

GAMIFICATION LEARNING DESIGN STRATEGY TO INCREASE STUDENT MOTIVATION

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Abstract

This article aims to develop a strategy for designing gamification-based learning that can increase student motivation. The approach used is a theoretical review (literature review) by analyzing various theories and previous studies on educational gamification and learning motivation. Secondary data used in the form of journal articles, books, and relevant research reports, which were collected and analyzed to identify important elements in gamification, such as game mechanics, game dynamics, and game aesthetics. The results of the analysis show that gamification can increase student motivation by creating interactive and enjoyable learning. Elements such as points, levels, challenges, rewards, and feedback play an important role in increasing student engagement in the learning process. The resulting model makes a significant contribution to designing more interesting and motivating learning for students. Gamification-based learning not only makes students learn in a fun way but also allows them to develop cognitive, social, and emotional skills. This study provides valuable insights into the application of gamification in education, which can increase student engagement and overall learning outcomes. Thus, the application of gamification can be an effective solution to create more interesting learning and have an impact on student motivation.

Keywords: *learning strategies, learning design, gamification, motivation, elementary school students*

Introduction

Gamification is a learning approach that uses elements in a game or video game with the aim of motivating students in learning activities. In addition, this technique can also capture things that are more interesting to students and inspire them to continue learning. This game-based learning makes students feel that the learning process is more enjoyable. Gamification techniques involve the activities of all students without any differences in status. Student learning activities with games designed in gamification allow students to learn more relaxed, also make students think critically, responsibly, cooperate, and compete healthily (Isnawati, AU, 2021). Gamification is becoming an increasingly popular method in education as a tool to increase student motivation and engagement in the learning process. To create a more engaging and interactive learning experience, the concept of gamification involves incorporating game elements such as levels, points, and badges into non-game educational contexts. (Mulyanti et al., 2023). Research by (Hamari et al., 2020) gamification has a positive impact on student learning outcomes, especially because it can increase students' intrinsic motivation through mechanisms such as awards and rewards. In addition, research from (Ariyanti Nurningtias & Majid, 2022) states that the use of gamification in education is not only effective in increasing student motivation but also provides benefits in terms of increasing understanding of subject matter.

Gamification has attracted attention in education as an innovative approach to increase student motivation and engagement. Hong, Saab, & Admiraal (2024) and Vhalery et al., (2024) define gamification as the use of game elements in non-game contexts by relying on digital platforms or applications. The main objectives of implementing gamification are to increase student engagement, optimize learning, support behavioral change, and create positive social interactions (Hakulinen & Auvinen, 2014; Azman et al., 2023). However, its implementation must be adjusted to the learning context and characteristics of students to be effective (Azman et al., 2023). Motivation is an important factor in the learning process. Heri (2019) stated that motivation is the driving force that drives someone to be interested in learning. Strong motivation can improve learning outcomes, while weak motivation causes

decreased activity and quality of learning (Harjanto & Sudarwati, 2022). Learning motivation, according to Mulyaningsih (2014) and Harjanto & Sudarwati (2022), refers to changes in a person's behavior after understanding certain knowledge, attitudes, or skills. Learning design is a systematic process for designing teaching materials, activities, resources, and learning evaluations (Anna Yulia Susilowati & Ika Candra Sayekti, 2021). Good design allows teachers to create an effective and efficient learning environment, so that students can achieve learning goals (Nurhayati & Handayani, 2020). According to Handayani et al. (2022), learning design includes a series of detailed steps aimed at improving the quality of student learning. In a narrow sense, learning design is perceived as the preparation of a Learning Implementation Plan (RPP), which is compiled based on a syllabus with certain principles (Zulkarnaen, 2020).

The term strategy generally means an action taken to achieve a goal. Meanwhile, learning means activities carried out by educators and students to achieve educational goals. According to Sumandya & Widana in (Dhamayanti, 2022) learning strategy is a method used to deliver material by paying attention to aspects of the nature, scope, and learning activities that provide real experiences. Learning strategy is a concept chosen to achieve effective and efficient learning goals, which include approaches, methods, and learning techniques (Sumatupang, 2019). Define learning strategy as a way to achieve the specified learning goals. Broadly speaking, this strategy includes how to determine all aspects related to achieving learning goals, including planning, implementing, and evaluating learning. (Haudi, 2021)

Method

This article uses a theoretical study approach (literature review) to analyze and develop a strategy for effective gamification-based learning design in increasing student motivation. This approach is carried out by identifying, reviewing, and integrating various theories, concepts, and previous relevant research findings. Secondary data in the form of journal articles, books, research reports, and other reliable sources have been collected using keywords such as "educational gamification," "learning motivation," "gamification-based learning design," and "motivation in learning." These sources were obtained from academic databases such as Google Scholar, and ProQuest.

The collected literature is then analyzed to identify important elements in gamification, such as game mechanics, game dynamics, and game aesthetics. This analysis also includes the relationship between these elements and motivational theories, such as Self-Determination Theory and ARCS Motivation Model. The results of the analysis are used to compile a theoretical synthesis that connects gamification elements with learning design.

The resulting model or strategy is then conceptually validated by comparing it to previous research findings to ensure its relevance and reliability in the educational context. The analysis was conducted qualitatively using the content analysis method. This method aims to identify patterns, themes, and key concepts from relevant literature. The results of the analysis are presented in the form of a conceptual model or framework for gamification-based learning design strategies. This approach is expected to produce an applicable and evidence-based gamification-based learning design framework, as well as provide a significant contribution to increasing student learning motivation.

RESULTS

The results of the study of gamification learning design strategies to increase student motivation based on available research can be seen in table 1.1. research results.

Table 1.1 results of research on gamification learning design strategies to increase student motivation:

No.	Writer	Research result
1.	Shaliha, MA, & Fakhzikril, MR (2022). Concept Development Learning with Gamification. Curriculum Innovation, 19(1). https://doi.org/10.17509/jik.v19i1.43608	The use of gamification as a technique to motivate students. Their research shows that games can encourage curiosity and active participation in learning, which in turn increases students' motivation to learn. This shows that gamification can stimulate interest in learning. the greater one.
2.	Isnawati, & Hadi, S. (2021). Application of gamification in learning to increase students' interest in learning. Yogyakarta: Pustaka Edukasi.	The implementation of gamification will increase children to be more happy to learn. They can play and learn at the same time and can be done anywhere and anytime. So that teachers are easier in observing students' activities and interests in learning through the scoreboard and students' enthusiasm when playing the game.

3.	Marisa, H. (2020). Application of gamification in education: Increasing interactivity and learning motivation. Jakarta: Pustaka Edukasi.	By applying gamification in education, learning can become more interactive, fun and effective. Students will feel more motivated, actively involved, and develop various important skills. Therefore, it is important for educators to consider the use of gamification in their learning.
4.	Abdurrahman, S. (2025). Gamification-based learning design strategy to improve student motivation. Journal of Education and Technology, 2(1), 202–213. https://doi.org/10.xxxx/jpt.v2i1.2025 E-ISSN: 3047-1435206, Volume 2, No 1, March 2025	This study provides in-depth insights into how gamification-based learning design strategies can improve student motivation. The main elements of gamification in learning, such as points, levels, badges, leaderboards, and avatars, serve to increase student engagement and motivate them. These elements create more interactive and enjoyable learning. The application of gamification allows students to experience learning that is not only focused on academic aspects but also on interesting entertainment elements.
5.	Jeskris Lawalata et al., (2020) Lawalata, DJ, Palma, DI, & Pratini, HS (2020). A gamification-based cooperative learning model to improve students' mathematical strategy skills and learning motivation. In Proceedings of the National Seminar on Mathematics Education, University of Pekalongan.	Gamification serves as an effective tool to increase motivation students. They explained that elements such as points, badges, and leaderboards can stimulate students' interest, making them more engaged in learning. This shows that gamification is able to create a more interactive and enjoyable learning environment.

Discussion

These results reinforce that the use of gamification learning design strategies has great potential in increasing student motivation. This study shows that it is consistent with existing theories, such as Self-Determination Theory (SDT) and the ARCS Motivation Model. SDT states that gamification can meet students' psychological needs, such as competence, autonomy, and relatedness, which in turn increases students' intrinsic motivation (Baah & Govender, 2024). By utilizing gamification elements, educators can create more engaging and diverse learning, which in turn encourages higher student engagement.

This research provides in-depth insight into how gamification-based learning design strategies can increase student motivation. The key elements of gamification in learning, such as points, levels, badges, leaderboards and avatars, work to increase student engagement and motivate them. These elements create more interactive and enjoyable learning. The application of gamification allows students to experience learning that is not only focused on academic aspects.

but also on the interesting entertainment elements. This, in turn, helps to keep student concentration and reduce boredom in the learning process (Ariani, 2020).

Apart from that, gamification is divided into two types, namely structure gamification and content gamification. Gamification of the structure includes the use of points, levels, achievements, badges, and leaderboards that directly reward students based on their achievements. While content gamification involves elements such as stories, challenges, and avatars that strengthen the learning experience emotionally and socially. Thus, gamification helps create a more holistic and memorable learning experience.

1. Elements and Types of Gamification in Learning

Furthermore, important principles in gamification, such as the freedom to fail, feedback, progress, and storyline, also play a major role in enhancing students' learning experience. The freedom to fail allows students to learn from mistakes without fear, while continuous feedback helps students understand their strengths and weaknesses. The process of progress marked by increasing levels or achievements gives students a sense of ongoing achievement, thus encouraging them to continue trying. The storyline developed in gamification not only makes learning more interesting but also helps connect the material to students' real lives, so that they feel more connected to the learning (Vhalery et al., 2024).

2. Gamification Principles that Improve the Learning Experience

Student motivation in learning is an important factor that influences success.

academic. Heri, (2019) emphasized that high motivation makes students more focused on learning, absorb information better, and actively participate in the learning process. Therefore, the application of gamification in learning design can greatly support increasing student motivation. Gamification provides an entertainment element that makes students more enthusiastic about participating in learning. According to Zulkarnaen, (2020), good learning design must pay attention to analyzing student needs and identifying learning barriers, as well as creating a fun and effective learning environment. Gamification or game adaptation in learning is an approach in which game concepts and mechanisms are used to increase student engagement, motivation, and learning outcomes (Zeybek, N., & Saygi, 2023). This involves the use of game elements, such as points, levels, challenges, rewards, and leaderboards, to create a more engaging and interactive learning experience.

3. The Effect of Gamification on Student Motivation in Learning

Learning theories, such as behaviorist, cognitive, and constructivist theories, also provide a strong foundation for the application of gamification. According to Kemp et al., (2024) Kemp et al. (2024), these theories support gamification as a tool that creates deeper and more meaningful learning experiences. Behaviorist theory emphasizes behavioral changes as a result of experiences gained through gamification, while cognitive theory focuses on information processing in the minds of students involved in the game. Meanwhile, constructivist theory emphasizes the importance of active experience in building knowledge, which is in accordance with the principle of gamification that supports direct student involvement in the learning process. With gamification, students are not only motivated externally, but also develop skills and knowledge through richer and more dynamic experiences.

4. Theoretical Foundations of Gamification in Learning

The main goal of gamification is to improve students' abilities, introduce learning goals in a fun way, and support more positive behavioral changes (Khusnul Khuluq & Kuswandi, 2023). Therefore, gamification elements that include game mechanics, game dynamics, and game aesthetics play a very important role in achieving these goals. Game mechanics, such as points and levels, give students a sense of accomplishment. Game dynamics, including narratives and challenges, strengthen students' social and emotional engagement in learning. Meanwhile, game aesthetics, with attractive visual designs and intuitive interfaces, make learning more fun and easier to understand. Thus, the application of gamification in learning can make learning more effective and interesting for students.

5. Goals and Role of Gamification Elements in Learning

Thus, the application of gamification in learning offers an innovative and effective way to increase student engagement and motivation. Gamification not only improves the teaching and learning process but also supports the development of students' cognitive and social abilities in a broader educational context. Gamification-based learning gives students the opportunity to learn through more interactive, fun, and challenging experiences, which in turn encourages them to achieve better learning outcomes.

6. Effectiveness of Gamification in Student Learning and Development

The effectiveness of gamification in student learning and development is reflected in its ability to create a dynamic and enjoyable learning environment. Gamification elements, such as awarding points, levels, and badges, are not only intended to reward achievement but also to build a sense of healthy competition among students. This encourages students to continue to strive to improve themselves and improve their achievements in learning. Research shows that students who engage in gamification-based learning tend to have higher levels of motivation because they feel more appreciated for their efforts and progress (Ariani, 2020).

Conclusion

This review concludes that how gamification-based learning design strategies can increase student motivation. The main elements of gamification in learning, such as points, levels, badges, leaderboards, and avatars, serve to increase student engagement and motivate them. Not only that, other forms of gamification can be in the form of adjunct game applications such as Kahoot, quizziz, picture stories and others that are adjusted to the Lesson and Level/level of education. These elements create more interactive and enjoyable learning. The application of gamification allows students to experience a learning experience that is not only focused on academic aspects but also on interesting entertainment elements, so that it can increase student learning motivation.

However, the success of its implementation is very dependent on appropriate learning design, the availability of supporting technology, and teacher competence in utilizing gamification effectively and appropriately. Therefore, the gamification learning design strategy does not only function as a tool, but as an innovative and relevant learning strategy to answer learning challenges across subjects and can be used at all levels or levels of education according to the gamification used.

Suggestion

Based on the results of the review that has been conducted, here are some suggestions that can be considered:

1. For educators, it is recommended to be able to use and start integrating gamification learning design strategies, especially to increase student motivation across lessons and can be used at all levels or levels of education, depending on the type or content of gamification used.
2. For the government and educational institutions, it is hoped that they will provide support in the form of:
 - 1) Training and strengthening of teacher competencies in the use of technology,
 - 2) Provision of technological facilities that support digital-based learning.
3. For media developers, it is necessary to create game or application content that is appropriate to the curriculum, age characteristics of students, and local context so that it is easy to understand and relevant.
4. For researchers, it is recommended to conduct further empirical studies to strengthen these findings, as well as evaluate the effectiveness of using gamification at various levels and aspects of learning.

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