifying instructions, assigning roles (reader, recorder, spokesperson), and fostering a non-threatening,

supportive environment. This adaptive teaching reinforced the function of games as educational tools, not just entertainment.

Overall, the results confirm that snakes and ladders effectively enhance active participation in thematic learning. These findings are consistent with [11] view that student participation is a key indicator of high learning engagement and a positive predictor of achievement. Although simple and traditional, the game proves effective when pedagogically adapted for content delivery. Its flexibility, ease of use, and ability to spark learning interest make it ideal for elementary education.

Besides cognitive development, the game also contributes to affective and social skills such as cooperation, sportsmanship, responsibility, and empathy. According to [15], meaningful learning occurs when students are directly involved in relevant activities, and games represent experiences closely related to children's real lives. Thus, integrating games into thematic learning not only boosts participation but also creates a humanistic, adaptive, and contextual learning environment aligned with current elementary students' needs. Educational games like snakes and ladders deserve consideration as part of student-centered learning innovations in primary education.

CONCLUSION

Fundamental Finding : Based on the results of the research conducted at SD Tunas Harapan, Bogor, it can be concluded that the implementation of the snakes and ladders educational game in thematic learning has proven effective in increasing students' active participation in class. The game, which was modified according to thematic material, succeeded in creating a fun and challenging learning atmosphere, encouraging students to be more actively involved in the learning process. Students showed significant improvement in terms of asking questions, answering, engaging in discussions, and having the confidence to express their opinions. Additionally, this game media also strengthened social interaction and cooperation among students through structured group activities. **Implication :** The implementation of snakes and ladders as a learning medium is not only pedagogically relevant but also aligned with the principles of constructivist theory and active learning. This game allows students to build understanding contextually and collaboratively. Therefore, snakes and ladders can be considered an innovative learning strategy, especially in the context of thematic learning that requires holistic student engagement. For teachers, it is advised to begin utilizing educational game media such as snakes and ladders as a variation in thematic learning methods. Teachers need to design the game appropriately to suit the learning objectives and students' developmental levels. Additionally, teachers must be able to manage time and classroom dynamics to ensure learning activities remain effective and well-directed. **Limitation :** Although there are some technical challenges such as time constraints and the need for rule adaptations, these can be overcome with careful planning and an active teacher role as facilitator. **Future Research :** For future researchers, it is recommended to develop this research at different grade levels or with different themes, and to compare the effectiveness of other game-based media. Quantitative research can also be conducted

to statistically examine the influence of educational games on students' learning outcomes. For curriculum and educational media developers, it is important to consider the integration of modified traditional games into thematic learning design so that complex material can be delivered in a more engaging and contextual manner for elementary students.

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