Gamifying Economics Education: A New Frontier in Teaching Innovation

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ABSTRACT

This study explores the use of Classcraft, a gamified learning platform, in economics education to increase student engagement and improve learning results. Traditional methods of teaching economics frequently struggle to keep students interested, owing to the subject's abstract and theoretical nature. Gamification, as implemented by platforms such as Classcraft, provides a novel solution by adding game mechanics such as prizes, competition, cooperation, and narrative. These features encourage active involvement, critical thinking, and the practical application of economic principles. This study investigates Classcraft's effectiveness in altering the economics learning experience, increasing student motivation, and enhancing academic success. Previous research indicates that gamification dramatically improves student engagement and cognitive learning results. Classcraft's immersive, team-based structure provides a dynamic environment where students can apply economic concepts through interactive quests and challenges. The study contributes to the growing body of literature on gamification in education, highlighting the potential of Classcraft to revolutionize economics teaching by making it more engaging, accessible, and effective.

Keywords: Gamification, Economic, Interactive Learning, Motivation, Classcraft

INTRODUCTION

In the past few years, traditional methods of teaching economics have been unable to maintain students' interest and motivation. The abstract and at times theoretical nature of economics has led to disinterest among students, causing educators to seek new ways of teaching. A study done by Tan et al. (2018) argued that game-based learning evokes emotional engagement often absent in traditional educational settings. However, aligning commercial games with specific learning objectives poses significant challenges, particularly when considering design constraints and development costs associated with serious games. In this context, gamification emerges as a compelling alternative in leveraging game elements, mechanics, and logic while maintaining educational content at its core. Unlike full-scale serious games, gamification integrates enjoyment without compromising pedagogical intent, thereby enhancing student engagement across diverse learning environments (Fu et al., 2009; Filippou et al., 2018; Roy & Zaman, 2018). Gamification is one such innovation that has been incorporated into the learning process and its application of game design in non-game environments maximizes participation and motivation (Deterding et al., 2011).

Recent advancements in educational technology have demonstrated the effectiveness of gamification in improving learning outcomes across various disciplines. By incorporating elements such as teamwork, competition, rewards, and storytelling, gamification can create a more immersive and engaging learning environment. Unlike conventional lecture-based methods, which often rely on passive learning, gamification fosters active participation, encouraging students to engage with the material in a more meaningful way. Motivation is a crucial internal factor affecting students' academic performance. Despite its importance, many students experience a loss of interest and motivation due to various factors, one of which is the lack of

perceived support within the classroom environment. As a result, students may become bored, disengaged, and uninterested in classroom activities. This boredom can have significant repercussions, including increased absenteeism, diminished attention to important material, and incomplete assignments. While boredom in the classroom is challenging to avoid, even with the incorporation of group work, discussions, or other active learning strategies, lecturers can mitigate its effects by engaging students in ways that enhance the overall interest and engagement of the class.

Engaging students and enhancing the appeal of classroom learning posed a significant challenge for the course instructor (Ramesh, Azzah, Habiba & Pauline, 2025). Economics education, in particular, can benefit from gamification due to the subject's reliance on abstract models, quantitative analysis, and theoretical frameworks. Traditional teaching methods may struggle to capture students' interest or effectively develop their problem-solving skills. However, by integrating game mechanics, educators can simulate real-world economic scenarios, allowing students to apply theoretical knowledge in practical, decision-making contexts. This experiential learning approach aligns with constructivist educational theories, which emphasize active learning and student-centered instruction. While most research on gamification in education has focused on high school students, gamified instruction in university classrooms remains relatively uncommon (Dehghanzadeh et al., 2024; Dehghanzadeh et al., 2021). In addition, the increasing prevalence of digital learning tools and the shift towards blended and online learning environments make it crucial to explore innovative pedagogical methods. The COVID-19 pandemic further accelerated the adoption of digital education, emphasizing the need for interactive and engaging learning strategies that can be implemented in both physical and virtual classrooms.

In comparing the suitability of gamification platforms, Quizlet offers diverse quiz formats such as flashcards, gravity games, tests, matching activities, and spelling exercises, fostering individual learning engagement. Kahoot, on the other hand, motivates students through competitive point-based quizzes that reward accuracy and speed. Classcraft uniquely integrates gamification with classroom management by encouraging students to follow class rules through interactive role-play. Students create personalized avatars with special powers and collaborate in teams within time constraints, emphasizing the importance of teamwork, mutual respect, and collective responsibility. In response, Classcraft was strategically implemented as a gamified platform to foster student motivation and engagement in learning economics. Classcraft, an education-based gaming system, is a dynamic and interactive platform that enhances the learning process beyond the standard classroom. Moreover, game-based learning platforms such as Classcraft provide real-time feedback, enabling students to track their progress and make adjustments to enhance their understanding.

In this context, gamification through platforms in particular, Classcraft represents a promising avenue for enhancing student engagement, motivation, and overall learning outcomes in economics education. Gamification emerges as a valuable tool for improving classroom management, fostering active participation, and boosting student motivation. Hence, to enhance students' motivation to learn Economics, this game was proposed to create a more engaging and interactive learning experience. Classcraft leverages motivational gaming principles to create a positive learning experience for students who enjoy role-playing games. Thus, the objective of this paper is to enhance the effectiveness of the learning process and improve students' motivation in learning Economics by integrating innovative gamification methods. This study aims to introduce a game-based approach as an interactive and enjoyable method for teaching Economics, thereby increasing student engagement and making learning more enjoyable.

LITERATURE REVIEW

Gamification in education has gained significant attention as an effective pedagogical tool. which integrates game elements into learning, and has proven effective in boosting student motivation and attention (Wang & Tahir, 2020), particularly in social sciences such as economics and business (Gravalos-Gastaminza et al., 2022). Based on Kapp (2012) study, gamification can improve students' motivation, engagement, and learning outcomes by incorporating elements such as competition, rewards, and collaboration. Similarly, Hamari et al. (2014) suggest that game-based learning enhances intrinsic motivation, leading to better knowledge retention and application.

The use of Classcraft as a gamification tool in education has been explored in various disciplines. For example, studies by Rodríguez et al. (2019) indicate that Classcraft fosters student engagement, teamwork, and a sense of responsibility. More recent research by Wang and Tahir (2020) highlights that digital gamification platforms significantly improve student engagement and cognitive learning outcomes, particularly in higher education settings. Additionally, a study by Bai et al. (2021) found that gamification tools, including Classcraft, can enhance the effectiveness of online and hybrid learning environments by increasing student participation and motivation.

Economics, as a subject, involves complex theories and abstract concepts that require a high level of cognitive engagement. Traditional lecture-based methods often fail to cater to diverse learning styles (Becker, 2001). Gamification strategies, like those employed in Classcraft, offer an alternative approach to traditional methods. By incorporating elements such as storytelling, role-playing, and reward mechanisms, they make learning more interactive and enjoyable (Gee, 2003). Studies by Cheong et al. (2013) support the idea that incorporating game-based learning can improve comprehension and application of economic principles. Furthermore, a study by Domínguez et al. (2022) emphasized that gamification significantly enhances problem-solving skills and conceptual understanding in economics courses, reinforcing its value as an educational tool.

The potential advantages of gamification, including enhanced motivation, engagement, and learning outcomes, have been extensively explored in academic literature (Kapp, 2012; Hamari et al., 2014). However, there remains a need to substantiate these theoretical claims with empirical evidence, particularly in evaluating the effectiveness of gamified platforms such as Classcraft in specific subject areas like economics. For example, Rodríguez et al. (2019) conducted a study demonstrating that students utilizing Classcraft experienced a 25% increase in engagement compared to those in a traditional, non-gamified economics course. This improvement was especially evident in students' participation in class discussions and completion of assignments, supporting the theoretical premise that gamification promotes active learning and involvement. Furthermore, a study conducted by Wang and Tahir (2020) reported a substantial increase in student satisfaction, along with a 15% higher average grade in gamified economics courses compared to conventional lecture-based instruction. This empirical evidence reinforces the argument that gamification, particularly through platforms such as Classcraft, can yield measurable improvements in learning outcomes.

In comparison to other gamified learning tools such as Kahoot! or Quizlet, Classcraft distinguishes itself through its immersive narrative and team-based features. While Kahoot! primarily emphasizes quizzes and immediate feedback, Classcraft incorporates role-playing elements, enabling students to create avatars and collaborate in teams to earn points based on their academic progress. This emphasis on storytelling and teamwork has been found to have a more significant impact on student engagement in economics courses (Bai et al., 2021), as it facilitates the application of economic principles in a dynamic, real-world context rather than relying solely on rote memorization.

Considering the growing interest in gamified learning, this study explores the integration of Classcraft into economics education in higher learning institutions as a means to enhance university student engagement and foster a more dynamic, interactive learning environment. While gamification has shown promise across various disciplines, there is a notable gap in empirical research on its application within economics, particularly to engaging students with abstract and complex economic concepts. By examining both student experiences and academic performance, this study aims to provide a comprehensive analysis of how gamification, specifically through Classcraft which can support deeper learning and sustained motivation in economics classrooms in higher learning institutions. The findings contribute to the evolving discourse on innovative pedagogical strategies and offer practical insights for educators zooming into higher learning institutions seeking to transform traditional economics instruction into a more participatory and impactful educational experience.

DESIGN AND METHODOLOGY

This study adopted a quantitative research design involving undergraduate students enrolled in science policy and public administration courses at one of the public universities in Malaysia. To enhance engagement and

promote active learning, a customized Classcraft-based gamification intervention was integrated into the economics component of the curriculum. The gamified instructional approach was strategically developed to make abstract economic concepts more accessible and to foster a more interactive learning environment. In this game, students are also required to answer questions using the Quizizz and Kahoot apps.

Data were collected through structured instruments to evaluate students' comprehension, motivation, engagement, and perceptions of the economics course. The implementation of Classcraft served not only as an instructional tool but also as a mechanism to assess the effectiveness of gamification in transforming the economics classroom into a more dynamic and student-centered space.

The respondents of this study comprised 150 undergraduate students enrolled in an Economics course at Universiti Teknologi MARA, Negeri Sembilan Branch, Seremban 3 Campus, Malaysia. Of the total participants, 16.0% (n = 24) were male and 84.0% (n = 126) were female, with a median age of 20 years. As part of the study, the respondents were given the opportunity to engage with an educational economic game specifically designed to align with the course syllabus. Following the gameplay session, a questionnaire (adapted from Ibrahim et.al, 2011) was administered to collect data on students' perceptions regarding the effectiveness of the game in motivating them to study Economics.

FINDINGS

The result of the reliability test is shown in Table I. Cronbach's Alpha reliability for all variables indicated the range of good, very good and excellent internal consistency with reading 0.873. The widely-accepted cut-off is that alpha should be 0.600 or higher (Hair, Black, Babin, & Anderson, 2010). Thus, this indicates that the data and the measuring instrument are excellent and therefore, the data obtained for this research are reliable.

TABLE I:
RESULT OF CRONBACH'S ALPHA OF THE STUDY

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.873	.876	7

Motivation refers to an internal condition that prompts or energizes individuals to act. In this study, motivation was measured using seven items, each rated on a five-point Likert scale ranging from 1 (mostly disagree) to 5 (mostly agree). The detailed results are presented in Table 2.

For the first item (M1), which assessed whether the game enhanced students' knowledge of the subject matter, 68.7% (n = 103) agreed and 20.0% (n = 30) mostly agreed. A total of 10.7% (n = 16) were unsure, while none (n = 0) mostly disagreed, and only 0.7% (n = 1) disagreed with the statement.

With regard to the second item (M2), 54.0% (n = 81) agreed and 17.3% (n = 26) mostly agreed that they preferred answering questions through games. About 21.3% (n = 32) reported being unsure, whereas 1.0% (n = 1) mostly disagreed and 6.7% (n = 10) disagreed.

In relation to future use of games for learning (M3), 58.0% (n = 87) agreed and 20.0% (n = 30) mostly agreed that they were very interested. Approximately 19.3% (n = 29) were unsure, with no respondents (n = 0) selecting mostly disagree, and only 2.7% (n = 4) disagreeing.

For the fourth item (M4), 66.0% (n = 99) agreed and 20.7% (n = 31) mostly agreed that they preferred completing exercises through games. Only 9.3% (n = 14) were unsure, none mostly disagreed, and 4.0% (n = 6) disagreed.

When asked whether games made the Economics subject more interesting (M5), 61.3% (n = 92) agreed and 26.7% (n = 40) mostly agreed. A smaller proportion, 10.7% (n = 16), were unsure, while both mostly disagree and disagree responses were low at 0.7% (n = 1) each.

Regarding better understanding of the subject through games (M6), 64.7% (n = 97) agreed and 28.0% (n = 28) mostly agreed. Meanwhile, 14.7% (n = 22) were unsure, with no respondents indicating mostly disagree and 2.0% (n = 3) disagreeing.

Finally, for the item measuring whether games attracted students' interest in learning (M7), 58.7% (n = 88) agreed and 28.0% (n = 42) mostly agreed. About 10.7% (n = 16) were unsure, while only 0.7% (n = 1) mostly disagreed and 2.0% (n = 3) disagreed.

TABLE 2:
FREQUENCY AND PERCENTAGE MOTIVATION TOWARDS EDUCATION GAME

Items	Mostly Disagree		Disagree		Not Sure		Agree		Mostly Agree	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
M1	0.0	0.0	1	0.7	16	10.7	103	68.7	30	20.0
M2	1.0	0.7	10	6.7	32	21.3	81	54.0	26	17.3
M3	0.0	0.0	4	2.7	29	19.3	87	58.0	30	20.0
M4	0.0	0.0	6	4.0	14	9.3	99	66.0	31	20.7
M5	1.0	0.7	1	0.7	16	10.7	92	61.3	40	26.7
M6	0.0	0.0	3	2.0	22	14.7	97	64.7	28	18.7
M7	1.0	0.7	3	2.0	16	10.7	88	58.7	42	28.0

The level of the study variables was determined based on the five-point Likert scale, with response options ranging from 1 (mostly disagree) to 5 (mostly agree). To categorize the scores into low, moderate, and high levels, the range between the highest and lowest possible scores (5 – 1 = 4) was divided into three equal intervals (4 ÷ 3 ≈ 1.33). Accordingly, mean scores were interpreted as follows: 1.00 to 2.33 indicated a low level, 2.34 to 3.67 indicated a moderate level, and 3.68 to 5.00 indicated a high level.

TABLE 3:
LEVEL OF MOTIVATION TOWARDS EDUCATION GAME

No	Items	Mean	SD	Level of Motivation
1	This game enhance knowledge on subject matter (M1)	4.08	0.5737	High
2	Prefer to answer questions in games (M2)	3.806	0.8249	High
3	Very interested using games for learning in future (M3)	3.953	0.7079	High
4	Prefer to do exercises in games (M4)	4.033	0.6796	High
5	Games make subject more interesting (M5)	4.126	0.6685	High
6	Games help to understand subject better (M6)	4.000	0.645	High
7	Games attract interest (M7)	4.113	0.7192	High

Table 3 presents the results for the seven items measuring motivation. Overall, the findings indicate that the level of motivation towards the use of educational games was high, as reflected by the mean scores for each item falling within the high-level range. Among the items assessed, the highest motivation was associated with the perception that games make subjects more interesting (M5; Mean = 4.1267), followed by the belief that games attract students' interest (M7; Mean = 4.1133), enhance knowledge of the subject matter (M1; Mean = 4.0800), and encourage preference for doing exercises through games (M4; Mean = 4.0333). Additionally, games were perceived to aid in better understanding of the subject (M6; Mean = 4.0000). Students also expressed considerable interest in using games for future learning (M3; Mean = 3.9533). The item with the lowest mean, though still within the high motivation range, was the preference for answering questions through games (M2; Mean = 3.8067).

Based on the analysis, the majority of respondents indicated that educational games motivated them to learn Economics, as evidenced by an overall mean score of 4.0162 (SD = 0.52169), as shown in Table 4.

TABLE 4 :
LEVEL OF MOTIVATION

	Mean	SD
Motivation	4.0162	0.52169
Low (1.00-2.33)		
Moderate (2.34-3.67)		
High (3.68-5.00)		

DISCUSSION AND CONCLUSION

Classcraft is an educational approach uses game-based learning to enhance understanding of subjects. It was developed to promote student engagement in the classroom and with their teachings, promote positive behaviour, and foster the development of skills such as cooperation and communication. Students will build characters and collaborate in this game. They can gain and employ special "powers" to aid in their academic study and assist their comrades in times of need. Additionally, they receive some fantastic rewards for their efforts, such as new equipment and pets to let them customize their character.

The incorporation of Classcraft into economics education transforms the learning process by utilizing gamification elements to enhance accessibility and engagement with complex economic concepts. Conventional teaching approaches often face challenges in maintaining student interest, particularly when addressing abstract topics such as supply and demand, inflation, opportunity costs, and market structures. By converting these concepts into interactive quests and challenges, Classcraft provides students with opportunities to actively apply their knowledge in a dynamic and contextually meaningful manner.

Classcraft's gamified approach fosters student motivation through the use of rewards, competition, and collaborative learning. Instead of passively absorbing information, students actively participate in scenarios where they must make decisions that mirror real-world economic situations. These activities encourage critical thinking, problem-solving, and strategic planning, all of which are essential skills for understanding and applying economic principles.

Furthermore, the platform's interactive nature enhances student engagement and retention. Research has shown that students learn best when they are actively involved in the learning process, and Classcraft's format aligns perfectly with this philosophy. The game-like environment helps reduce anxiety associated with traditional assessments, allowing students to experiment with economic concepts without fear of failure. By making mistakes and learning from them in a controlled setting, students develop a deeper comprehension of the subject matter.

Beyond its educational benefits, Classcraft also holds strong commercial potential. As the demand for innovative and technology-driven educational tools continues to grow, this platform provides a valuable solution for educators looking to modernize their teaching methods. Schools and institutions that implement Classcraft may see improved student performance and engagement, making it a worthwhile investment in the future of education.

In conclusion, Classcraft presents a promising approach to teaching economics by combining traditional learning with gamification. It enhances student engagement, fosters critical thinking, and improves retention rates, ultimately making economics more accessible and enjoyable. With its strong potential for both educational impact and commercial success, Classcraft represents a modern and effective tool for revolutionizing the way economics is taught.

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