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Teaching cases

How to Embed "Gamification" Into Entrepreneurship Courses to Enhance Student Engagement

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Student engagement is a critical factor in educational success, influencing learning outcomes and retention rates. This paper explores the concept of gamification as an innovative strategy to enhance engagement in entrepreneurship courses. Gamification, which involves incorporating game design elements into non-game contexts, leverages students' intrinsic motivations such as competition, achievement, and collaboration. The paper discusses how gamification elements like rewards, points, badges, and leaderboards can be integrated into course activities to foster higher levels of engagement and motivation. Additionally, the authors highlight the potential of gamification to develop real-world skills such as problem-solving, collaboration, and critical thinking. Practical examples and considerations for implementing gamification in the classroom are provided. The paper concludes that gamification, when thoughtfully applied, can significantly enhance student engagement and learning outcomes in entrepreneurship education.

Introduction

The term "student engagement" has become a hot topic in the field of education. AACSB accreditation measures Engagement and Societal Impact, the National Survey of Student Engagement (NSSE) measures various aspects of student engagement on college campuses, and service-learning projects have been used to increase engagement between students and the community. In this article, we intend to answer several questions pertaining to engagement: What is engagement? Why is it important? How can gamification be used to increase student engagement?

At the university level, engagement is defined as 'the ways in which school leaders, educators, and other adults might engage students more fully in the governance and decision-making processes in school, in the design of programs and learning opportunities, or in the civic life of their community' (NSSE, 2020; *The Glossary of Education Reform*, n.d.). We will use the definition of 'student's willingness, need, desire, and compulsion to participate in, and be successful in, the learning process promoting higher-level thinking for enduring understanding' (Bomia et al., 1997) for classroom engagement.

The Importance of Engagement

Engagement plays a crucial role in student learning and retention. Engaged students can scaffold more effectively, retain a larger portion of the conveyed information, and are generally more successful in college. Three types of engagement are generally emphasized: student-material, student-student, and student-teacher. Student-material engagement often involves quizzes, homework, end-of-chapter questions, case studies, and similar activities. In-class activities such as think-pair-share exercises, discussion groups, peer reviews, and group projects can foster student-student engagement. Student-teacher engagement occurs when teachers review drafts, provide feedback, hold debriefing sessions following case studies or hands-on exercises, and arrange face-to-face meetings. Real-world application projects promote all three types of engagement and foster higher-level thinking skills such as creating, designing, developing, defending, evaluating, judging, and selecting. Designing course activities that connect course content to real-world applications might be the solution to spark a passion for learning in a world filled with routine quizzes, tests, discussion boards, and research papers, motivating students and maximizing retention.

Gamification as a Strategy

As educators, we are always looking for innovative ways to increase student engagement and enhance their learning experience. Gamification, a strategy that applies game design elements in non-game contexts, can be used as a powerful tool to increase student engagement in the classroom. Gamification taps into our natural desire for competition, achievement, and collaboration, leveraging our intrinsic motivation to play. It can make learning more interactive and fun, improving student engagement and motivation. Gamification elements, such as rewards, points, badges, stories, challenges, a sense of control, decision making, and a sense of mastery, can be used to increase both extrinsic

and intrinsic motivation to learn (Faiella & Ricciardi, 2015; Kapp, 2012; Nicholson, 2015). Research also shows that gamification can help students develop real-world skills such as problem-solving, collaboration, and critical thinking (Daineko et al., 2023; Jaramillo-Mediavilla et al., 2024).

Practical Applications

Every entrepreneurship textbook includes real-life application cases and discussion questions. Many entrepreneurship instructors also use cases from Harvard Business Publishing. In addition, instructors create consultation projects that aim to help local small businesses. Real-life application cases, discussion questions, and consultation projects can be turned into competitions that integrate both gamification elements and Bloom's Taxonomy. This approach increases student-student, student-material, and student-teacher engagement while boosting students' real-world skills. Let's expand on this integration using a couple of examples.[1]

A *Backstory* or a theme is a major element of gamification. The theme can provide context and make the learning experiences more immersive and engaging. Whenever you're turning something into a game, allow your students to create a backstory when appropriate. For example, the cases included in textbooks are one or two pages long and include only a limited amount of information. Depending on the learning goals of the chapter or module, additional assumptions might be needed. Students or groups can introduce three to five additional assumptions to broaden the scope of the case. Students must design these additional assumptions, evaluate different options, and select the most advantageous assumptions for their case, incorporating different thinking skills from Bloom's Taxonomy cognitive domain. Moreover, creating a backstory will facilitate student-student and student-material engagement.

Every game includes *points, rewards,* and/or *badges*. These are used to track progress and provide immediate feedback. Leaderboards rank gamers/participants based on their points or achievements, creating a sense of competition. Many of the textbooks contain end-of-chapter discussion questions or problems; some of these questions focus on remembering (e.g., recalling specific definitions or facts) while others force the student to evaluate options, analyze possible outcomes, and apply the terminology in a new situation. You can use these questions to create daily challenges where student groups can compete for points or rewards. Correct answers can earn points, certain questions can be designated as the 'daily double', and answering all the questions correctly might earn a badge or bonus for the team. Teamwork, collaboration, and camaraderie can encourage student-student and student-material engagement. Debriefs can be used to facilitate student-teacher engagement.

Sense of control is a very interesting element in gaming. In many games, the gamer has choices; the gamer can decide which character to play with, which outfit to wear, which weapon to buy, or which street to drive on. Class activities can be designed to increase students' sense of control. For example, using a group format, you can allow students to choose their roles as part of a start-up team. Or a case that examines a new product offering can incorporate a marketing director, product designer, and accounting director roles. Ownership of a functional area can increase the students' *sense of control*. The process of evaluating options, listening to other students' perspectives, and selecting the best option for the company in the decision-making stage can increase both student-material and student-student engagement. Debriefs can be used to facilitate student-teacher engagement.

Small businesses often face multiple challenges that require assistance. Consultation projects that include various concerns can increase *sense of control* as groups can select the problem they wish to solve. These projects provide a rich *backstory* as students can learn more about the business by visiting the business, assessing its website, and conducting interviews with the owner(s) or manager(s). *Rewards* can be offered to the group that presents the best solution. Such consultation projects engage higher-order thinking skills as outlined in Bloom's Taxonomy, encouraging students to analyze the current situation, evaluate and compare potential solutions, consider the implications of each implementation, and justify the most effective strategy for the business.

Considerations for Implementation

Real-life application cases, discussion questions, and consultation projects can be turned into games. Gamification elements can be used to motivate students, track progress, and reinforce positive outcomes. Most importantly, the assignment and the game can be customized to fit the learning outcomes of classes and students' needs. However, attention must be paid to the group composition and interactions within the group. The group's composition in terms of gender identity (male, female, non-binary, LGBTQ+), age, and personality types (e.g., introverts versus extroverts) can lead to awkward and sometimes hostile interactions. Expectations for respectful and professional exchanges must be upheld consistently. The needs of students with learning disabilities must also be considered. Assigning in-class reading tasks could put these students at a considerable disadvantage.

Here are a couple of considerations for a successful start:

1. **Prepare!** The first competition you prepare will take significant prep time; do not try to turn everything into a competition. When possible, collaborate with

1 Content that is in italics refers to gamification elements. Content that is underlined refers to Bloom's Taxonomy.

local businesses, businesspeople, and institutions. Outside participation brings out the best in students.
2. **Be flexible!** Things are bound to happen! Your judges might not show up on the presentation day/time as promised, you might overlook an important detail, there might be sick or no-show students, or the computer/projector might not work. Remember, pivoting is a part of entrepreneurship.
3. **Prizes!** When appropriate, include prizes, gift cards, school swag, and brag on LinkedIn/social media. Students love rewards.

Conclusion

Engagement plays a crucial role in student success. Incorporating gamification components into real-life application cases, discussion questions, and consultation projects can enhance student-material, student-student, and student-teacher engagement. The literature on gamification suggests that external motivators, such as points, prizes, and badges, can lead to higher levels of intrinsic motivation. Ultimately, this can encourage students to participate in learning activities, independent of the rewards (Faiella & Ricciardi, 2015). Certain subjects are better suited for integrating gamification; entrepreneurship is one such field where gamification elements can lead to high levels of student engagement, learning, and mastery.

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