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THE GAMIFICATION METHOD OF LEARNING

SUMMARY

Technology is transforming education, with gamified learning emerging as an innovative approach to enhance engagement and outcomes. Gamification applies gaming techniques, like points, leaderboards, badges, and levels, to non-game contexts to motivate learners. Traditional teaching methods often lack personalization, engagement, and real-world application, which gamified learning effectively addresses. Gamified learning improves knowledge retention by incorporating storytelling, role-playing, and immersive experiences. Immediate feedback provided in gamified platforms helps learners track progress and adjust strategies for improvement.

Gamification fosters collaboration and social interaction through team challenges, multiplayer modes, and leaderboards. Personalized learning experiences cater to different learning styles and paces, ensuring inclusivity and adaptability. Real-time assessments in gamification simulate real-world scenarios, preparing learners for practical applications. Gamified learning is cost-effective and scalable, making it suitable for organizations of all sizes. Despite its benefits, gamification risks overemphasizing competition, potentially causing stress and reducing cooperation. It may also undermine intrinsic motivation if external rewards, like points and badges, overshadow genuine learning. Proper implementation requires thoughtful design, planning, and educator training to maintain educational depth. Accessibility concerns arise due to unequal access to technology, which can widen educational disparities.

Neuroscientific studies highlight gamification's ability to boost dopamine release, memory retention, and cognitive skills. Overall, gamification makes learning more interactive, enjoyable, and effective, driving positive changes in motivation and outcomes.

Key words: education, learning, gamification, learner, technique.

What Is Gamification for Learning?

In today's world, technology plays a pivotal role in shaping education and curriculum development. To enhance learning outcomes, educators are increasingly incorporating advanced digital tools and innovative strategies into their teaching practices. As technology evolves at a rapid pace, education is undergoing a significant transformation, particularly with the rise of gamified learning. Gamification has emerged as a widely adopted strategy among teachers globally, offering an interactive and mobile-friendly approach that is revolutionizing employee training programs and redefining the student learning experience.

Traditional professional development methods, such as sifting through dense training manuals or watching long instructional videos, are gradually being replaced by this more engaging and effective learning style. Gamification applies gaming techniques in non-gaming contexts to achieve educational objectives by leveraging both intrinsic and extrinsic motivators. These techniques include features like leaderboards, rewards such as points or coins, level progression, badges, and friendly competition among peers. The benefits of gamified learning are substantial, as games foster essential lifelong skills like problem-solving, critical thinking, collaboration, and social awareness. Additionally, gamification increases motivation, boosts interest in specific subjects, reduces learner dropout rates, improves academic performance, and enhances cognitive abilities.

Think of gamified learning as the perfect blend of education and entertainment - there's even a term for it: 'edutainment.'

Traditional teaching methods and their limitations

Traditional teaching methods include chalkboards (if we're going way back), thick textbooks, and long lectures. While these learning models have their benefits and are often still used today, it's worth exploring their limitations, especially when compared to more dynamic approaches like gamified learning.

One-size-fits-all approach

Traditional teaching methods like seminars and tests often rely on a standardised program that treats every learner the same. Sometimes, it's like trying to fit a square peg into a round hole. Everyone has their own learning pace and style, yet the conventional system has little wiggle room for individual needs.

Interactive, gamified courses can often be personalised, making the whole experience much more individualised.

Lack of engagement

Traditional teaching methods can sometimes lead to passive learning, where people are mere spectators rather than active participants. When you're simply listening to something, it's so easy to switch off. Without engagement, even the most crucial information can pass us by.

Minimal real-world context

Traditional education often isolates subjects from real-world applications. This lack of context can make the learning feel irrelevant, making it hard for people to connect the dots between theory and practice.

Assessment worries

Tests, exams, and more tests. While most traditional tests and exams aim to measure understanding, they can also be stress-inducing and may not accurately reflect a person's full capabilities or potential.

Limited feedback loop

In a conventional teaching setting, the loop between learning, practising, and receiving feedback can be lengthy and isn't always constructive. This delay can slow the learning process and discourage people who work best with real-time insights into their progress. Gamified learning, on the other hand, provides instant feedback which is motivating and encouraging for people.

While traditional teaching methods have benefits, these limitations highlight the need for more flexible, engaging, and personalised educational approaches. That's where gamified learning can come into play, offering a more tailored and interactive educational experience. And in many cases, a blend of both classroom teaching and gamified courses is a perfect combination for effective results.

Advantages of gamification in education

The curriculum development services have been greatly influenced by the evolution of gamification in education. Curriculum designers can now better engage students, encourage active learning, and meet their diverse needs by incorporating games and interactions.

Improved learner engagement

The interactive and immersive nature of advanced gamification makes the learning process more enjoyable and encourages long-term active participation.

Increased motivation

Elements such as points, badges, levels, and rewards create a sense of achievement and progress for learners. They also increase motivation to actively pursue goals, complete tasks, and overcome challenges, often leading to improved learning (and performance) outcomes.

Improved knowledge retention

Firstly, gamified learning [encourages better knowledge retention](#). By incorporating storytelling, role-playing, and immersive experiences, gamification stimulates multiple senses and engages staff on a deeper cognitive level. This active participation enhances information recall and long-term memory retention, ensuring employees retain crucial knowledge and skills.

When people engage in interactive experiences, their brains actively process information, make connections, and form memories. This multi-sensory approach to learning not only makes it more enjoyable but also enhances their ability to recall

information when faced with real-life situations. Whether it's remembering the steps to handle a difficult customer or recalling safety protocols before starting a role as a truck driver, gamified learning ensures that staff have the knowledge they need.

Immediate feedback and progress tracking

Gamification platforms can provide learners with immediate feedback on their performance, helping them stay motivated, understand gaps, and adjust their learning strategies where necessary.

Educational research shows that postponing feedback hinders reinforcement learning by diminishing the positive response to rewards in comparison to situations where feedback is immediate.

This real-time feedback mechanism mirrors the dynamic nature of games, where players continuously assess their performance and adjust strategies accordingly. In an educational setting, learners can instantly see the results of their efforts, understand where improvements are needed, and celebrate their successes. Such immediate recognition can motivate learners to strive for continuous improvement and support a deeper understanding of the material. By integrating these game-like feedback loops, training becomes a more responsive and rewarding experience.

Social interaction and collaboration

Leading gamified learning platforms incorporate advanced social features such as segmented leaderboards, multiplayer modes, or team-based challenges, as well as social sharing capabilities. This fosters collaboration, competition, and peer interaction, allowing learners to learn from – and with – others.

Personalized learning experiences

Gamification can be adapted to accommodate different learning styles, preferences, and skill levels. By allowing learners to progress at their own pace and choose their challenges, gamification ensures a more personalised educational experience.

This individualised approach is one of the primary gamification benefits in education. It provides diverse learning styles and maximises engagement and efficacy, making education more inclusive and adaptive for everyone involved. Through this tailored learning environment, students can explore their strengths and interests in depth, leading to a more fulfilling and motivating learning experience.

Real-time assessment

Gamification in education bridges the gap between theoretical knowledge and real-world application, offering learners a hands-on approach to understanding and applying their skills. By simulating real-life scenarios within gamified educational contexts, learners can directly see the impact of their decisions, experiencing firsthand the consequences and rewards of their actions. This immersive learning experience solidifies their grasp of the subject matter and highlights its practical relevance and utility. This approach empowers students to appreciate the real-world

significance of their learning and prepares them for future challenges and opportunities.

Cost-effectiveness

Setting up traditional training programs can be both time-consuming and costly, especially if you need to hire a specialist teacher or lecturer. Gamified learning platforms, however, can be more affordable in the long run. With some eLearning platforms, courses can be reshared and edited as much as you like. Additionally, the digital nature of such platforms means there are no venue-related expenses, making it a cost-effective solution that delivers high value.

Scalability

One of the most significant advantages of gamified learning is its scalability. Whether you're a small startup or a multinational corporation, you can scale your gamification teaching program to accommodate your needs.

You can introduce new courses as your business grows or as updated training requirements emerge. This adaptability ensures that your staff training and upskilling efforts keep pace with your business's evolution, all without requiring a complete overhaul of the existing system.

Gamification boosts student participation in educational settings.

In a study aimed at gauging student participation when introducing gamification elements, researchers implemented a points-based system for various classroom activities. The student engagement metrics revealed that the gamified environment fostered a positive and more productive learning atmosphere.

Gamification ensures inclusivity in educational settings.

As an instructional mechanism, gamification can cater to the diverse needs of young learners. A study focused on the potential of video game-based gamification for students on the autism spectrum demonstrated its efficacy in delivering age-appropriate content.

Beyond school walls: Gamification's expansive reach.

Gamification extends beyond traditional classrooms, offering enriched learning experiences elsewhere. For instance, segmenting your child's arithmetic tasks allows them to "level up" after each segment, unlocking clues for a mystery. Alternatively, encouraging your child to craft their version of the Periodic Table, inspired by Mendeleev's card method, can be enlightening. Gamified learning at home offers parents a delightful avenue to engage with their child's educational journey.

Overall, gamification for learning can make the learning process more enjoyable, engaging, and effective, leading to improved knowledge retention, skill development, and motivation among learners

Disadvantages of gamification in education

1. Potential for overemphasis on competition

While gamification in education provides the power of competition, there's a risk it might overshadow cooperation. An overemphasis on competition can create pressure, leading to stress and anxiety among learners who might feel left behind. It's crucial to balance competitive gamification elements with collaborative and supportive learning experiences to ensure everyone benefits equally, promoting an environment where learning triumphs over winning. This approach encourages a healthy competitive spirit without compromising the essence of learning and personal growth.

2. Risk of diminishing intrinsic motivation

Introducing gamification in education can inadvertently diminish intrinsic motivation by emphasising external rewards like badges and points too much. When the thrill of the game dynamics overshadows the love for learning, students may focus solely on earning rewards rather than valuing the knowledge itself. It's essential to design gamified learning experiences that enhance, rather than replace, the intrinsic joy of learning, ensuring that the pursuit of rewards complements rather than detracts from the genuine curiosity and desire to learn.

3. Challenges in proper implementation

Implementing gamification in education presents challenges, requiring careful planning, resources, and training. Educators must navigate the complexities of integrating game elements into training effectively without compromising educational content. This balancing act demands a deep understanding of pedagogy and gamification design, as well as ongoing support to ensure that gamification strategies are engaging and educationally sound. Without proper implementation, the potential benefits of a gamified system risk being undercut.

4. Accessibility and equality concerns

Not all students have equal access to the educational technology required for gamified learning, potentially widening the gap between those with and without digital resources. Ensuring fair access is crucial for harnessing gamification's full potential, requiring strategies that accommodate diverse learning environments and educational technological capabilities.

5. Oversimplification of complex subjects

The risk of oversimplification of complex subjects is one of the main disadvantages of gamification in education. By focusing on game elements, there's a risk that the depth of academic content may be reduced to fit within the confines of gamified activities. This simplification can lead to a superficial student understanding of topics, where students might miss out on critical analytical and reflective learning opportunities. Educators need to strike a balance, ensuring that while gamification makes learning engaging, it doesn't compromise the integrity and complexity of educational material. Crafting gamified experiences that enrich rather

than dilute subject matter is vital to leveraging the educational benefits of gamification while preserving depth.

Neuroscience Of Gamification

Gamification psychology is a field that studies the behavior of users in gamified systems. In other words, it focuses on how to understand and influence people's behaviors through gaming methods. Studies have shown that the brain works in harmony with gamification and that it triggers the release of dopamine, which gives players an increased feeling of motivation and enjoyment.

1. Gamification Connects People On An Emotional Level

Emotions can be a powerful tool for learning. They help facilitate encoding and retrieval of information more effectively, making the learning process much more efficient. Gamification creates an emotional connection between the content and students. It strongly influences the individuals' [attention](#), which makes them more receptive to learning.

2. Recall Is Controlled By The Hippocampus

The hippocampus is the part of the brain that controls the amount of information we recall or remember. It's no surprise, then, that gamification helps students retain better what they've learned during class. Gamification stimulates the hippocampal memory, which helps promote the storage of new information into long-term memory. Moreover, dopamine, a neurotransmitter linked with learning and memory, is also released from the hippocampus, which helps maintain focus on a task.

3. Stories Are Easier For The Brain To Process Than Facts

The brain processes stories more effectively than it does a string of facts. For this reason, storytelling is a fantastic way of delivering new information to students. Gamification greatly benefits from using this strategy, as games often include [story-telling](#) elements such as background, characters, plot twists, and more.

4. Game Paying Improves Endorphin Release

Endorphins are natural painkillers that improve relaxation, calm, and focus. They're naturally produced by the body while playing games and performing other engaging activities. Gamification strategies improve endorphin release, helping to create an environment ideal for focused learning.

5. Playing Games Keeps Your Brain Healthy

Games encourage neuroplasticity, which is the brain's ability to respond to different stimuli and develop new connections. This kind of training can strengthen neural pathways, increase cognitive skills such as memory and attention, enhance creativity and problem-solving skills, and help prevent age-related cognitive decline.

6. The 'Zeigarnik effect'

Moreover, gamified learning takes advantage of the psychological phenomenon known as the '[Zeigarnik effect](#).' This effect claims that people tend to remember incomplete tasks better than completed ones. By structuring learning activities as

quizzes, quests, or missions with multiple stages, gamified learning creates a sense of unfinished business, keeping learners engaged and motivated to complete their journey.

E-learning is suitable for easy and effective integration of gamification. Game techniques and mechanisms can be implemented in the learning process as activities which purpose is to achieve certain learning objectives, increase learners' motivation to complete them and engage students in a friendly competitive environment with other learners.

Gamification is an effective approach to make positive change in students' behavior and attitude towards learning, to improve their motivation and engagement. The results of the change have bilateral nature – they can affect students' results and understanding of the educational content and create conditions for an effective learning process.

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Игровой метод обучения

Резюме

Технологии трансформируют образование, и игровое обучение становится инновационным подходом к повышению вовлеченности и результатов. Геймификация применяет игровые приемы, такие как баллы, таблицы лидеров, значки и уровни, к неигровым контекстам для мотивации учащихся. Традиционным методам обучения часто не хватает персонализации, вовлеченности и применения в реальном мире, с чем эффективно справляется игровое обучение. Геймифицированное обучение улучшает усвоение знаний, включая повествование, ролевые игры и захватывающие впечатления. Немедленная обратная связь, предоставляемая на игровых платформах, помогает учащимся отслеживать прогресс и корректировать стратегии для улучшения.

Геймификация способствует сотрудничеству и социальному взаимодействию с помощью командных задач, многопользовательских режимов и таблиц лидеров. Персонализированный опыт обучения соответствует различным стилям и темпам обучения, обеспечивая инклюзивность и адаптивность. Оценки в реальном времени в геймификации имитируют реальные сценарии, подготавливая учащихся к практическому применению. Геймифицированное обучение является экономически эффективным и масштабируемым, что делает его подходящим для организаций любого размера. Несмотря на свои преимущества, геймификация рискует переоценить конкуренцию, что может вызвать стресс и снизить сотрудничество. Она также может подорвать внутреннюю мотивацию, если

внешние награды, такие как баллы и значки, затмевают подлинное обучение. Правильная реализация требует продуманного проектирования, планирования и обучения педагогов для поддержания образовательной глубины. Проблемы доступности возникают из-за неравного доступа к технологиям, что может усилить образовательные различия.

Нейробиологические исследования подчеркивают способность геймификации усиливать выброс дофамина, сохранение памяти и когнитивные навыки. В целом геймификация делает обучение более интерактивным, приятным и эффективным, способствуя положительным изменениям в мотивации и результатах.

Ключевые слова: образование, обучение, геймификация, учащийся, методика.

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Oyuna əsaslanan öyrənmə üsulu

Xülasə

Texnologiya təhsili dəyişdirir və oyun əsaslı öyrənmə cəlbədiciliyi və nəticələri artırmaq üçün innovativ yanaşma kimi ortaya çıxır. Oyunlaşdırma öyrənmələri həvəsləndirmək üçün xallar, liderlər lövhələri, nişanlar və səviyyələr kimi oyun texnikalarını oyundan kənar kontekstlərə tətbiq edir. Ənənəvi öyrənmə üsullarında çox vaxt fərdiləşdirmə, məşğulluq və real dünya tətbiqi yoxdur, burada oyun əsaslı öyrənmə gəlir. Oyunlaşdırılmış öyrənmə nağıl, rol oyunu və immersiv təcrübələri özündə birləşdirərək biliklərin saxlanmasını artırır. Oyun platformaları tərəfindən verilən dərhal rəy tələbələrə tərəqqi izləməyə və təkmilləşdirmə strategiyalarını tənzimləməyə kömək edir.

Oyunlaşdırma komanda problemləri, çox oyunçu rejimləri və liderlər lövhələri vasitəsilə əməkdaşlığı və sosial qarşılıqlı əlaqəni təşviq edir. Fərdiləşdirilmiş öyrənmə təcrübələri müxtəlif öyrənmə üslublarını və templərini özündə cəmləşdirir, inklüzivliyi və uyğunlaşmanı təmin edir. Oyunlaşdırmada real vaxt qiymətləndirmələri real dünya ssenarilərini simulyasiya edir, tələbələrə praktik tətbiqə hazırlayır. Oyunlaşdırılmış öyrənmə sərfəli və miqyaslı biləndir, bu da onu bütün ölçülü təşkilatlar üçün uyğun edir. Faydalarına baxmayaraq, oyunlaşdırma rəqabəti həddindən artıq vurğulamaq riskini daşıyır ki, bu da stressə səbəb ola bilər və əməkdaşlığı azalda bilər. Xallar və nişanlar kimi xarici mükafatlar həqiqi öyrənməyə kölgə salarsa, bu, daxili motivasiyanı da sarsıda bilər. Düzgün həyata keçirilməsi təhsilin dərinliyini qorumaq üçün düşünülmüş dizayn, planlaşdırma və müəllim hazırlığını tələb edir. Əlçatanlıq problemləri texnologiyaya qeyri-bərabər çıxışdan yaranır ki, bu da təhsildəki fərqləri gücləndirə bilər.

Neyrologiya tədqiqatı oyunlaşdırmanın dopamin ifrazını, yaddaşın saxlanması və idrak bacarıqlarını artırmaq qabiliyyətini vurğulayır. Ümumilikdə, oyunlaşdırma öyrənməni daha interaktiv, xoş və effektiv edir, motivasiya və performansda müsbət dəyişiklikləri təşviq edir.

Açar sözlər: təhsil, təlim, oyunlaşdırma, tələbə, metodologiya.

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