



Gamified Learning for Students in the Field of Education and Their Needs

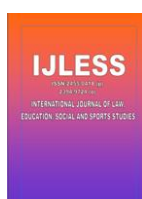
Kiran Premkumar Malge¹ and Sushma R.²

¹Research Scholar, Department of Education, Rani Channamma University, Belagavi, India.

Email: kiranmalge82@gmail.com

²Associate Professor, Department of Education, Rani Channamma University, Belagavi, India. Email: sushmarcueducation@gmail.com

DOI: [10.33329/ijless.12.S2.470](https://doi.org/10.33329/ijless.12.S2.470)



Abstract

The purpose of gamification is to increase engagement, the level of attention and personal involvement a person has with an activity, through the use of competition (both individual and class-wide), creativity, student-led learning, and immediate feedback. The gamification of learning is an educational approach that seeks to motivate students by using video game design and game elements in learning environments. The goal is to maximize enjoyment and engagement by capturing the interest of learners and inspiring them to continue learning. Gamification is a strategy that integrates entertaining and immersive gaming elements into nongame contexts to enhance engagement and motivate certain behaviors. It uses game design and mechanics, such as badges, leaderboards, points and rewards, to encourage active participation and make tasks fun and enjoyable

Keywords gamified learning, Traditional teaching methods, Benefits.

Introduction

As technology advances exponentially, the educational landscape is undergoing a transformative shift towards gamified learning. This interactive, mobile-friendly approach is revolutionising employee training programs and redefining how students learn. Traditional methods of professional development, like flipping through thick training manuals or watching lengthy instructional videos will soon be a thing of the past for many companies, as we focus on this more effective and engaging learning style.

By integrating gaming elements into the learning process, gamification makes the educational experience more compelling, interactive, and enjoyable. But what exactly is gamified learning, and why does it work? Let's learn all about it.

The definition of gamified learning

At its core, gamified learning is a teaching approach that applies game design elements to learning. The goal is to engage people in a way that makes learning not just effective, but also fun.

Storylines and characters

Storylines offer a narrative structure to educational content, adding context and meaning. A well-structured and relevant storyline often makes learning feel like a journey rather than a chore. The narrative creates a sense of purpose, making even the most complex subjects more digestible. Characters in these storylines add a personal touch to the educational journey. They serve as guides, mentors, or even fellow learners, making the experience more relatable and engaging. One success case of gamification with storylines is how Nobina, the Nordic region's largest public transport operator with over 13,000 employees across four countries, trained 7,000 bus drivers using interactive courses. Nobina's courses incorporate fictional micro-novels to illustrate the training material and make concepts easier to understand. Instead of just telling people what to learn, staff experience a storytelling learning journey.

Quizzes

Fun, interactive quizzes or courses offer milestones for learners to test their skills and knowledge. Unlike traditional courses or tests that seem to be full of endless black text, gamified quizzes can be more interactive. They may feature instant feedback, rewards, or playful penalties for wrong answers. These elements can make assessments less intimidating.

Points systems

Much like video games, many gamified learning platforms include points or scoring systems to indicate progress. These points can be seen as a numerical representation of achievement and are often tied to specific actions like completing a task, participating in a discussion, or achieving a high score on a quiz. In a nutshell, gamification turns learning into an interactive and enjoyable process. This isn't just a flashy trend; it's a pedagogical approach backed by research showing increased engagement and better learning outcomes. Research conducted by the Federation of American Scientists revealed that students could retain just 20% of what they heard. When visual aids were included in an oral lecture, retention rates improved to 30%. If students took an action while receiving the explanation, their retention climbed to 50%. Most impressively, when students actively participated in learning through gamification techniques, they could remember as much as 90% of the material. Another study was taken of 365 students at the School of Electrical and Computer Engineering of the National Technical University of Athens, Greece. It was found that challenge-based gamification improved student performance by 89.45% compared to lecture-based education. The overall performance of the students increased by 34.75%.

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

Did you ever find yourself daydreaming during a long lecture? You're not alone. 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

Remember asking, 'When will I ever use this in real life?' (we're looking at you, algebra). 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. Sigh. 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.

Spången aimed to create a long-lasting way to teach skills in preschools, elderly care, and disability services. The project mainly focused on helping workers who speak Swedish as a second language with gamified learning, as jobs in these areas are often a first step into the Swedish job market.

Intrinsic motivation

One key factor of gamified learning is the concept of intrinsic motivation, which refers to the internal drive and enjoyment derived from the learning process. By incorporating fun game elements, such as challenges, rewards, and progression, gamified learning taps into this intrinsic motivation and boosts learners' engagement and willingness to learn.

A 2012 study showed that intrinsic motives impact employee engagement three times more than extrinsic motives, which use rewards or incentives as motivation. For example, praise, fame, or money.

Immediate feedback and positive reinforcement

Gamified learning is also powerful thanks to the immediate feedback and positive reinforcement it provides to learners. Through visually appealing graphics, games, and animations, learners receive instant feedback on their performance, reinforcing positive behaviours and correcting misunderstandings. Staff can see that they're making progress, which can make them feel good. This feedback loop boosts people's confidence, encourages them to take risks, and promotes continuous improvement. Research shows that delayed feedback impairs reinforcement learning by reducing reward positivity compared to immediate feedback conditions. Reward positivity refers to a specific brain response that occurs when we experience something rewarding or positive.

Autonomy and control

Another psychological aspect of gamified learning is its ability to create a sense of autonomy and control. By offering staff choices and freedom when they're studying, they often feel a greater sense of ownership over their learning journey. This autonomy increases motivation and empowers employees to take responsibility for their own learning and development.

This part of gamification also links with the concept of flexible learning. When learners have the freedom and opportunity to choose when and where they study, again, they can feel a greater sense of ownership over their education. The self-determination theory argues that autonomy support is essential for fostering optimal learning, growth, and functioning in students across all levels.

Cognitive load theory and microlearning

Furthermore, gamified learning incorporates the principles of cognitive load theory. This theory suggests that most people have a limited capacity for processing information. By breaking down complex concepts into smaller, more manageable chunks, gamified learning reduces cognitive load and boosts learners' understanding and retention of the material.

This theory also links in with microlearning and nano learning - two growing study methods that focus on providing information in short, engaging bursts. Both microlearning and nano learning are closely linked with gamified learning.

The benefits of gamified learning

Gamified learning offers a huge range of benefits. In this section, we'll provide scientific evidence of why gamified learning is more than just a trend.

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.

Increased engagement and motivation

By incorporating elements like points, storylines, and interactive challenges, employees become active participants when learning rather than passive recipients of information. This heightened level of engagement makes the training process a whole lot more enjoyable. In business, an engaged and happy employee is more likely to excel at work, driving organisational success and remaining in the company longer.

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

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.

Measurable ROI

Gamified learning platforms often come with analytics and reporting features that allow you to track various metrics, such as how many courses have been completed. These insights offer a measurable return on investment (ROI), providing clear data on how effective the training program is and where improvements can be made. This data-driven approach enables businesses to continually optimise their training programs, maximising their investment in human capital.

Identify training needs

The first step is to identify what your training needs are. Are you onboarding a new elderly care worker who needs to know company policies, or are you aiming to upskill staff members working. Once you have a handle on your training needs, you can tailor the gamified elements, such as storylines and characters, to meet these specific needs.

Choose the right learning management software

Selecting the appropriate eLearning platform is crucial. Look for one that allows you to easily include gamified elements in your courses. The platform should be user-friendly, scalable, and offer some sort of tracking system to measure the effectiveness of your training program. It's often a good idea to opt for a platform that provides a free membership or trial so you can test. With Lingio, you can develop interactive and visually appealing learning courses with Lingio's AI Course Creator that incorporate game elements, such as stories, quizzes, and simulations. Alternatively, you can choose a ready-made, gamified course from our premium course library.

Monitor and provide feedback

With some eLearning platforms, you can track the progress of your courses and pinpoint areas where learners may be struggling. You may also be able to provide real-time feedback and make adjustments to the courses as needed. This ensures you're offering a truly effective and engaging learning experience.

The potential pitfalls of gamified learning and how to avoid them

Gamified learning is a fantastic way to engage learners and reach business goals, but like any training method, it's not foolproof. Here are some pitfalls you might encounter and some tips

Poorly designed game mechanics

A game that's too easy or too hard can turn learners off. Similarly, game elements that seem pointless or disconnected from the learning objectives can confuse users and dilute the educational. Make sure to choose your gamified elements carefully with the learner's journey and current skill set in mind. Balance challenges with achievable goals and tie game mechanics directly to learning objectives. You may consider involving instructional designers and even game designers in this process.

Not aligning with business goals

As we shared earlier, before you even start the gamification process, identify the business goals you aim to achieve. That's whether you want to boost sales skills, improve customer service, or enhance leadership abilities. Make sure these goals are built into the learning objectives and outcomes of your gamified course.

Budget and resource constraints

If you're designing gamification yourself, start small, perhaps by creating only a single module or course as a pilot. Opting for an eLearning platform is often more affordable as you'll spend far less time researching and designing. Choose one that can be customised to your needs so you can create bespoke, gamified courses without breaking the bank.

The future of gamified learning in staff training

The future of gamified learning in staff is promising, especially with the available tools and eLearning platforms that make creating or customising gamified courses for your staff super simple.

With the increased demand for continuous learning and upskilling, gamified learning will continue to play a vital role in employee development. Gamification's ability to engage and motivate learners while delivering valuable knowledge and skills makes it an extremely valuable tool for organisations looking to stay competitive in business.

Conclusion

In conclusion, gamification offers a promising avenue for transforming traditional learning into a more engaging and effective experience for students. By incorporating game mechanics like points, badges, and leaderboards, educators can foster a sense of achievement, encourage competition, and enhance motivation, ultimately leading to improved learning outcomes. Gamification in education stands as a powerful catalyst for transforming traditional learning paradigms into dynamic, engaging, and effective educational experiences.

References

- [1]. Mohanty, S., & Christopher, B. P. (2023). A study on role of gamification elements in training outcomes: Comparing the mediating effect of intrinsic and extrinsic motivation. *The Learning Organization*, 30(4), 480–500. <https://doi.org/10.1108/TLO-05-2022-0062>
- [2]. Bencsik, A., Mezeiová, A., & Samu, B. (2021). Gamification in higher education (Case study on a management subject). *International Journal of Learning, Teaching and Educational Research*, 20(6), 211–231. <https://doi.org/10.26803/ijlter.20.6.12>
- [3]. Federation of American Scientists. (2006). *Harnessing the power of video games for learning*. <https://fas.org>
- [4]. Legaki, N. Z., Xi, N., Hamari, J., Karpouzis, K., & Assimakopoulos, V. (2020). The effect of challenge-based gamification on learning: An experiment in the context of statistics education. *International Journal of Human-Computer Studies*, 144, 102496. <https://doi.org/10.1016/j.ijhcs.2020.102496>
- [5]. Lingio. (2023). *Accelerate teacher-led training with Lingio's digital courses for 4X faster results*. <https://www.lingio.com>
- [6]. Cho, Y. J., & Perry, J. L. (2012). Intrinsic motivation and employee attitudes: Role of managerial trustworthiness, goal directedness, and extrinsic reward expectancy. *Review of Public Personnel Administration*, 32(4), 382–406. <https://doi.org/10.1177/0734371X12453059>
- [7]. Yin, H., Wang, Y., Zhang, X., & Li, P. (2018). Feedback delay impaired reinforcement learning: Principal components analysis of reward positivity. *Neuroscience Letters*, 685, 179–184. <https://doi.org/10.1016/j.neulet.2018.08.024>

- [8]. Johansen, M. O., Eliassen, S., & Jeno, L. M. (2023). The bright and dark side of autonomy: How autonomy support and thwarting relate to student motivation and academic functioning. *Frontiers in Education*, 8, 1130760. <https://doi.org/10.3389/feduc.2023.1130760>
- [9]. Rakes, C. R., Ronau, R. N., Bush, S. B., Driskell, S. O., Niess, M. L., & Pugalee, D. K. (2020). Mathematics achievement and orientation: A systematic review and meta-analysis of education technology. *Educational Research Review*, 31, 100337. <https://doi.org/10.1016/j.edurev.2020.100337>