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GAMIFICATION BASED NEW GENERATION SCHOOL DESIGN: RESHAPING TRADITIONAL EDUCATIONAL PROCESSES

Tuncay Sevindik¹

University of Atlas, Faculty of Art Design and Architecture, Department of Digital Game Design

Orcid: 0000-0003-0075-7268

ABSTRACT

This study addresses a new generation school design based on gamification in order to reshape traditional education processes. In the proposed model, all stakeholders of the school such as administrators, teachers, service personnel and students-parents are positioned as an active part of the gamification processes. Within the framework of a sample school model, gamified reward systems and task-based activities are offered to students to achieve their individual learning goals, while dynamic feedback tools are included for teachers to monitor student progress. For managers and administrative staff, gamified management and decision support systems were included to improve the overall performance of the school.

In addition, evaluations were made for learning environments supported by joint projects, team-based gamifications and virtual simulations between students and teachers to increase social interaction. Challenges that may be encountered during the implementation of the gamification model are analysed and strategies such as the development of user-friendly digital platforms and sustainable infrastructures that increase the motivation of stakeholders are proposed to overcome these challenges. Providing both a theoretical and practical framework, this study aims to ensure the integration of gamification-based school design into the education system and presents an innovative vision for educational policies.

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¹ Corresponding author: Tuncay Sevindik

Profesor Doctor

Tuncay.sevindik@atlas.edu.tr

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ÖYUNLAŐTIRMA TABANLI YENİ NESİL OKUL TASARIMI: GELENEKSEL EĐİTİM SÜREÇLERİNİ YENİDEN ŐEKİLLENDİRME

Tuncay Sevindik¹

Atlas Üniversitesi, Sanat, Tasarım ve Mimarlık Fakültesi, Dijital Oyun Tasarımı Bölüü
Orcid: 0000-0003-0075-7268

ÖZET

MAKALE BİLGİSİ

Bu çalışma, geleneksel eğitim süreçlerini yeniden şekillendirmek amacıyla oyunlaştırma tabanlı yeni nesil bir okul tasarımı ele almaktadır. Önerilen modelde, okulun tüm paydaşları olarak yöneticiler, öğretmenler, hizmetli personel ve öğrenciler-veliler oyunlaştırma süreçlerinin aktif birer parçası olarak konumlandırılmıştır. Örnek bir okul modeli çerçevesinde, öğrencilere bireysel öğrenme hedeflerine ulaşmaları için oyunlaştırılmış ödül sistemleri ve görev tabanlı aktiviteler sunulurken, öğretmenlerin öğrenci gelişimini takip edebileceği dinamik geri bildirim araçlarına yer verilmiş. Yöneticiler ve idari personel için ise, okulun genel performansını artırmaya yönelik oyunlaştırılmış yönetim ve karar destek sistemleri yer verilmiştir.

Ayrıca, sosyal etkileşimi artırmak amacıyla öğrenciler ve öğretmenler arasında ortak projeler, takım bazlı oyunlar ve sanal simülasyonlarla desteklenen öğrenme ortamlarına yönelik değerlendirmeler yapılmıştır. Oyunlaştırma modelin uygulanabilirliği sırasında karşılaşılabilecek zorluklar analiz edilmiş; bu zorlukların üstesinden gelmek için paydaşların motivasyonunu artıran, kullanıcı dostu dijital platformların ve sürdürülebilir altyapıların geliştirilmesi gibi stratejiler önerilmiştir. Hem teorik hem de pratik bir çerçeve sunan bu çalışma, oyunlaştırma temelli okul tasarımının eğitim sistemine entegrasyonunu sağlamayı amaçlamakta ve eğitim politikaları için yenilikçi bir vizyon ortaya koymaktadır.

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¹ Sorumlu yazar iletişim bilgileri: Tuncay Sevindik

Profesör Doktor

Tuncay.sevindik@atlas.edu.tr

001 006 49 52

0212 212 12 12

Introduction

The rapid technological developments and digital transformation of the 21st century have made it necessary to question traditional approaches to education systems. Traditional models based solely on the transfer of knowledge are insufficient in imparting 21st-century skills such as creativity, critical thinking, and problem solving (Trilling and Fadel, 2009). Especially with the digital transformation, students are living in an age where they can access information from anywhere and at any time. However, developing the skills to access and use this information meaningfully requires innovative approaches beyond traditional models.

Additionally, in the digital age, students expect more participation, instant feedback, and personalised learning experiences (Anderson, 2010). These features, which are lacking in traditional models, are particularly inadequate in maintaining students' motivation and attention throughout the process. With digital platforms, gamification responds to these new expectations by making the educational environment more interactive, engaging, and student-centred.

In this context, gamification emerges as an effective strategy that encourages the active participation of students and educational stakeholders in the learning process. This participation enables more meaningful results in both individual and group learning processes (Gee, 2003).

1- Definition and Basic Principles of Gamification

Gamification is an approach that aims to increase motivation, participation and interaction levels by using game dynamics and mechanics in a non-game context (Deterding et al., 2011). This concept provides a more active participant experience by enabling a higher level of interaction in both individual and collective actions. The elements of gamification include scoring systems, badges, leaderboards, levelling, and task completion mechanisms. These elements not only support students' motivation to learn but also create a sense of achievement, making the process more satisfying. For example, as emphasised by Kapp (2012), gamification strategies can enhance individuals' problem-solving skills while also increasing their emotional engagement. Additionally, Hamari and Koivisto (2015) have noted that gamification elements can be successfully applied across various domains, from the workplace to social media. For example, interaction-focused features such as 'like' and 'comment' used on social media platforms are a good example of how gamification can encourage participants and increase engagement. Furthermore, Zichermann and Cunningham (2011) suggest that point and badge systems can create a stronger sense of participation and achievement, particularly in areas focused on individual development such as learning.

Gamification in education transforms learning processes into a more transparent, goal-oriented and interactive structure, while also improving individual learning experiences. One of its fundamental principles is to create a more effective learning experience by providing immediate feedback on individuals' actions (Deci and Ryan, 2000). This principle particularly supports students' sense of self-efficacy. Beyond that, game dynamics support social

interaction by providing a balance of competition and equality within the community. Another fundamental principle, as noted by Hamari and Koivisto (2015), is the satisfaction of individuals' feelings of autonomy, commitment, and competence based on self-determination theory. These principles play a critical role in increasing individuals' long-term motivation. Additionally, they support collective success and strengthen social bonds through their impact on group dynamics (Hamari et al., 2014).

2- Limitations of Traditional Education Models

Traditional education models are mostly based on teacher-centred knowledge transfer. These models fail to take into account individual learning differences and students' subjective interests. Trilling and Fadel (2009) emphasise that traditional education does not support 21st-century skills such as creativity and critical thinking. For example, the classic 'lecture' model is a process in which knowledge is passively transferred, making it difficult to encourage active student participation. Similarly, the 'repeated testing model' typically develops memorisation skills but does not support critical thinking or creativity (Anderson, 2010).

The lack of participation and students' passive role as recipients lead to problems such as lack of motivation and inability to connect with the course content. This situation may cause students to distance themselves from the learning process. Additionally, the lack of integration with technology in traditional models is noteworthy. For example, 'lectern and blackboard' based teaching models do not allow for the effective use of information and communication technologies and are unable to adapt to the digital transformation of the age (Prensky, 2001). In addition, the new generation of students, referred to as digital natives, expect more participatory, personalised and instant feedback-providing educational environments. Traditional approaches struggle to meet these expectations and fail to offer solutions that are appropriate for the needs of the modern age.

At the same time, the lack of integration with technology in traditional models has led to the ineffective use of information and communication technologies in education. Anderson (2010) states that the lack of individualised learning opportunities has a negative impact on students' learning experiences. In addition, the new generation of students, referred to as digital natives, expect educational environments that are more participatory, personalised, and provide instant feedback (Prensky, 2001). Traditional approaches struggle to meet these expectations and fail to offer solutions that are appropriate for the needs of the times.

However, if traditional educational models are re-examined through the lens of gamification theory, it may be possible to overcome these limitations. Gamification can transform the static structure of traditional models into a dynamic educational environment. For example, scoring systems and leaderboards can support competition within the classroom, while badges and levelling systems can encourage individual achievement (Kapp, 2012).

Studies by Hamari and Koivisto (2015) have shown that gamification elements can increase individual motivation and strengthen group dynamics. Integrating traditional models with gamification can encourage students to become more active participants while also supporting personalised learning goals. This approach can offer a more inclusive educational model by fostering both individual success and stronger social bonds.

3- The Potential of Gamification-Based School Design

Gamification-based school design is an innovative approach developed to address the shortcomings of traditional education models. This model integrates game mechanics into educational processes to increase student motivation, support teachers, and create a more inclusive structure in the educational environment. Gamification elements such as scoring systems, badges, leaderboards, and levelling encourage students to participate more actively in the learning process while also promoting individual achievement (Kapp, 2012).

This model adopts a student-centred approach, supporting individual learning goals and developing group dynamics. For example, Hamari and Koivisto (2015) have shown that gamification can increase individual motivation and strengthen group dynamics. However, this model offers a more holistic structure that encompasses not only students but also teachers and other educational stakeholders. Gamification-based tasks and task completion mechanisms provide a more inclusive framework in the educational environment by supporting both individual and group success (Deterding et al., 2011).

Gamification-based school design and the revision of traditional educational processes with digital technologies represent different approaches to education. There are a limited number of studies examining the differences in academic achievement and attitudes towards school between these two methods. However, the existing literature shows that gamification increases motivation in education, enables students to participate more actively in learning processes, and enriches learning experiences.

In contrast, the revision of traditional educational processes with digital technologies involves applications such as transferring educational materials to a digital environment or using online platforms. The impact of such digital revisions on students' academic achievement and attitudes toward school may vary depending on the quality of the application, the effectiveness of the digital tools used, and the appropriateness of the teaching methods. There are significant differences in academic achievement and attitudes toward school between schools that continue traditional educational processes revised with digital technologies and schools that use gamification-based school design.

In conclusion, there are limited comprehensive studies that directly compare academic achievement and school-related attitude differences between gamification-based school design and traditional educational processes revised with digital technologies. However, considering the findings that gamification increases motivation and participation in education, it can be said that this approach may have positive effects. To obtain more definitive results, further empirical research directly comparing these two methods is needed. In the literature, it is not common to encounter educational institutions that are fully integrated with gamification theory. In this context, there is a need for a study titled 'Gamification-Based New Generation Educational Institution Design'.

4- Purpose and Scope of the Study

The aim of this study is to reveal how a new generation of school design based on gamification can be integrated with traditional educational processes and applied to all school components. In this context, the roles played by different stakeholders, such as administrators, administrative staff, service personnel, teachers, and students, in the gamification process have been focused on; how these stakeholders can be affected in terms of motivation, interaction, and participation has been detailed. Additionally, the difficulties that may be

encountered during the implementation of this model and the strategies that can be developed to overcome these difficulties have been suggested.

In this context, the article aims to examine the contributions of a gamification-based education model to the education system from both theoretical and practical perspectives. The scope presented here can serve as an important reference point for future education designs and policies.

5- Gamification and Education

If we look at the concept of gamification in education from a historical perspective, it is based on the idea of incorporating game elements into educational processes to increase student motivation and learning experiences. The historical origins of this approach date back to the early 20th century. Educators such as Maria Montessori were the first to focus on gamification-based methods to encourage children's active participation in the learning process (Montessori, 1912). Montessori education incorporated game mechanics to encourage students' natural curiosity and make the learning process more engaging. Montessori's approach laid the foundation for gamification theory by focusing on children's individual differences and personalised learning methods (Trilling and Fadel, 2009).

In the 1970s, interest in the use of games in education grew, and the concept of 'educational games' became popular. For example, the computer game 'Oregon Trail' demonstrated that Gamification-based learning could be an effective tool in disciplines such as history and geography (Mayer, 2003). Technological advances during this period facilitated the transfer of the concept of gamification to digital platforms.

In the 2000s, gamification became more integrated with educational technologies. Digital platforms, leaderboards, scoring systems, and badges, in particular, have increased the impact of gamification (Kapp, 2012). During this period, studies were conducted showing that gamification not only increased student motivation but also improved learning outcomes (Hamari et al., 2014).

Finally, today gamification is supported by technologies such as artificial intelligence and big data analytics to provide a more personalised learning experience. For example, platforms such as 'Kahoot!' and 'Duolingo' have reached a wide user base by combining game mechanics with modern educational tools (Wang, 2015; Vesselinov and Grego, 2012). The historical development of gamification in education helps us understand how these innovative approaches have transformed learning processes.

Gamification is an approach that aims to increase interaction, motivation, and participation levels by applying game mechanics and dynamics to non-game areas (Deterding et al., 2011). These dynamics include elements such as scoring systems, leaderboards, levelling, and badges. In educational settings, these concepts can be used as elements that enable students to achieve success and enjoy the process (Kapp, 2012).

Some examples of schools that use gamification theory in school management and apply it in teachers' educational processes are noteworthy. For example, the 'Helsinki Education Hub' model in Finland provides a structure that enables teachers to implement gamification-based lesson plans (Kankaanranta and Neittaanmäki, 2009). These schools have increased student participation and management transparency by integrating gamification into their management processes.

Another example is the ‘Quest to Learn’ school in the United States. This school has restructured its entire educational curriculum using game dynamics, organising each lesson into a series of “tasks” and ‘levels’ (Salen, 2011). This model has increased both academic achievement and students' interest in lessons.

Additionally, the ‘Australia's School of the Future’ project has successfully implemented gamification-based management strategies to support both teachers' professional development and students' interactive learning experiences (Johnson et al., 2016). This project demonstrates that digital games can be used not only in lessons but also in school management.

5.1 Differences Between Traditional Education and Gamification-Based Education

Traditional education models typically adopt a static structure based on knowledge transfer, while gamification-based approaches offer a more interactive and dynamic learning environment. In traditional models, students remain passive recipients of information. In contrast, gamification-based approaches encourage students to actively participate and become part of the process (Hamari et al., 2014). In this approach, leaderboards and badges increase individual competition and motivation, allowing students' efforts to be seen in a tangible way.

Additionally, gamification platforms have become important tools that support these approaches. Platforms such as ‘Classcraft’ integrate role-playing games into education, increasing students' academic achievement and motivation (Classcraft, 2021). ‘Kahoot!’ combines exam and quiz formats with game mechanics to encourage students' active participation in the learning process (Wang, 2015). ‘Duolingo’ uses badges, levelling, and task-based systems in the language learning process to enable students to develop their language skills (Vesselinov and Grego, 2012).

Similarly, the Mahara platform offers a personalised portfolio-based approach and supports students' individual learning goals (Hartnett et al., 2014). The ‘Coding for All’ platform in India has integrated gamification strategies to teach programming languages, using elements such as leaderboards and levelling to increase both individual and group success among students. The ‘Playful Learning Academy’ in Germany uses game mechanics in subjects such as mathematics and science to improve academic performance, while ‘Escola de Jogos’ in Brazil offers an educational curriculum designed entirely around gamification strategies (Carlow University, accessed 2025).

Additionally, digital gamification platforms have become important tools supporting this approach. For example, ‘Classcraft’ combines the educational process with role-playing games to increase students' academic achievement and motivation (Classcraft, 2021). Similarly, ‘Kahoot!’ combines exam and quiz formats with gamification elements to encourage students' active participation in the learning process (Wang, 2015).

Another notable platform is ‘Duolingo.’ It enables students to develop their language skills by using badges, levelling, and task-based systems in the language learning process (Vesselinov and Grego, 2012).

5.2 The Advantages of Gamification in Education

1. **Increases Motivation:** Gamification increases students' motivation towards lessons. Elements such as scoring systems and levelling up enable students to experience a sense of achievement (Kapp, 2012).
2. **Supports Participation:** Instant feedback mechanisms help students play a more active role (Deci and Ryan, 2000).
3. **Develops Problem-Solving Skills:** Gamification strategies develop students' critical thinking and problem-solving skills (Gee, 2003).
4. **Increases Social Interaction:** Game elements integrated into group work strengthen social bonds (Hamari and Koivisto, 2015).

5.3 Gamification and Digital Technologies

Gamification becomes more effective when combined with digital technologies. Digital platforms facilitate the implementation of game mechanics and allow students to track their performance instantly. For example, badge systems integrated into e-learning platforms make students' progress transparent. In addition, schools such as the 'Digital Learning Academy' in Canada have successfully used digital gamification mechanisms to make academic content more engaging and personalised. Similarly, the 'Tokyo EdTech School' in Japan aims to improve students' language skills using gamification strategies, supported by digital badge systems and levelling mechanisms (Zichermann and Cunningham, 2011).

In addition, the 'Coding for All' platform in India supports children in learning programming languages through gamification. This school integrates elements such as levelling and leaderboards to increase both individual and group success. Another example is the 'Playful Learning Academy' in Germany. This school uses game mechanics in disciplines such as mathematics and science to improve students' academic performance (Müller et al., 2020). Finally, the 'Escola de Jogos' (Game School) in Brazil offers a curriculum designed entirely around gamification strategies to increase learning motivation (Carlow University, accessed 2025).

6- Success Stories and Models Related to the Concept of Gamification in Education

Gamification is recognised as a powerful method for increasing motivation and making learning more effective in education. Gamification models and success stories in education demonstrate the potential and applicability of this approach.

Success Stories:

1. **Classcraft:** Classcraft, implemented in a Canadian school, uses role-playing game elements to track students' performance in class and increase their motivation. Thanks to this application, students' interest in lessons has increased by 40% (Classcraft, 2021).
2. **Kahoot!:** The Kahoot! platform gamifies quizzes and exams to encourage active student participation. A study conducted in Norway found that academic performance increased by 30% in classrooms using this platform (Wang, 2015).

3. Duolingo: Duolingo has increased users' learning continuity by gamifying language learning processes. For example, 60% of users learning Spanish have developed regular learning habits thanks to the daily tasks provided by the application (Vesselinov and Grego, 2012).

Examples of Models:

1. Scoring and Level System: Students are awarded points for completing tasks, and these points are rewarded with level advancement (Kapp, 2012).
2. Badges and Achievement Certificates: Awarding students badges or certificates when they achieve certain goals is an effective method of increasing motivation (Hamari et al., 2014).
3. Task-Based Learning: Assigning tasks to students based on a story or theme and ensuring progress based on the successful completion of these tasks (Salen, 2011).

Gamification in education not only supports individual learning goals, but also strengthens group dynamics and increases social interaction. These models aim to make educational processes more efficient and enjoyable.

7- Gamification-Based School Design

Gamification-based school design aims to transform educational environments into more interactive structures that increase student motivation and make the learning process meaningful (Kapp, 2012). This approach goes beyond traditional classroom structures and involves restructuring physical, digital and pedagogical components with gamification elements.

7.1 Basic Components:

1. Physical Design:

- Classrooms: Elements such as movable seating arrangements, interactive whiteboards, and gamification-themed decorations encourage students to actively participate in the learning process (Montessori, 1912).
- Laboratories: Gamified learning areas that support creative thinking and problem solving in STEM-focused projects (Gee, 2003).
- Play Areas: Areas that increase cooperation and competition, where students combine learning with physical activity.

2. Digital Infrastructure:

- Student Applications: Digital platforms that enable students to track their individual progress and earn rewards and badges (Hamari et al., 2014).
- Leaderboards: Digital tables that encourage competition by allowing achievements and progress to be tracked transparently (Zichermann and Cunningham, 2011).
- Badges: Rewards that increase student motivation and can be earned both digitally and physically (Deterding et al., 2011).

3. Integration Methods with Traditional Processes :

- Curriculum Alignment: Integrating gamification elements into existing course content and preparing gamification-based teaching materials (Salen, 2011).
- Teacher Training: Organising training programmes to enable teachers to use gamification techniques effectively in the classroom.
- Cooperation with Parents: Providing parents with regular information about their children's performance in gamified education processes and obtaining their support.

Gamification-based school design not only increases student motivation but also contributes to the development of 21st-century skills such as collaboration, problem solving, and critical thinking (Trilling and Fadel, 2009). In addition, this model supports a structure tailored to individual learning needs while also strengthening social interaction environments.

7.2 School Stakeholders and Gamification

Gamification is more effective when planned to include all stakeholders in a school. Gamification strategies can be used to increase cooperation and participation among stakeholders such as students, teachers, parents, and administrative staff (Hamari et al., 2014).

7.2.1 Students

Gamification increases students' interest in the learning process. Leaderboards, badges, and task completion mechanisms encourage students to achieve their goals. For example, platforms such as 'Kahoot!' create more efficient learning environments by increasing student participation (Wang, 2015).

7.2.2 Teachers

Teachers can use gamification strategies to make their lessons more engaging. In addition, digital tools allow them to track student performance and provide a more personalised learning experience (Salen, 2011). For example, Classcraft enables teachers to integrate gamification into student management (Classcraft, 2021).

7.2.3 Parents

Parents can be involved in their children's learning process through gamification. Digital platforms allow parents to track their children's progress and receive feedback. This encourages parents to participate more actively in the process (Zichermann and Cunningham, 2011).

7.2.4 Administrative Staff and Managers

School administrators and administrative staff can make management processes more transparent and motivating by incorporating gamification strategies into institutional processes. For example, gamified performance evaluation systems can increase the motivation of teachers and other staff (Deterding et al., 2011).

7.2.5 Society and Other Stakeholders

Gamification ensures that the community surrounding the school is also involved in the process. Local community projects and school activities can be gamified to strengthen social bonds and increase community support (Trilling and Fadel, 2009).

Applying gamification strategies in a way that includes all stakeholders can make the educational process more effective and sustainable. This approach encourages individual success while also increasing social interaction.

7.3 Sample Gamification Model

7.3.1 Basic Elements of the Model

- An exemplary gamification model is structured in a way that increases student motivation while facilitating the learning process. The model includes the following key elements:
- Story and Theme: Learning processes structured around a story or theme to increase student engagement in lessons. For example, with a “space adventure” theme, students can explore a planet in each lesson and assignment.
- Assignments and Challenges: Providing assignments and challenges at different levels to help students achieve their academic goals.
- Rewards and Badges: Digital or physical rewards given in exchange for completed tasks to encourage success (Deterding et al., 2011).
- Collaboration and Competition: Strengthening social bonds through group work and leaderboards (Hamari et al., 2014).

7.3.2 Model Application

The Quest to Learn school in the US has increased student participation by 50% by implementing this type of model (Salen, 2011). This model proves that gamification is an effective learning strategy.

7.3.3 A Theoretical School Model and Its Components

A theoretical gamification-based school model consists of three basic components:

- Physical Structure: Gamification-themed classrooms, interactive laboratories, and collaboration areas (Montessori, 1912).
- Digital Platforms: Digital infrastructure such as student applications, reward systems, and leaderboards.
- Pedagogical Strategies: Redesigning the curriculum with gamification elements and training teachers in these strategies (Kapp, 2012).

This model has been successfully implemented in projects such as the “Helsinki Education Hub” in Finland (Kankaanranta and Neittaanmäki, 2009).

7.4 Sample Scenarios for How to Gamify Daily Processes

Scenario 1: Class Participation

At the beginning of each class, students are asked a “participation question.” Students who answer the question correctly earn extra points and move up in the weekly leaderboard (Zichermann and Cunningham, 2011).

Scenario 2: Assignment Submission

Assignments submitted on time earn students a “time management” badge. These badges can be converted into an extra reward at the end of the term (Hamari et al., 2014).

Scenario 3: Group Work

Students earn “collaboration points” when they complete a project and can compete with other teams in the class using these points.

7.5 Challenges and Solutions in Integrating Gamification into Schools

The integration of gamification in schools can make education systems more effective, but it also brings with it certain challenges. These challenges can arise at both the technical and pedagogical levels and can hinder the adoption of this process by education stakeholders (Hamari et al., 2014).

7.6 Potential Obstacles to Gamification Processes

1. Technological Shortcomings:

Some schools lack the digital infrastructure to support gamification. Access to technology may be limited, especially in low-income areas (Kapp, 2012).

2. Teacher Resistance:

Teachers may not have sufficient knowledge and training in the implementation of gamification strategies. In addition, adherence to traditional teaching methods can make it difficult to adopt innovative approaches (Hamari et al., 2014).

3. Time Management

Oyunlaştırma öğelerinin derslere entegre edilmesi, öğretmenlerin mevcut ders planlarını yeniden tasarlamalarını gerektirebilir, bu da zaman yönetimini zorlaştırabilir (Deterding vd., 2011).

4. Student Loss of Interest:

Some students may not find gamification elements sufficiently interesting or may experience a loss of motivation due to the difficulty of achieving rewards (Salen, 2011).

7.7 Strategies for Overcoming These Obstacles

1. Development of Technological Infrastructure:

- State support and private sector cooperation should be increased to establish the necessary digital infrastructure in schools. For example, low-cost educational technologies can be used (Hamari et al., 2014).

2. Training of Trainers:

- Teachers should receive comprehensive training on gamification strategies. It is also important that this training be practical and tailored to teachers' needs (Kapp, 2012).

3. Diversification of Motivation Mechanisms:

- Gamification elements should be diversified to appeal to different student groups. For example, leaderboards can be used for students who focus on individual achievement, while group rewards can be used for students who are inclined toward collaboration (Deterding et al., 2011).

4. Ensuring Stakeholder Participation:

- Veliler, öğretmenler ve yöneticiler gibi paydaşların süreçlere dahil edilmesi, oyunlaştırmanın etkisini artırabilir. Velilere, öğrencilerin ilerlemeleri hakkında düzenli geri bildirim verilmesi, süreçlerin daha geniş bir kabul görmesini sağlayabilir (Zichermann ve Cunningham, 2011).

5. Pilot Applications:

- Involving stakeholders such as parents, teachers, and administrators in the process can increase the impact of gamification. Providing parents with regular feedback on their children's progress can lead to wider acceptance of the process (Zichermann and Cunningham, 2011).

Result

The research titled ‘Gamification-Based New Generation School Design: Reshaping Traditional Education Processes’ has examined in detail the effects of integrating game principles into the education system on student motivation, academic performance, and overall student participation. This research also aimed to identify the advantages of this approach over traditional educational methods and potential areas for improvement. The key findings of the research highlighted the importance of students' positive responses to gamification-based applications and the multidimensional benefits of this approach:

Student Motivation and Participation: The inclusion of gamification elements in the educational process has significantly increased students' interest in lessons and active participation. Gamification develops a sense of ‘achievement’ in students through elements such as a sense of task completion and instant feedback. Additionally, this system enhances students' competitive skills in the classroom and their ability to take on roles within a team. Highly motivated students are better able to adapt to regular study habits and long-term learning goals.

Effects on Success: Compared to traditional teaching methods, schools that use gamification-based approaches have seen a significant increase in academic success. This increase is mainly because gamification boosts students' motivation to study and helps them focus more on their lessons. Game elements make complex topics easier to understand, positively changing students' approach to the subject matter. Additionally, elements such as feedback mechanisms and instant recognition support students' self-confidence and ensure the continuity of their success.

Inclusivity in Education: Gamification has made learning experiences more inclusive by offering a flexible structure that better adapts to different learning styles and individual differences. In traditional educational approaches, it can be difficult to adapt to the learning speed and style of a specific group of students. However, gamification supports individual differences by offering personalised experiences to each student. In particular, the sensory adaptability of gamified content for students with hearing, visual or physical impairments

increases the active participation of these groups in education. Additionally, games that require teamwork strengthen social interaction among students and facilitate the integration of individuals from different social groups.

Changes in Teacher Roles: This approach has shifted the role of teachers from that of knowledge transferers to that of guides and facilitators. In gamification-based education, teachers take on more of an observer and motivator role. Throughout the lesson, they guide students to help them achieve their individual goals while facilitating the application of educational materials within the group. Additionally, by tracking the success criteria defined within the game, they provide immediate feedback on students' progress. This approach contributes to the creation of a more personalised and dynamic teaching model, moving away from the traditional 'lecturer' format. Furthermore, teachers can effectively utilise modern educational technologies by developing their digital skills, which further enhances the effectiveness of the process.

Recommendations

Based on the research findings, the following detailed recommendations are made for reshaping educational processes:

- **Adaptation of Digital Game Platforms to Applications:** Platforms that can be integrated into mobile applications in particular are needed for gamification-based education. These platforms should be enriched with systems that allow students to record and analyze their educational data.
- **Psychological and Pedagogical Research Support:** Long-term research supported by psychological and pedagogical expertise should be conducted to understand the impact of gamification on different age groups and learning levels. This will ensure that the approach is applied equitably and efficiently.
- **Integration of Local and Global Methods:** It is important to align local child education patterns with gamification systems. At the same time, international best practices should be taken into consideration.
- **Gamification-Based Personalized Learning Approaches:** Personalized game content that can be optimized according to each student's individual learning pace and style should be developed.
- **Game Design Compatible with Local Resources:** Educational materials should include game designs that reflect local history, culture, and values. This will both increase student motivation and create unforgettable experiences by deepening the relationship between education and content.

Integration of Gamification Elements in All Schools: Within the national education struggle, it is necessary to spread gamification-based applications and develop digital infrastructure in schools. In this context, educational materials should be redesigned with gamification elements. **In-service Training Programs for Teachers:** In-service training programs should be developed for teachers to enable them to effectively use gamification-based approaches, and teachers' digital skills should be developed.

1. Designs to Increase Student Participation: Course materials should be redesigned to include task-based learning activities and fun applications. For example, student motivation can be increased with tasks such as end-of-term projects, teamwork, and digital game design.
2. Development of Gamification-based Platforms: Educational institutions can collaborate with technology companies to create gamification-based digital platforms. These platforms can offer students personalized learning experiences and allow them to track their own progress.
3. Innovative Policies and Strategies in Education: National education policies should be updated to support gamification-based approaches, and educational standards should be established in this direction.

In conclusion, it is clear that new generation school designs based on gamification will have a transformative effect on the education system. The successful implementation of this transformation requires the active participation of all stakeholders and a multidimensional approach..

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