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LEARNING INNOVATION THROUGH EDUCATIONAL GAMES IN INCREASING ELEMENTARY SCHOOL CHILDREN'S INTEREST IN LEARNING

Baso Intang Sappaile
Universitas Negeri Makassar, Indonesia
E-mail: baso.sappaile@unm.ac.id

Abstract

Technological advancements and changes in children's learning patterns necessitate innovative teaching methods that can enhance elementary school students' interest in learning. One form of innovation widely used is educational games, whether in digital form, board games, role-playing, or gamification. This research is a literature review aimed at analyzing the role of educational games in increasing elementary school children's interest in learning, as well as identifying supporting factors and challenges in their implementation. The research method used is a literature study, reviewing various relevant sources such as journals, books, and research reports. The study results indicate that educational games can increase intrinsic and extrinsic motivation, foster curiosity, and create a more enjoyable learning environment. Additionally, games also encourage active student engagement and strengthen social interaction within the classroom. Factors supporting the successful implementation of educational games include teacher support, creativity, the availability of infrastructure, and collaboration with parents. However, the challenges faced include time constraints, teacher readiness, media costs, and alignment with learning outcomes. Therefore, a sustainability strategy needs to be prepared so that educational games can be effectively integrated into learning. This research suggests the need for further study regarding the effectiveness of digital educational games and their integration into the Merdeka Belajar curriculum.

Keywords: Learning Innovation, Educational Games, Learning Interest, Elementary School

INTRODUCTION

Basic education is an important foundation in shaping students' character and basic abilities (Hasanah, 2022). At this stage, children begin to learn the concepts of reading, writing, arithmetic, and moral values that will serve as a foundation for the next level. However, the learning process in elementary school often faces various challenges, both in terms of methods

and approaches. Teachers still heavily rely on conventional methods centered around lectures and memorization (Rozi & Arini, 2022). Methods like this tend to make students less active and only passive recipients of information. As a result, students' learning experiences feel monotonous and lack motivation.

The main challenge of learning in elementary school is how to keep children focused on learning activities. Elementary school-aged children have characteristics such as enjoying play, movement, and interacting with their surroundings. If learning is not presented in an engaging way, children easily lose concentration. This condition requires teachers to innovate in creating a fun learning environment (Wen et al., 2022). The lack of variety in teaching methods can impact students' active participation (Hernandez & Ramirez, 2024). This certainly hinders the achievement of the expected learning objectives.

Low student interest in learning is often a serious issue in elementary schools. Low learning interest is reflected in the students' lack of enthusiasm for participating in class lessons. Children tend to be passive, get bored quickly, and even consider learning a boring activity. The contributing factors include monotonous teaching methods, a lack of relevance of the material to daily life, and a scarcity of engaging learning media (Ruzita et al., 2025). If this condition is left unaddressed, it will impact low learning outcomes. Therefore, efforts to increase students' interest in learning have become an urgent need.

Conventional learning that only emphasizes memorization and problem-solving practice provides less meaningful learning experiences. Children need not only cognitive knowledge but also learning experiences that involve affective and psychomotor aspects. With traditional methods, students are rarely actively involved in the learning process. This situation makes them less trained in critical, creative, and collaborative thinking. In fact, these competencies are highly needed in the modern education era (Ji et al., 2022). Therefore, teachers need to find alternative methods that are more interactive.

The urgency of learning innovation stems from the need to adapt learning methods to the characteristics of elementary school-aged children. Children learn better when learning is linked to fun activities. One form of this innovation is the use of educational games in the teaching and learning process (Masrum et al., 2023). Games not only provide entertainment but are also capable of stimulating students' curiosity and enthusiasm for learning. By combining play and learning, children will find it easier to understand the

material. This innovation is expected to improve the quality of learning in elementary schools (May & Tseng, 2024).

Educational games have great potential to increase students' interest in learning. Thru games, children can interact actively with the subject matter. Play activities provide opportunities for students to explore knowledge in a fun way (Ramli et al., 2022). Additionally, games can foster cooperation, healthy competition, and problem-solving skills. All of these are important components in the process of effective learning (Siala et al., 2022). Therefore, educational games are a relevant solution to address the low learning interest in elementary school.

The implementation of educational games is also in line with the concept of student-centered learning. In this learning process, students are positioned as active subjects who are fully engaged in learning activities. The teacher only acts as a facilitator who guides and supports the learning process (Blažič, 2024). With this approach, children feel more free to express and create. They not only receive information, but also build knowledge thru direct experience. This can certainly increase their motivation and engagement in learning.

Additionally, educational games can also adapt to the development of digital technology. Currently, there are many application-based educational games that can be used as interactive learning media. The presence of digital technology allows children to learn thru gamification, which is the application of game elements in learning activities. This concept makes the learning process more engaging and aligns with the lifestyle of children today (Pérez-López & Navarro-Mateos, 2022). Thus, learning is no longer limited to the classroom, but can be accessed anytime and anywhere. This innovation provides great opportunities for teachers to create more creative learning experiences.

However, the implementation of educational games is not without its challenges. Teachers must be able to select and design games that are appropriate for learning objectives. Additionally, the availability of facilities, learning time, and school support also influences the successful implementation of this innovation. If the game is not well-designed, then learning objectives can be overlooked (Humble et al., 2023). Therefore, careful planning is needed to integrate games into the curriculum. This confirms that innovation must be accompanied by the right implementation strategy.

Overall, learning thru educational games is a highly relevant form of innovation for elementary schools. Games can overcome the challenge of low

learning interest and create a more interactive learning environment. With the support of teachers, schools, and parents, this innovation can be implemented optimally. If successful, educational games not only increase learning interest but also shape students' positive character. Therefore, research on learning innovation thru educational games is important to conduct. The results of this research are expected to contribute to the development of teaching methods in elementary schools.

RESEARCH METHOD

This research uses the literature review method with a descriptive qualitative approach. The literature review was chosen because the research focuses on collecting, analyzing, and synthesizing various relevant scientific sources related to learning innovation thru educational games in increasing the learning interest of elementary school children. The data sources used include national and international journal articles, educational textbooks, conference proceedings, and research reports published within the last ten years. The data collection process was carried out by selecting literature using keywords such as educational games, learning innovation, elementary school students, and learning interest. Next, the selected literature will be analyzed to identify patterns, themes, and key findings related to the research focus.

Data analysis was conducted using content analysis techniques, which involve analyzing the content of literature to find relevance between the concept of educational games and increased learning interest in elementary school students. The analysis stage included identifying key concepts, comparing findings across studies, and drawing synthetic conclusions. Data validity is maintained by source triangulation, which involves comparing findings from different sources to ensure the accuracy and consistency of the results. The analysis results were then systematically organized into a discussion covering three main aspects: educational game-based learning innovation, its influence on student learning interest, and supporting factors and challenges in its implementation. With this method, the research is expected to provide a comprehensive overview of the contribution of educational games as a learning innovation in elementary schools (Snyder, 2019; Tranfield et al., 2003).

RESULT AND DISCUSSION

Educational Game-Based Learning Innovation

Learning innovation is a creative effort to introduce more effective, efficient, and enjoyable learning methods for students. In the context of elementary school, innovation needs to consider the characteristics of children who tend to be active, enjoy playing, and learn thru concrete experiences. One form of innovation that is widely developed is the use of educational games. Games are seen not only as a recreational activity, but also as a medium that can instill certain knowledge and skills. Thru this innovation, students are more easily and actively engaged in the learning process (Hertati, 2022). Thus, educational games become a strategic alternative in overcoming the boredom of conventional learning.

The first form of educational games is technology-based digital games. This game utilizes digital devices such as computers, tablets, or smartphones to present learning materials in an interactive format. Digital games can integrate audio, visuals, and animation, making learning more engaging. For example, interactive math applications can help students understand basic arithmetic operations in a fun way. The use of digital games also allows for rapid feedback on student answers (Mikrouli et al., 2024). This can increase the child's motivation to learn and their self-confidence.

Beside digital games, board games are also an innovation in elementary school learning. Board games are usually board games that combine elements of strategy, rules, and social interaction. Teachers can modify traditional board games like Snakes and Ladders or Monopoly by adding elements of lesson material. For example, each square in the game Snakes and Ladders can contain a question that students must answer (Callaghan & Reich, 2022). In this way, students learn while playing in a more relaxed atmosphere. This activity not only increases learning interest but also trains social skills and teamwork.

Another innovation is role-playing. In this method, students are invited to play specific roles according to the learning theme. For example, when studying material about professions, students can role-play as doctors, teachers, or police officers. Role-playing activities allow students to internalize the concepts they are learning thru direct experience (Netinant et al., 2023). This activity also develops communication skills, creativity, and empathy toward others. Thus, role-playing becomes an effective medium for connecting theory with real-world practice.

Beside the concrete form of play, gamification, or the application of game elements in learning activities, is also an important innovation. Gamification doesn't always mean a full game; it can also involve

incorporating elements like points, levels, badges, and leaderboards into the learning process. These elements are capable of increasing student engagement because they feel challenged to achieve targets. For example, teachers can award points each time a student successfully answers a question correctly (T. Liu, 2024). With the symbolic award, students become more motivated to learn. Gamification provides a healthy competitive and collaborative atmosphere in the classroom.

In the application of educational games, the role of the teacher as a creative facilitator is very important. Teachers are not only responsible for delivering material, but also for designing engaging learning experiences thru games. Teacher creativity is needed to adapt the game format to the subject matter being taught. The teacher must also be able to direct the flow of the game so that it remains focused on the learning objectives. Without the active role of the teacher, the game has the potential to become mere entertainment without clear educational value (Obenza-Tanudtanud & Obenza, 2024). Therefore, teachers need to have innovative skills in designing game-based activities.

The alignment of games with the curriculum is an important aspect of learning innovation. The games used must be relevant to the basic competencies and learning objectives to be achieved. For example, in Indonesian language class, games can focus on vocabulary or reading comprehension. Meanwhile, in Mathematics, games can be directed toward practicing arithmetic operations or geometric recognition (Yang & Li, 2023). In this way, the game not only adds to the fun but also strengthens students' academic achievements. This ensures that innovation remains in line with applicable educational standards.

Beside relevance to the curriculum, educational games must also be suitable for the characteristics of elementary school children. Elementary school-aged children tend to learn thru concrete, group-based activities and are full of curiosity (Utari et al., 2023). Therefore, the chosen games should be simple, interactive, and allow children to move actively. Games that are too complex or abstract can reduce learning effectiveness. Aligning with the child's developmental stage will make the game more meaningful and easier to understand. Considering this, educational game-based learning innovation can function optimally.

The Influence of Educational Games on Elementary School Children's Learning Interest

Educational games play an important role in increasing the intrinsic motivation of elementary school students. Intrinsic motivation comes from within a child when they feel happy and challenged to learn. With the presence of games, the learning process is no longer seen as an obligation, but as an enjoyable activity. For example, a child feels proud when they successfully complete a certain level in a math game. This pride motivates them to keep trying without being forced (X. Liu & Lin, 2023). Thus, educational games can foster a love of learning that stems from personal satisfaction and happiness.

Beside intrinsic motivation, educational games can also increase extrinsic motivation. Extrinsic motivation arises from the rewards, recognition, or prizes students receive when they successfully complete the game. Teachers can award points, stars, or badges as a form of recognition for student achievements (Bainbridge et al., 2022). This fosters a spirit of healthy competition among the children. They became more diligent in their studies so they could gain appreciation from both teachers and classmates. In this way, educational games provide a double boost, both from internal and external factors.

Educational games can also foster a child's curiosity about learning materials. When children are engaged in play, they are encouraged to figure out how to overcome the challenges presented. This curiosity makes them actively explore and ask questions to both teachers and friends. For example, when playing a simple science game, a child wants to understand why a reaction occurs (Thangjai & Worapun, 2022). This process indirectly increases their activity in class. A high level of curiosity is an important asset for fostering sustained learning interest.

Student active engagement also increases when educational games are implemented in learning. Unlike the lecture method, which tends to be passive, games encourage children to participate directly. Children can make decisions, solve problems, or work together with their group in games (Ahmad, 2024). This activity makes students more focused because they are directly involved in the learning process. Additionally, active involvement helps students remember the material they learn more easily. Thus, educational games create more interactive learning.

Social interaction is also built thru the implementation of educational games in elementary school. Many games are designed to be played in groups, so students learn to cooperate and communicate. For example, in group games, each child has their own role to achieve a common goal. This trains

children's ability to listen, appreciate opinions, and collaborate. Additionally, social interaction also fosters a sense of community that improves the classroom atmosphere (Lampropoulos, 2023). Thus, educational games not only foster interest in learning but also social skills.

Educational games can create a fun learning atmosphere in the classroom. Children feel like they are playing while learning, so they are more relaxed and not stressed. This pleasant atmosphere makes it easier for students to absorb the lesson material. For example, children are more enthusiastic about learning vocabulary thru word games than thru traditional memorization methods. Learning in a joyful atmosphere also helps reduce the boredom that often arises in traditional learning (Sahin & Anagun, 2022). Thus, educational games make the classroom feel more lively and full of enthusiasm.

Children's enthusiasm for learning increases significantly when teachers use educational games. The children showed joyful expressions, enthusiastically answered questions, and actively participated in the activities. This enthusiasm is important because it is an early indicator of high learning interest. The more enthusiastic children are, the greater their chances of understanding and mastering the material. Teachers can leverage this condition to strengthen students' academic achievement (Maheshwari, 2022). In other words, educational games foster interest while also facilitating the knowledge transfer process.

Overall, educational games have a positive influence on elementary school children's interest in learning. Games not only enhance intrinsic and extrinsic motivation but also foster curiosity, active engagement, and social interaction. A fun learning environment makes children more enthusiastic and eager to participate in lessons. Thus, educational games are able to address the challenge of low learning interest in conventional learning. If applied consistently, this method can be an effective strategy for improving the quality of basic education. Therefore, educational games are worthy of consideration as an important part of learning innovation in elementary schools.

Supporting Factors and Challenges in Implementing Educational Games

The successful implementation of educational games is greatly influenced by various supporting factors present in the school environment. One important factor is the support of teachers, who act as both designers and implementers of learning. Highly committed teachers will be more motivated to try new methods in their classrooms. Teacher support also

includes their willingness to continue learning and innovating. Without the active involvement of teachers, educational games will only remain theoretical without real implementation (Tsionas & Satratzemi, 2023). Therefore, the motivation and readiness of teachers are crucial to the success of this innovation.

Beside teacher support, creativity is also a key supporting factor in the implementation of educational games. Creativity is needed to design games that are suitable for the material and the characteristics of the students. A creative teacher can modify simple games into effective learning tools. For example, traditional games like congklak or snakes and ladders can be adapted to train counting skills. Creativity also allows teachers to utilize simple materials as play media (Ouariachi & Dam, 2022). With creativity, limited facilities are no longer a major obstacle.

The next supporting factor is adequate facilities and infrastructure. The presence of supportive teaching aids, learning media, and classroom facilities can enhance the quality of educational games. For example, a projector and computer can be used to run interactive digital games. Meanwhile, flexible classroom spaces allow students to move freely during group activities. Without adequate resources, educational games risk being less engaging for students (Gutica & Petrina, 2022). Therefore, facility support is crucial to support the effectiveness of implementing this innovation.

Beside the school, collaboration with parents is also a significant supporting factor. Parents can help provide play media or support their children in learning thru play at home. Parental support will strengthen the implementation of game-based learning in schools (Asih & Halisiana, 2022). With parental involvement, the child's learning process doesn't just stop in the classroom, but also continues at home. This creates continuity between formal and non-formal education. This kind of collaboration will accelerate the achievement of learning objectives.

However, the implementation of educational games also faces a number of challenges. One of them is the time constraint in the learning process. The elementary school curriculum has many subjects with limited time allocation. If the game isn't well-planned, it will take too long, thus reducing the delivery of the material. Teachers often find it difficult to balance their time between playing and learning (Hayati & Behnamnia, 2023). Therefore, effective planning is essential to ensure the game doesn't disrupt the learning schedule.

Another challenge is the readiness of teachers to implement educational games. Not all teachers have the understanding or skills to design games that are appropriate for the subject matter. There are teachers who still feel comfortable with conventional methods and are less confident about trying new things. Additionally, some teachers may find it difficult to manage an active class during playtime. This can lead to unfocused learning and failure to achieve learning objectives (Hanghøj, 2023). Therefore, teacher readiness is a challenge that needs to be addressed thru training and mentoring.

The cost of creating or buying game media is also a challenge in itself. Some games, especially digital ones, require special devices and paid applications. Not all elementary schools have sufficient budgets to support these needs. Additionally, the games must align with the learning outcomes, so not all types of games can be used. If the game is not relevant to the basic competencies, it will be considered merely entertainment (Kiili et al., 2022). This requires teachers to be more selective in choosing and adapting game media.

To overcome these various challenges, a sustainability strategy for implementing educational games is needed. Teachers can start with simple games that don't require a large investment and gradually increase their complexity. Training and workshops for teachers are very important for improving their skills in designing educational games. Schools also need to collaborate with parents and utilize free technology or local resources. Good time management will ensure that the game does not disrupt the curriculum. With this strategy, the implementation of educational games can be effective and sustainable.

CONCLUSION

Based on a literature review, educational games have proven to be one of the effective forms of learning innovation in increasing the learning interest of elementary school children. Games not only stimulate intrinsic and extrinsic motivation but also foster curiosity, active engagement, and social interaction among students. A fun learning atmosphere thru games makes children more enthusiastic about attending lessons. This shows that educational games can be a solution to the problem of low learning interest in conventional learning. Thus, the application of educational games has strategic value in supporting the achievement of learning objectives at the elementary school level.

The implication of this finding is the need for developing more interactive, creative, and enjoyable learning methods thru the integration of

educational games. Teachers need to be supported with training and facilities so they can design games that align with the curriculum and student characteristics. In addition, further research is needed to examine the effectiveness of digital educational games, particularly in supporting the Merdeka Belajar curriculum. The integration of technology, innovation, and pedagogy is expected to create learning that is relevant to the needs of the times. In this way, educational games can play a greater role in improving the quality of basic education in Indonesia.

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