

THE ROLE OF GAMIFICATION IN ENTREPRENEURIAL EDUCATION

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Abstract:

Gamification has emerged as a transformative approach in developing digital skills. This paper explores how gamification or gamified platforms can help to develop Entrepreneurial Education as we explore its role in enhancing learning through various gameplay mechanics like leaderboards, points and rewards, challenges/quest. As we learn about the term 'Gamification' and how it can be used and implemented in learning. This study reviews analysis of the survey conducted for this research, case studies, existing literature present on Gamified learning used in Entrepreneurial Education. The findings provide an insights into the effectiveness of gamification in developing technological skills and entrepreneurial education.

Keywords: gamification, entrepreneurial education, gamified platforms, learn, learning engagement

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Introduction:

In the world of technology and the increase use of AI (Artificial Intelligence), the concept of 'Gamification' has recently started to get it's rise with the increase in learning online, ever since the pandemic. Use of gamified platforms, applications and free of cost learning has led to its popularity among people. Originally popularized in marketing and business, gamification has now gained traction in academic settings, particularly in entrepreneurial education. The objective of these gamified platforms are to make learning interesting and increase engagement as it has emerged as an innovative approach in education, incorporating game-like elements such as points, leaderboards, and rewards to enhance student engagement.

Entrepreneurial education helps people develop skills like creativity, flexibility, risk- taking, and perseverance. Entrepreneurship education can take many forms, including workshops, seminars, online courses, and mentorship programs. Research suggests that gamification helps to increase motivation knowledge retention and efficient learning experiences.

By the use of technology, educators can use this and make interactive and fun learning environment for students to study and focus through a media in the form interactive gameplay mechanics like, leaderboards, daily challenges, virtual badges and much more. This form of online learning is mostly categorized as 'Edutainment' i.e aiming to combine education with entertainment by incorporating game design elements into learning experiences making the process more engaging and entertaining for users while still delivering educational content to the users.

This concept can be used for entrepreneurial education creating real-world business challenges through simulations and further more helping students to build an understanding around the situations they may face, hence preparing them for what may come, developing their problem- solving skills and critical-thinking. Although gamification is a concept not everyone is familiar with and that can come with its own sets and challenges. Even good amount of positivity, it does have its cons too which act as hindrance among users/learners which may further discourage to learn further or to try again. Problems like, poor connectivity

issue, lack of user-friendly mechanics, lack of immediate feedback and lack of objectives can discourage user to further explore and learn.

What is Gamification?

Gamification can be defined as the process of enhancing systems, services, organizations and activities through the integration of game design elements and principles, such as dynamics and mechanics, in non-game contexts with the aim of motivating and engaging users. Gamification in terms of education has been quite popular over the decades, as it offers several of benefits like memory retention, problem-solving skills and much more. Gamification uses game-like elements like, leaderboards, virtual badges, has shown to effectively engage many users and providing them a fun and interactive environment for learning.

The word ‘Gamification’ was given by Nick Pelling, who was a computer programmer and inventor, as he noticed the potential of game mechanics in business and industry. It may not seem like it but this concept of gamification has been around for much longer. It is said that the rise of video games around the 1970s and 1980s, influenced the early development of gamification. It started becoming popular around mid-2010.

Review of Literature: Referring the research paper on ‘Gamification of Entrepreneurship Education’ written by Diane A. Isabella, in which she discusses about the research she conducted, where students participated in a 12-week course to acquire knowledge of business concepts and launch and operate their business online with the help of OVC (Online Ventures Challenges) which is a web-based platform developed for entrepreneurship educators by a Canadian firm, where student teams start real businesses and the profits earned are donated to a charity. It provides a gamified curriculum that guides the students.

OVC is also has a partnership with Shopify, which a

commerce platform that helps users to sell product online and in-person by offering tools to create and manage online stores, including payment, inventory management, and sales tracking. Due to this partnership Shopify allows OVC to use its Application Programming Interface (API) which would allow the data of sales and order transfer and convert into points and badges.

She mentions that findings from her study showed that student enjoyed the gamified entrepreneurial education experience and that they were actively engaged. She also confirmed through her findings that student’s entrepreneurial knowledge can effectively developed through gamification. Further stating that her students gave better outcome with the use of gamified learning and approach.

Objectives: The objectives of this research are to explore the concept of gamification, its role in skill development, and its application in entrepreneurial education. Specifically, this study aims to:

- Study various gamification strategies Understand its role in education and the reasons behind its widespread adoption.
- Analyze its application in entrepreneurial education.
- Identify the advantages, disadvantages, and limitations of gamification.

Significance of Study:

This research is significant as it contributes to the understanding of how technology can help us in so many ways including education. Due to globalization this concept is accessible for many people around the world. Gamification has been an innovative way of teaching and learning. Integrating gamified mechanics into study, it makes easier for students to efficiently grasp onto their concepts. As this helps in engagement, skill development and practical learning experience. Through the findings of this research it will help others learn more about this concept and implement in their lives as a student or even an educator by providing

many interesting and engaging concepts for learning. The study also highlights how gamification can be tailored to individual learning styles, thereby making education more personalized and effective. Additionally, it supports lifelong learning by maintaining learner interest and promoting continuous skill development. This study also goes through how gamification can be used in entrepreneurial education, how it can benefit students, its features and much more. Furthermore, this study contributes to academic discussions on modern technological approaches and their alignment with industry demands, thereby offering valuable insights for curriculum designers and educational policymakers.

Research Methodology: The data for this research is gathered from trusted websites like, Google Scholar, IEEE Xplore, ResearchGate and many reliable research papers are referred for this study. A survey was also conducted through Google forms, which further asked questions about having to hear the term gamification or if they have used any gamified platforms, further contributing to this study with

different opinions and insights related to this topic. As this research analyzes survey responses, identifying the trends in the use of gamification and also gathering expert opinion through various research papers.

Findings: Through the findings we can say that gamification has a positive impact on student engagement, motivation and with memory retention. Although it does come with its own sets of challenges which can stand in as a barrier against student and demotivate them to further explore.

Gamification Strategies: Gamification strategies are game-play mechanics that are implemented to boost engagement among users.

Leaderboards: This is one of the most popular gameplay mechanics that are used in gamification as it motivates students to rank at the top of the chart, competing with other students for the top place, further

encouraging them and keeping them engaged as they still learn in the process.

Quest and Challenges: Quest and challenges are like objectives that are supposed to be completed at a certain time or situation and as a reward users get points in return which can further be co-related to the leaderboard system that can determine their ranking.

Virtual Badges: Virtual badges are a part of rewards which users can get after completing certain quest or challenges, which further motivates users to complete these tasks and collect badges, which can also be seen as a form of checkpoint through the progress users make.

Role of Gamification in Entrepreneurial Education:

Entrepreneurial education requires a mix of technical and soft skills, including innovation, risk-taking, and strategic thinking. Gamification can simulate real-world entrepreneurial challenges, allowing learners to experiment with business models, market analysis, and decision-making in risk-free environments through simulations and VR (Virtual Reality). There are also some Indian platforms that offer gamified learning like, ‘Startup Simulation’ which is a platform by IIM Bangalore that simulates the startup experience, ‘Entrepreneurship Simulation’ which is a platform by IIT Bombay that teaches entrepreneurship skills and ‘Swayam’ a MOOC (Massive Open Online Course) by the Government of India that offers entrepreneurship courses.

Challenges and Limitations:

Despite its advantages, Gamification has its fair share of disadvantages such as high implementation costs, the risk of superficial learning, lack of hands-on learning, connectivity issues, and chances of it not being user/beginner-friendly. All these are few of the challenges faced when learning online through gamification.

Conclusion: Gamification is a powerful tool in entrepreneurial education. As it helps in the ability to

enhance learner engagement, improve retention, and provide a practical approach to acquiring entrepreneurial skills, by incorporating game-play elements into educational frameworks, as it would help students to better grasp complex concepts and develop a more creative thinking.

While gamification has proven beneficial, further research is necessary to explore its long- term impact on learners and entrepreneurs. AI-driven gamification techniques, and the integration of immersive technologies like virtual reality (VR) and augmented reality (AR) could further enhance its effectiveness.

Feedback from Others: The survey results indicate that most respondents (71.4%) were undergraduates, while the remaining included postgraduates, diploma holders, and other degree holders. A significant portion (61.9%) had never heard of the term gamification before, highlighting the need for greater awareness. However, 52.4% of respondents had used gamified learning platforms, with platforms like Duolingo and Byju's being the most commonly mentioned.

When asked about the most effective game elements in education, quests and challenges were rated the highest (76.2%), followed by points and rewards (33.3%). Furthermore, 85.7% of respondents agreed that gamified platforms are beneficial for learning technological skills, while 61.9% believed gamification could aid in entrepreneurial education by enhancing problem- solving, decision-making, and strategic planning skills. However, some respondents expressed concerns about technical challenges, lack of hands-on experience, and difficulty in maintaining engagement without structured guidance.

From the survey responses, it is evident that gamification is not yet widely understood, but those who have engaged with gamified platforms find them

beneficial for learning. The results indicate that leaderboards, challenges, and structured progressions in learning can enhance motivation and engagement. The study also highlights that gamification fosters problem-solving and decision-making skills, which are essential for entrepreneurial education. However, challenges such as technical limitations, self-motivation, and accessibility barriers must be addressed to maximize the benefits of gamified learning.

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