



Gamification in GENYO e-Learning: Exploring Student Motivation and Challenges in English Language Instruction

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Abstract

Background and Aim: Gamification is widely recognized for enhancing student motivation. However, some educators sidestep it due to time constraints, insufficient technical skills, and challenges in selecting and integrating suitable games for teaching. Hence, this study explores the motivation and challenges in English language instruction.

Materials and Methods: Using a qualitative, single-case study design, data were collected from eight (8) participants through semi-structured interviews and thoroughly analyzed using thematic analysis.

Results: The findings reveal that students used Hangmoon, Memory Match, Crossword, and Triviatron in the GENYO e-learning platform, finding these games entertaining and educational. They appreciated the ease of access and how the games sparked their curiosity. Despite technical challenges, such as poor internet connectivity, malfunctioning IT equipment, forgotten login credentials, inaccessible links, and power outages, and complex game instructions, students adopted coping strategies, including adapting to technical difficulties, seeking support, and ensuring stable connectivity.

Conclusion: The study concluded that a variety of games in the learning process enhances interactivity and engagement and sparks curiosity. Finally, this study underscored that gamification fosters a more dynamic and interactive classroom environment.

Keywords: Gamification; GENYO e-Learning; Motivation; Challenges; English Language Instruction

Introduction

Integrating gamification into the classroom to enhance motivation has gained significant traction in pedagogical research. This approach, which leverages game design elements in educational contexts, has proven effective in addressing modern challenges in teaching and learning (Prieto-Andreu et al., 2022). Gamification is increasingly recognized as a powerful tool for improving student motivation by fostering positive behavioral and attitudinal changes in the classroom (Kiryakova et al., 2014). Despite its potential, some educators struggle to incorporate gamification due to constraints such as insufficient time to prepare gameplay sessions, lack of technical competence, and difficulties in selecting appropriate games for teaching (Jääskä & Aaltonen, 2022). These challenges highlight the gap between gamification's potential and its practical implementation. Moreover, students today approach learning differently, seeking methods that align with their interests and needs (Buda & Pesti, 2024). Teachers must, therefore, adopt innovative methodologies to foster active participation and sustained motivation in their students (Redjeki & Muhajir, 2021).

While the benefits of gamification are widely acknowledged, few studies have investigated its implementation and impact within the GENYO e-learning platform, especially concerning student challenges and coping mechanisms. This study addresses this gap by exploring how students'





motivation is affected by the use of gamification in GENYO, along with the challenges they face in utilizing this platform and the strategies they adopt to overcome them.

Addressing student motivation is crucial in today's educational landscape, as these factors directly impact academic achievement and learning outcomes. Students often struggle with disengagement due to outdated teaching practices and a lack of connection to their interests, underscoring the importance of incorporating innovative strategies like gamification. By creating an interactive and enjoyable learning environment, educators can better meet the evolving needs of modern learners and prepare them for future challenges. This emphasis on motivation supports academic success and fosters a lifelong love for learning, which is essential in a rapidly changing world.

Technology is pivotal in modernizing teaching and learning in today's educational landscape. It has transformed learning strategies and teaching methodologies, creating opportunities to enhance pedagogical efficiency (Yenkimaleki & van Heuven, 2019). Technology in education is seen as a progressive step toward improving instruction and fostering more engaging learning experiences (Naparan & Alinsug, 2021). One such technological approach is gamification, effectively making learning more interactive and enjoyable.

In education, gamification employs game-based techniques and strategies to promote learning by enhancing critical thinking and motivation (Kapp, 2012). Studies suggest that gamification empowers students by enabling them to achieve tasks and sustain efforts, ultimately improving their motivation and reducing boredom (Trigueros et al., 2019; Fuentes-Riffo et al., 2023). This study aims to describe the experiences of students using games in the GENYO e-learning platform. Understanding students' experiences and the challenges they face in accessing gamified platforms like GENYO is crucial in assessing its effectiveness and identifying areas for improvement. By exploring these aspects, the study aims to provide insights into how such platforms can better cater to students' needs and overcome barriers to implementation.

GENYO is a Learning Management System (LMS) used in basic education, featuring educational games designed to enhance learning. Despite its availability, there is a lack of research exploring the effectiveness of GENYO's educational games in fostering motivation. This study aims to address this gap by examining the integration of gamification through GENYO's features. Understanding how GENYO's educational games impact motivation can provide valuable insights for educators seeking to implement innovative teaching strategies.

Motivation is a critical factor influencing student achievement in learning (Gardner, 1985). However, studies highlight that many students lack the motivation to participate actively in learning (Alsawaier, 2018; Kiryakova, 2014). This necessitates a shift in pedagogy, with teachers adopting approaches that equip students with essential skills such as digital literacy, problem-solving, creative thinking, and ownership of their learning (Anak Yunus & Hua, 2021). Despite the prevalence of technology, many educators remain reliant on traditional methods due to familiarity and workload constraints, limiting their exploration of innovative resources (Buda & Pesti, 2024; Madrunio et al., 2016).

English, as a core subject, emphasizes developing competencies in listening, speaking, reading, and writing (DepEd Memorandum Order 43, 2002). Achieving these competencies requires motivation, which can be fostered by integrating novel teaching approaches such as gamification. However, there is a lack of in-depth research on the application of gamification in English language classes in the Philippines. This study seeks to bridge this gap by investigating how gamification, through the GENYO platform, can enhance student motivation in English learning.

By addressing the challenges in implementing gamification and highlighting its potential benefits, this research aims to provide practical insights for educators. It underscores the importance of adopting innovative methodologies to meet the evolving needs of modern learners and improve the quality of English education.

Objectives

This study aimed to 1) describe the experiences of students using games in GENYO e-Learning and 2) identify the challenges and coping strategies in accessing games in GENYO e-Learning.

Literature review

Gamification in Education

Gamification, the application of game-like elements in non-game contexts, has emerged as a powerful tool in education, with research consistently showing that game mechanics like competition, rewards, and challenges can significantly enhance student motivation (Kapp, 2012; Trigueros et al.,



2019). However, the effectiveness of gamification is not universal, and its success depends on how well it aligns with educational goals (Fuentes-Riffo et al., 2023). The theoretical foundations of gamification are largely informed by Self-Determination Theory (SDT) and Flow Theory, which offer valuable insights into why gamification effectively motivates students. SDT emphasizes that motivation is strongest when individuals experience autonomy, competence, and relatedness (Deci & Ryan, 2000). In gamified learning environments, autonomy is promoted through student choice, competence through incremental challenges and rewards, and relatedness through collaborative or competitive elements. Games in platforms like GENYO, such as *Baseball* and *Memory Match*, foster these psychological needs by providing rewards for correct answers, aligning with SDT's emphasis on intrinsic motivation (Ryan & Deci, 2000). Many studies have shown that when gamified environments are carefully designed to meet these needs, they can substantially boost motivation (Kiryakova et al., 2014; Trigueros et al., 2019).

Flow Theory, developed by Csikszentmihalyi (1990), also plays a critical role in understanding the impact of gamification. The theory suggests that students are most motivated when the challenge of a task matches their skill level, resulting in a state of complete immersion known as "flow." Educational games in GENYO utilize this principle by adjusting game difficulty based on student performance, as seen in games like *Jeopardy* and *Triviatron*, which maintain engagement by keeping students in a state of flow. Studies have shown that achieving flow through appropriately challenging tasks enhances satisfaction and motivation (Csikszentmihalyi, 1990; Hong et al., 2014).

Despite these theoretical foundations, different approaches to gamification can affect motivation in diverse ways. Competitive gamification, such as in the game *Baseball* on GENYO, can motivate students who are driven by external rewards (Hamari et al., 2016), while more cooperative approaches, like the group-based challenges in *Jeopardy*, may be more effective for students who value social connection and shared success (Jääskä & Aaltonen, 2022). However, regardless of the approach, it is crucial to balance game mechanics carefully. Poorly designed gamification, with overly difficult tasks or imbalanced rewards, can lead to frustration and disengagement (Jamaluddin et al., 2020). Moreover, some studies have argued that while gamification can increase interest, it risks overshadowing learning content if not aligned with educational objectives (Rahayu et al., 2022).

Despite the growing body of research on gamification in education, several gaps remain. Much of the existing literature has focused on general educational contexts rather than specific platforms like GENYO, with few studies examining how gamification is implemented in Learning Management Systems (LMS). Additionally, the impact of platform-specific challenges, such as technical issues or accessibility, has not been thoroughly explored. Moreover, many studies on gamification emphasize its positive impact on motivation without examining students' coping mechanisms to navigate the challenges they face during gameplay. In this study, the challenges students encounter in navigating GENYO, including technical difficulties and complex game instructions, will be critical to understanding gamification's full impact. This gap highlights the need for research investigating how students adapt to and overcome these barriers.

This study aims to fill this gap by focusing on the gamified features of the GENYO e-learning platform and their impact on student motivation in English language learning. It will explore how gamification in GENYO affects student motivation and how students deal with their challenges, such as technical issues and complex instructions. By addressing these aspects, this research will provide a more nuanced understanding of gamification in specific educational platforms, offering practical insights for educators aiming to implement gamification effectively in their classrooms.

Conceptual Framework

This study is grounded in Malone's Intrinsically Motivating Instruction Theory (1980) and Deci and Ryan's Self-Determination Theory (1985), which offer insights into gamified learning environments' motivational and experiential aspects.

Malone's Intrinsically Motivating Instruction Theory highlights that learning becomes engaging and effective when activities incorporate challenge, fantasy, and curiosity. These elements encourage learners to invest effort, derive enjoyment, and achieve meaningful learning outcomes (Malone, 1981). Within GENYO e-Learning, the games embody fantasy by immersing students in interactive scenarios beyond traditional learning experiences. This framework provides a lens for understanding how students experience the platform and how its features foster motivation.

Deci and Ryan's Self-Determination Theory (1985) explains motivation by fulfilling three core psychological needs: competence, autonomy, and relatedness (Ryan & Deci, 2022). This study draws on two key components of SDT—Organismic Integration Theory (OIT) and Causality Orientations



Theory (COT)—to examine how students respond to challenges in accessing gamified learning. OIT describes how external motivators, such as the gamified tasks in GENYO, can be internalized when students find them valuable and meaningful. COT analyzes students' behaviors based on their sense of control, showing how they navigate difficulties, seek assistance, and stay connected to their learning goals despite challenges.

These theories align with the study's aim of describing students' experiences with GENYO e-learning games and identifying their challenges. This framework provides a theoretical basis for analyzing how GENYO's gamification impacts students' motivation and their strategies for overcoming obstacles.

Methodology

Research Design

This study employed a qualitative research design to explore the impact of gamification on students' motivation in English class. A single-case study approach, as developed by Merriam (1998), was utilized to provide an in-depth understanding of students' experiences with gamification, the challenges they faced, and their coping strategies.

Research Environment

The study was conducted in a private institution in Pagadian City, Philippines, which offers elementary to tertiary education. The secondary school involved in the research has class sizes ranging from 30 to 40 students per section. The institution is equipped with a computer laboratory that provides internet and multimedia tools, and classrooms with projectors for interactive lessons. The school culture emphasizes technology integration in teaching, with policies that encourage innovative learning approaches like gamification, creating an environment conducive to implementing GENYO e-learning.

Research Participants

Purposive sampling was employed to select participants for this study. Initially, the researchers collaborated with the Learning Integration Specialist (LIS) of GENYO to identify active users of the platform. The LIS provided a list of the top five users from Grades 9 and 10, ranked by their access counts on the platform. After contacting the students, three Grade 9 students declined participation, resulting in a final sample of eight participants—two from Grade 9 and six from Grade 10—who were successfully interviewed. These participants were enrolled in the 2023-2024 school year. Moreover, two English teachers were also interviewed separately as a secondary data source.

The selection criteria were based on the student's level of activity on GENYO, specifically their access frequency and the amount of time spent on the platform each month. While the participants were ranked based on their access count, it is important to note that they were top users at different times, not necessarily in the same month.

The small sample size was justified due to the qualitative nature of the study, which focuses on depth rather than breadth. Data saturation was achieved by analyzing recurring themes and patterns across all participant responses, ensuring comprehensive insights.

Research Instrument

The researchers were the primary data collection instrument, utilizing interview guides and recording devices to capture the participants' responses. The interview questions, which were designed to address the central research question, included open-ended, exploratory, and exit questions. These questions aimed to explore the students' experiences with gamification, instances where they felt motivated, and the challenges and coping mechanisms they encountered.

Data Gathering Procedure

To ensure the reliability and validity of the data, the researchers employed reflexivity and involved a second researcher for cross-checking during the interview and data analysis phases. The purposive sampling approach, focusing on the monthly top users of GENYO, was explained in detail, and the selection of participants was justified by their active use of the platform, which provided rich insights into the research topic. Before the interviews, participants were briefed on the study's objectives and assured of confidentiality.

Validated interview guides, with feedback from an expert panel, were used to ensure the clarity and relevance of the questions. After collecting the data, the researchers transcribed the interviews and provided the participants with the transcriptions to confirm the accuracy of the information conveyed.

Data Analysis

Thematic analysis was employed to process the qualitative data. The researchers transcribed and coded the responses, identifying recurring themes and patterns. Themes were derived from the research questions, focusing on students' experiences with gamification in GENYO, their motivational

challenges, and the strategies they used to overcome them. This systematic approach ensured a comprehensive understanding of the data and maintained rigor and transparency throughout the analysis.

The researchers carefully examined each participant's responses to identify overarching categories that unified all cases. This analysis allowed the researchers to describe the shared experiences of the participants using gamification in GENYO, which was the central focus of the study.

Ethical Considerations

The study adhered to strict ethical guidelines. Informed consent was obtained from the participants' parents, as the participants were underage. Data confidentiality was maintained, and all information was kept private. To protect the participants' privacy, codes were used instead of names to ensure anonymity. The researchers also followed the principles of beneficence and non-maleficence, ensuring that the study benefited the target audience without causing harm to any individual involved.

Results

Games that the students used in GENYO e-Learning

The eight participants verbalized four (4) games (i.e., *Hangmoon*, *Memory Match*, *Crossword*, and *Triviatron*) they had played as an assessment.

Subtheme 1: Hangmoon. It is a guessing game where students guess phrases and letters. Incorrect guesses lead to the appearance of the Grim Reaper. Three respondents shared a similar description of the game:

“It was a guessing game.” – Student 2

“You guess the phrase or letter of a question.” – Student 4

“One of them is you guess it, and if you commit too many mistakes, something appears.” – Student 3.

Subtheme 2: Memory Match. It is a card game where students match terms and definitions. The game picks random pairs each play. Three respondents share a similar description of the game:

“...memory card where you choose one card and then flip another card to find the matching words.” – Student 4

“In the memory card game, you match the corresponding vocabulary.” – Student 5

“I have also tried a memory game where there should be a matching word.” – Student 6

Subtheme 3: Crossword. It is a puzzle where students fill squares with letters to form words based on given clues. Three students shared a similar description of the game:

“...crossword...” – Student 4

“I enjoy crosswords more, unlike writing on the board, which makes me nervous.” – Student 6

“I also tried a crossword.” – Student 7

Similarly, the teacher shared an experience using a crossword as a formative assessment.

“I used a game crossword.” – Teacher 1

Subtheme 4: Triviatron. It is a multiple-choice trivia game that provides immediate feedback on answers. Eight students shared a similar description of the game:

“I tried the multiple-choice game.” – Student 1

“...multiple-choice game.” – Students 2, 5, and 7

“...then multiple choice like Quizziz.” – Student 4

“Most of them are multiple-choice games.” – Student 6

“In English quizzes, there is a multiple-choice type of game.” – Student 8

On the other hand, a teacher shared an experience of using this game.

“In Triviatron, for my topic on opinion and assertions, I am using it where they choose a letter ... and if they choose that specific answer, it will reveal the correct answer.” – Teacher 2

Gamification of students' motivation

The goal of stimulating students' motivation is a serious obligation that teachers must fulfill. But thankfully, gamification is a pedagogical motivational tactic in learning and teaching. The participants attested that gamification enhances motivation, describing it as entertaining and engaging, accessible to learning, and sparking curiosity.

Subtheme 1: Entertainment and Engagement. Gamified activities not only make learning enjoyable but also actively engage students, which in turn motivates them to participate more



enthusiastically. Students shared that they feel more involved when lessons are gamified and are eager to complete tasks. This is evident in the following statements.

“When a subject or an activity is entertaining, I feel more motivated to answer correctly, especially if the activity is engaging.” – Student 1

“It is not only interesting ... but you can also learn lessons not just from the fun side but also from the educational side.” – Student 8.

Similarly, an English teacher affirmed that the games’ entertainment motivates them. Another English teacher emphasized that it entertains students and enhances learning.

“...they will become interested in the lesson if it is game-based. If we incorporate games into our teaching, they will treat learning English as fun.” – Teacher 1

“...we make sure that the activities assigned will test the student’s learning, not only for them to enjoy and have fun, but to learn also while doing such activities.” – Teacher 2.

The statements above emphasize the role of gamified activities in education and how they entertain students. Students stated that entertaining and engaging activities increase their motivation and performance, with some highlighting that those games help in understanding, boost confidence, and make learning enjoyable. In addition, English teachers and learning specialists support this notion, noting that 21st-century learners respond better to technology-integrated education. While effective, traditional methods are less engaging than game-based approaches that make English subjects fun and exciting.

Subtheme 2: Accessible to Learning. Mentioning that the institution has its own GENYO laboratory, the teacher and the students use computers to take the activity online. On top of that, students shared a common notion that through technology, accessing and taking activities can be more accessible, thus giving them convenience. It is evident in the responses stated below:

“When GENYO came, learning became better, easier, and more enjoyable.” – Student 1

“GENYO is more motivating because it is accessible, so tasks can be done more easily, especially since technology is designed to make everything easier for learning.” – Student 5

“It is easier. You can quickly gather information. When you do work on GENYO, you can also do research.”

GENYO simplifies learning by facilitating easy access and easy interaction. The respondents have the same notion regarding playing or taking an online gamified activity; they find it exciting and motivating because, just like what technology promises, GENYO generally conforms to the need for easy access or convenience. In other words, e-learning, such as GENYO, helps teachers and students by providing digital access to course content, including gamified activities, with increased interaction among teachers and learners.

Subtheme 3: Sparking Curiosity. Gamified activities spark curiosity among students, leading them to explore more in the subject and maintain interest. Two respondents shared their experiences of being curious while taking a gamified activity. These are evident in the statements below:

“Sometimes, I get curious, especially when there is incomplete information.” – Student 7

“It makes me want to learn more because it opens my curiosity to enjoyable learning activities. So, I will be more curious in the next lesson.” – Student 5.

Two respondents shared that they get curious because of the gamified activities. One respondent said that presenting such missing information could spark curiosity. The other one noted that it opened curiosity to learning activities that stimulate fun. Now, this signifies that while gamification tends to spark curiosity, it encourages students to learn and explore more until they get what they want while learning.

Challenges encountered when accessing games in GENYO e-Learning

The participants cited various challenges when accessing games in GENYO e-Learning. These are technical issues and a lack of clear guidance on problem-solving.

Subtheme 1: Technical issues. Technical issues encompass problems related to technology or digital infrastructure, such as poor internet connection, malfunctioning IT equipment, forgetting login accounts, inaccessible links, and power cuts.

“...accessing games can be difficult if the internet is slow.” – Student 6





“Keyboard and audio on the computer malfunction.” – Student 5

“...sometimes, the links are also inaccessible, they have errors.” – Student 8

“There are times when I am nearly finished, and then there is an unexpected power outage, causing my work not to be saved.” – Student 3

The technical problems encountered by the participants were confirmed by their English teachers.

“...And most especially, internet connection. They cannot access the GENYO without the internet,” – Teacher 1.

“...some students forgot their password and username. Some students are more prone to distractions; for example, if some students forget their password, they keep asking.” – Teacher 1

“It somehow affects them. Because it reduces their time and, at the same time, interrupts their momentum and eagerness to learn more.” – Teacher 1

The responses highlight the technical challenges students face and their impact on learning. Students struggle with slow internet, hardware malfunctions, inaccessible links, and power outages, which disrupt their ability to complete tasks and save progress. These issues are corroborated by their English teacher, who points out the reliance on internet connectivity for accessing resources like GENYO. Additionally, problems such as forgotten passwords delay students and lead to distractions, reducing their focus and enthusiasm. Such challenges significantly hinder the learning process, as they consume valuable time and disrupt the momentum needed to sustain interest.

Subtheme 2: Lack of Clear Guidance in Instruction. While students encounter tricky game instructions, they may also experience challenges in solving the tasks due to a lack of clarity on how to proceed. This lack of clear guidance in the game interface or instructions can confuse and delay completing tasks effectively.

“I didn’t understand how to solve some of the problems because the instructions weren’t clear enough.” – Student 6

“The game could be tricky when I didn’t know how to approach a specific part of the activity.” – Student 5

Further, a teacher affirmed the statement about the game’s instruction.

“...another problem that the students might encounter when answering an activity or game in GENYO is if they understood the instruction itself, because how are they going to answer a game if they do not know what the instruction is all about?” – Teacher 1

The statements emphasize how unclear or incomplete instructions may frustrate students and prevent them from fully engaging with the game’s objectives, pointing to the need for more explicit directions and problem-solving guidance. Teacher 1 supports this observation, highlighting that unclear instructions pose a significant barrier. Students who do not fully grasp the directions cannot properly engage with or succeed in the games, which undermines the learning objective. This issue stresses the importance of providing clear, straightforward instructions to ensure students can participate meaningfully and benefit from the activities.

Students' coping strategies to overcome challenges

What can be done when dealing with challenges is up to the students. They mentioned how they coped with challenges when accessing games in GENYO: adapting to technical challenges, seeking support, and ensuring stable connectivity.

Subtheme 1: Adapting to Technical Challenges. Adapting to technical challenges involves troubleshooting and waiting for internet connectivity to stabilize. Two participants demonstrated patience and resignation when faced with unavoidable delays, suggesting they have normalized these technical issues as part of their learning experience.

“I have to wait.” – Student 1

“...and about the internet, I have to wait for it (the internet) to be stable.” – Student 6

Two respondents reflect a common experience of patience and resignation in the face of unavoidable delays. Student 1 signifies a resigned acceptance of the need to wait. Similarly, Student 6’s elaboration highlights a specific scenario involving internet connectivity issues. This underscores frustrations but also conveys a similar sense of acceptance. Both statements emphasize the inevitability



of waiting, indicating that the speakers are accustomed to these delays and have learned to cope with them as a normal aspect of their daily lives.

Subtheme 2: Seeking Support. The participants actively seek help from peers and teachers when encountering difficulties they cannot resolve independently. This help-seeking behavior punctuates the importance of interpersonal assistance in navigating educational technology.

“If I cannot solve my challenges or problems, I will seek help from my classmates or teachers.”

– Student 1

“By asking for help from somebody” – Student 7

An English teacher expressed that a teacher should help and facilitate students.

“...do not forget that there is a teacher who will facilitate and help them. So, that is the role of the teacher to facilitate ... not only to demand certain things they need to do but also to facilitate and always to give their best help if someone needs or seeks advice. So, that is how important the gamification activity should be in school face-to-face for the teacher and to facilitate those struggling students.” – Teacher 2

The responses highlight the importance of seeking and providing support in overcoming challenges during gamification activities. Students recognize the value of asking for help from classmates and teachers when they encounter difficulties. This approach is reinforced by Teacher 2, who emphasizes the teacher’s role in facilitating and assisting students, particularly those who struggle. Teachers are responsible for guiding and supporting learners and creating an environment where students feel encouraged to seek help.

Subtheme 3: Ensuring Stable Connectivity. Before starting activities, the participants take proactive measures to ensure a stable internet connection. This includes checking signal strength and verifying links to minimize disruptions during their online learning sessions.

“I first check to see if the internet works.” – Student 7

“First, with the internet connection, I ensure I am in a place with a strong signal. However, here at school, the GENYO lab has Wi-Fi. Then, with errors, I make sure to click the link before starting because it might have an error.” – Student 8

The data indicates that students adopt proactive measures to ensure connectivity and minimize technical issues. Student 7 mentions the importance of checking internet connectivity in advance. At the same time, Student 8 emphasizes the need to be in a location with a strong signal and to verify links before starting an activity to prevent errors. These actions demonstrate students' awareness of the potential challenges related to connectivity and their efforts to mitigate them, reflecting a proactive approach to managing technical issues during online learning sessions.

Discussion

Games used in GENYO e-Learning

Integrating games into the classroom has proven to enhance student motivation. The researcher discovered that it entertains and engages students, gives easy access to learning, and sparks curiosity. The games mentioned by the students are *Hangmoon*, *Memory Match*, *Crossword*, and *Triviatron*.

Table 1. Games used by students

Game	The number of students who played
Hangmoon	3 (Student 2, 3, 4)
Memory Match	3 (Student 4, 5, 6)
Crossword	3 (Student 4, 6, 7)
Triviatron	8 (All students)

While the games identified in this study have not yet been studied, the researchers explored similar games to understand the potential benefits these games may offer.

Hangmoon is closely related to Hangman. It is played by representing a word with a series of dashes corresponding to each letter (Munikasari et al., 2021). This game, typically played between a host and one or more players, emphasizes spelling, pronunciation, and vocabulary skills (Munikasari et al., 2021). *Memory Match* is similar to Quizlet, an educational platform offering various learning modes



(e.g., Learn, Flashcard, Write, Spell, Test, Gravity, Live). The Match mode is similar to Memory Match, where learners quickly pair terms with their definitions (or corresponding pictures) (Quizlet, 2020). Crossword, a popular game, is featured in GENYO and has mechanics similar to other crossword games. In this puzzle, squares must be filled in with words, with synonyms or definitions of words given corresponding to numbers in the squares (Nurteteng & Nopitasari, 2019). Triviatron is closely related to Kahoot!, serving multiple educational purposes, including knowledge review, formative assessments, and providing a break from traditional classroom activities. Triviatron offers immediate feedback after each answer, which is crucial for formative assessments, helping students understand their mistakes and learn the correct answers on the spot (Wang & Tahir, 2020).

Games such as Hangman, Quizlet, Crossword, and Kahoot! have proven to offer numerous educational benefits, particularly in vocabulary learning (Andarab, 2017; Dizon, 2016; Munikasari et al., 2021; Tanjung et al., 2019). Also, these games have been shown to enhance spelling competency (Wiratania, 2018), word retention (Muzdalifah, 2018; Tambaritji & Atmawidjaja, 2020), and meaning recall (Muzdalifah, 2018; Tambaritji & Atmawidjaja, 2020). Educators can gain valuable insights by examining the potential advantages of the games highlighted in this study, particularly about how gamified learning tools enhance student proficiency in diverse areas such as language learning and cognitive development.

Benefits of Gamification

The empirical findings reveal a consensus on the positive impact of gamified activities on student motivation. For instance, students who engaged in *Triviatron* reported feeling more excited and willing to participate in class discussions due to the instant feedback they received after answering. This immediate reinforcement helped them identify their strengths and areas for improvement, fostering a desire to learn more. Similarly, *Hangmoon* was highlighted for its role in improving vocabulary retention, with students noting that guessing letters and phrases made learning spelling more interactive and memorable. Participants also shared that *Memory Match* aided in mastering complex terminologies by quickly associating terms with their definitions, while *Crossword* activities encouraged logical thinking and strengthened word recall. These examples illustrate how gamification provides dual benefits, combining enjoyment with educational value and aligning with the concept of serious games.

Moreover, GENYO's platform simplifies learning through its user-friendly interface and accessibility. Students praised its ability to eliminate manual tasks, such as writing definitions or researching in books, as the platform facilitates quick information gathering and interaction. The online nature of GENYO provides access to vast educational resources, allowing students to use the internet effectively during assessments (Buda & Pesti, 2024).

Curiosity is pivotal in promoting deep learning. Incomplete information presented during gamified activities sparks students' interest, motivating them to seek additional knowledge and participate more actively. For example, participants expressed a desire to explore new words after playing *Crossword* and to test their peers in *Triviatron*, showing how gamified activities create a cycle of engagement and enthusiasm. These findings emphasize the importance of incorporating gamification thoughtfully to maximize its benefits while mitigating potential drawbacks.

In a nutshell, gamification is an effective approach to enhance student motivation. The study's findings corroborate prior studies. For instance, Zadeja and Bushati (2022) concluded that serious games are more effective for learners' long-term motivation. Similarly, Hellín et al. (2023) developed a tool designed to enhance learning experiences and increase motivation in programming courses, with their findings showing significant improvements in student motivation. Furthermore, gamification can foster curiosity by presenting material in a game-like format, sparking students' interest and motivation to explore and learn more about the covered topics (Nusi et al., 2024). The consistent findings across these studies support the notion that gamification effectively enhances student motivation.

Challenges in Implementing Gamification

The findings showed that challenges were evident based on students' experiences. Students encountered various technical issues, including poor internet connectivity, malfunctioning IT equipment, forgotten login credentials, inaccessible links, and power outages. These challenges significantly impacted the learning process by creating barriers to accessing learning materials, completing tasks, and maintaining motivation. For instance, students' satisfaction with online learning was closely tied to their internet connection's perceived quality and reliability, with poor connectivity leading to frustration and decreased participation (Li et al., 2021; Zalat et al., 2021). Similarly, intermittent power supply significantly hindered e-learning implementation, as Nazir and Khan (2021) and Ogbonnaya et al. (2020) reported.



IT equipment malfunctions also posed significant setbacks. Bączek et al. (2021) identified these malfunctions as a major disadvantage, further elaborated by Niemi and Kousa (2020), who emphasized their demotivating effects on students. Password-related issues, such as forgotten login credentials, were another barrier to accessing digital platforms, as noted by Hassol et al. (2004). These disruptions often resulted in students losing valuable time and momentum, negatively impacting their learning experience.

Additionally, technical problems with educational computer games disrupted class activities, frustrating students and teachers (Jääskä & Aaltonen, 2022). For example, unclear game instructions added another layer of difficulty for participants, mirroring findings from Jääskä and Aaltonen (2022), which showed that unclear or complex instructions in educational games diminished motivation. This underscores the importance of providing clear, concise, and well-structured instructions to ensure student motivation and the achievement of educational goals. Involving students in designing and refining game instructions could address this issue, making them more accessible and understandable (Buda & Pest, 2024).

Addressing these challenges through better infrastructure, effective guidance, and collaboration between educators and students can mitigate the negative impact on the learning process, allowing gamified activities to support student motivation fully.

Coping Strategies to Overcome Challenges

The study participants identified various coping strategies to overcome challenges, particularly technical ones, significantly contributing to successful learning. One prominent strategy was demonstrating patience and resignation when faced with unavoidable delays. Research by Carrascal and Church (2015) highlights that digital access interruptions can cause frustration, but tolerance levels vary based on cultural attitudes toward technology. For instance, in regions with less reliable internet infrastructure, students often exhibit higher levels of patience (Miller, 2016), allowing them to remain engaged despite connectivity issues.

Participants also sought help from teachers and peers, whether for navigating content, clarifying misunderstandings, or addressing technical difficulties. This collaborative approach aligns with findings by Davison et al. (2023), which emphasize that the ease of seeking assistance during gamified activities fosters positive learning experiences. Li et al. (2023) further note that these interactions build a supportive learning environment, encouraging students to stay motivated despite technical challenges.

Additionally, students adopted proactive measures to minimize disruptions, such as ensuring a strong internet connection, verifying functional links in advance, and preparing backup plans in case of interruptions. According to Gonzales et al. (2020), students who engage in such preparatory actions report fewer disruptions, higher satisfaction, and improved performance in online courses. These strategies reflect their resourcefulness and determination to mitigate connectivity challenges.

Moreover, the importance of reliable internet access for successful online education is well-documented. Anderson and Rainie (2018) emphasize that dependable connectivity is crucial for uninterrupted learning, further underscoring the significance of these coping strategies. By blending patience, collaboration, and proactive planning, students navigate technical barriers effectively, ensuring their learning process remains productive and resilient.

On the one hand, the findings highlight gamification as a powerful tool for enhancing motivation in education. Teachers should integrate games like Hangmoon, Memory Match, Crossword, and Triviatron to promote vocabulary learning, spelling competency, word retention, and meaning recall. Clear instructions can prevent confusion. Educational designers should prioritize user-friendly platforms and offer teacher training. To address technical challenges, schools should invest in reliable and provide backup resources to ensure seamless learning experiences.

This study supports previous research, such as Zajeda and Bushati (2022), showing that gamification improves motivation. However, it adds specific insights into how games like Hangmoon, Memory Match, Crossword, and Triviatron could promote vocabulary learning, spelling competency, word retention, and meaning recall. Unlike earlier studies, it identifies challenges, such as technical issues and a lack of clear guidance on problem-solving, offering practical strategies to overcome them, and making gamification more accessible in diverse educational settings.

Conclusion

This study accentuates the positive impact of gamification on student motivation, particularly through games like Hangmoon, Triviatron, Crossword, Memory Match, and Hangmoon. These findings emphasize how gamification in GENYO e-learning can entertain and engage students, give easy access to learning, and spark curiosity. The study also addresses challenges such as technical issues and a lack

of clear guidance in instruction, providing coping strategies for both teachers and students to adapt to technical challenges, seek support, and ensure stable connectivity.

However, this research has limitations. It focuses on a single educational platform and a specific set of games, limiting the generalizability of the findings. Since this study employs a qualitative research design, quantifying results (e.g., specifying statistical significance) is not applicable. Instead of numerical precision, the study provides rich, thematic insights into students' experiences, challenges, and coping mechanisms in gamified learning. Future research may explore mixed-methods approaches to complement qualitative findings with quantitative measures.

Knowledge Contribution

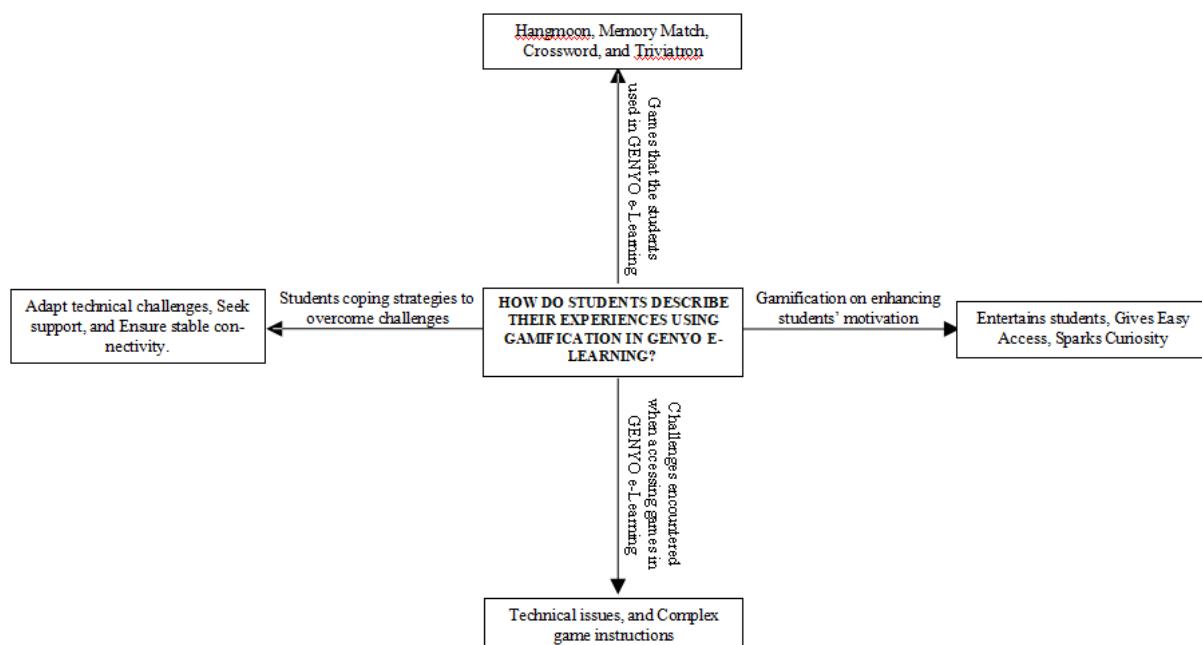


Figure 1: Gamification on Improving Students' Motivation

The paper centered on describing the experiences of Grade 9 and Grade 10 students using gamification in GENYO e-learning. Games like Hangmoon, Memory Match, Crossword, and Triviatron, which students accessed through GENYO e-Learning, demonstrated benefits such as vocabulary learning, spelling competency, word retention, and meaning recall, aligning with similar findings from other educational tools. Gamification significantly boosts student motivation due to its entertaining features and capacity to support learning (serious game), easy accessibility, and ability to spark curiosity. However, the study also revealed challenges, including technical issues (i.e., poor internet connectivity, malfunctioning IT equipment, forgotten login credentials, inaccessible links, and power outages) and complex game instructions, all of which negatively impacted student motivation. To overcome these obstacles, students employed coping strategies like adapting to technical challenges, seeking help from teachers and peers, and ensuring stable connectivity. This study adds to the growing body of research on gamification by emphasizing its benefits and challenges in educational contexts. While many studies focus on the positive effects of integrating games into classrooms, this research contributes to the less-explored challenges and coping strategies involved in accessing them. It provides empirical evidence and practical applications, particularly addressing the ongoing use of traditional methods despite the availability of technology, as noted by prior studies.

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