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Strategies in integrating gamification into the teaching–learning process to enhance engagement and its challenges

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A B S T R A C T

This study aimed to explore the integration of gamification and game-based learning in elementary education, focusing on its effectiveness and the challenges faced by teachers. Drawing on the experiences of 11 educators from Hilario Valdez Memorial Elementary School in Batac, Ilocos Norte, the research employs a phenomenological design to uncover strategies that enhance student engagement, motivation, and critical thinking. Findings reveal that both digital and non-digital game formats—such as Kahoot, Quizziz, and collaborative offline games—significantly improve classroom participation and learning retention. However, teachers also encountered barriers and challenges, including technical limitations, classroom management issues, and the absence of clear pedagogical frameworks. The study underscores the importance of aligning gamified activities with learning competencies, promoting inclusivity, and leveraging technology for feedback and assessment. Ultimately, it advocates for policy support, teacher training, and culturally responsive gamification practices to enrich the Philippine education system.

JEL Classification: I21

Introduction

One of the struggles of teachers is enhancing the class participation of the learners in the teaching-learning process. They recognize that incorporating elements of play can significantly boost student engagement and motivation. Integrating educational games into their curriculum, educators aim to create a dynamic atmosphere where students feel more inclined to participate actively in discussions and collaborative activities.

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Gamification improved the creativity and classroom management of elementary students. Students had a positive learning experience, enhanced class participation, and were challenged to think about the unknown (Chen et al., 2020). This only implies that gamified activities create a positive outlook in the teaching-learning process as these promote positive learning, enhance classroom participation, and even boost the critical thinking of students, which is crucial for their development.

Aside from that, to effectively implement game-based activities, the role of technology must be considered. The use of technology plays an important role in implementing and creating game-based learning and gamification units in the classroom (May, Allan, 2021). This study is supported by Zainuddin et al. (2020), who stated that technology is a valuable tool to create a platform for teachers to use, as well as allow them to provide assessment and feedback promptly.

However, despite the positive effects of gamification in the teaching-learning process, there are also challenges that teachers encounter. One of which is the lack of a clear pedagogical framework. Many gamified learning experiences lack alignment with pedagogical theories or learning outcomes (Deterding et al., 2020). With that, there is really a need to consider the pedagogical framework of these gamified activities for them to be aligned with the learning objectives. Furthermore, using game-based instruction is patronized by educators because studies show there is a significant role in the education system, especially in this era. It encourages the learners' involvement to enhance their skills and abilities, which prepares them for the

This research aimed to explore the effective strategies as well as the challenges encountered by teachers in integrating gamification into the teaching-learning process. The outcome of this study will be beneficial to strengthen policy discussions in gamification, teacher training in using gamified activities, and even the educational provisions of gamification in the Philippine education system.

Literature review

The purpose of this related literature is to contextualize the research within the body of existing knowledge and support the necessity of this study. It offers methodological insights, a theoretical foundation, and aids in preventing repetition. It also advances comprehension, strengthens the researcher's credibility, and helps formulate hypotheses.

Theoretical foundations of gamification in education

This study was anchored on B.F. Skinner's (1953) Behaviorist Theory and Lev Vygotsky's (1978) Social Constructivist Theory. Skinner emphasized that learning is shaped by reinforcement; in gamified instruction, elements such as points, badges, and rewards serve as positive reinforcers that condition students to exhibit desired academic behaviors, thereby enhancing retention and motivation. Vygotsky, on the other hand, highlighted the social nature of learning, where knowledge is co-constructed through interaction. Game-based instruction aligns with this view by fostering collaboration, peer scaffolding, and shared problem-solving within the learner's zone of proximal development (ZPD).

In addition to these foundational theories, the study draws on Deci and Ryan's Self-Determination Theory (1985), which posits that learners are most motivated when their needs for autonomy, competence, and relatedness are met. Gamified environments that offer meaningful choices, adaptive challenges, and social interaction support these psychological needs, leading to deeper engagement. Similarly, Csikszentmihalyi's Flow Theory (1990) explains how learners enter a state of optimal experience when tasks are neither too easy nor too difficult. Well-designed gamified tasks—balanced in difficulty and rich in feedback—can help sustain this immersive state.

Howard Gardner's Theory of Multiple Intelligences (1983) also informs this study by recognizing that learners possess diverse cognitive strengths. Gamification, through its multimodal and interactive nature, caters to various intelligences such as linguistic, spatial, kinesthetic, and interpersonal, making learning more inclusive and differentiated. Furthermore, Kapp's (2012) theory of gamified learning emphasizes that game mechanics must be intentionally aligned with instructional goals to promote meaningful learning rather than superficial engagement.

Together, these theories provide a robust framework for understanding how gamification can enhance student motivation, participation, and learning outcomes—especially when designed with pedagogical intentionality, cultural relevance, and learner diversity in mind.

Principles of gamification

Gamification in education refers to the strategic application of game design elements—such as points, levels, badges, and challenges—within learning environments to foster motivation, engagement, and academic achievement. Scholars and educators have identified several core principles that guide effective gamified instruction. Drawing from behavioral psychology and motivational theories, Paľová and Vejačka (2022) emphasize that feedback loops, progression systems, and well-calibrated challenges are essential to sustaining learner interest. These mechanics align with Self-Determination Theory, which highlights autonomy, competence, and relatedness as key motivational drivers. Cassie (TeachThought, 2024) further outlines eight foundational principles of gamified learning: play as a powerful teacher, universal potential for success, reframing failure as iteration, immediate and ongoing feedback, experiential learning, scaffolded challenges, social interaction, and the pursuit of mastery. These principles shift the educational focus from performance outcomes to process-oriented growth, encouraging learners to take risks and persist through difficulty.

In terms of cognitive and emotional engagement, gamification embeds learning in meaningful contexts that stimulate curiosity and exploration. Dr. Serhat Kurt (2023) notes that elements like storytelling, avatars, and quests can transform passive instruction into active, immersive experiences. Emotional engagement is heightened through mechanisms such as competition, collaboration, and personalized rewards, which foster a sense of belonging and achievement. However, designers must be cautious of overstimulation or superficial engagement; effective gamification balances novelty with clarity, ensuring that game elements reinforce rather than distract from learning goals.

Finally, designing gamified educational experiences requires intentional alignment with curriculum standards and learner diversity. Paľová and Vejačka (2022) stress the importance of clear learning

objectives, age-appropriate game elements, adaptive difficulty levels, inclusive and culturally sensitive design, and integration with digital platforms and feedback systems. Gamification should be flexible and responsive, accommodating learners with varied motivational profiles, cognitive styles, and cultural backgrounds. When thoughtfully implemented, these principles can transform classrooms into dynamic spaces for meaningful, joyful, and equitable learning.

Impact of gamification on student engagement

Gamification has garnered significant attention in educational research for its potential to enhance student engagement and motivation. Anderson and Rainie (2014) underscore the motivational benefits of game-based elements, suggesting that such strategies may foster increased participation and interest in learning activities. However, despite these promising claims, Zhao (2020) notes a paucity of empirical evidence linking gamification to measurable improvements in learning outcomes and sustained academic performance. This gap highlights the need for more rigorous, longitudinal studies that move beyond surface-level engagement metrics.

Moreover, the integration of gamification into formal curricula presents a range of practical challenges that remain underexplored. Bai (2021) identifies key barriers such as limited resources, the complexity of instructional design, and the diverse needs of learners. These constraints often hinder educators from fully leveraging gamification's potential, especially in contexts marked by socioeconomic disparities and varied learning profiles. The literature thus calls for a more nuanced understanding of how gamification can be ethically and effectively adapted to diverse educational settings.

Gamification and academic performance

Gamification has emerged as a promising pedagogical strategy to enhance student motivation, engagement, and academic outcomes. Jaramillo-Mediavilla et al. (2024) conducted a systematic review showing that game elements such as points, badges, and leaderboards positively influence learners' intrinsic motivation and performance across disciplines, especially when aligned with clear learning objectives. The integration of Self-Determination Theory and Flow Theory into gamified environments supports deeper engagement and persistence in learning tasks.

However, the impact is not universally positive. Some studies caution that extrinsic rewards may undermine long-term motivation if not carefully balanced with meaningful feedback and autonomy-supportive design.

Technology and platforms for gamified learning

A wide array of platforms has been developed to support gamified learning, each with unique features and pedagogical affordances. Kode (2025) highlights tools like Duolingo (language learning), Classcraft (classroom management), Kahoot (formative assessment), Minecraft Education (creative problem-solving), and ABCmouse (early childhood literacy) as exemplars of gamification in action. These platforms often combine storytelling, challenges, and social interaction to foster engagement.

The choice of platform should consider age appropriateness, curriculum alignment, and accessibility. For instance, Minecraft Education allows for open-ended exploration, while Kahoot supports rapid feedback and competition—each serving different instructional goals.

Challenges and criticisms of gamification

Despite its benefits, gamification faces several challenges. Kabilan et al. (2023) identify issues such as superficial engagement, over-reliance on competition, and the risk of excluding learners who may not respond well to game mechanics. Technical limitations, lack of teacher training, and misalignment with assessment standards also hinder effective implementation.

Moreover, critics argue that gamification can oversimplify complex learning processes, reducing education to point-scoring rather than deep understanding. Ethical concerns arise when gamified systems prioritize performance metrics over holistic development.

Best practices and design considerations

In today's evolving educational landscape, teachers are increasingly engaging in professional development to better understand how to integrate technology and game mechanics into their teaching practices. By doing so, they not only enhance their effectiveness in the classroom but also foster more inclusive and participatory learning environments that cater to diverse learning styles. The shift toward a game-based learning paradigm represents a promising approach to address challenges related to class participation, making learning more enjoyable and impactful for students.

Game-based learning has been broadly defined as the process of acquiring new concepts and skills through the use of digital and non-digital games (Grace, 2019). Research has shown that the application of games in education can foster notable improvements in both learning processes and educational outcomes (Kula, 2021; Syafii, 2021). These interactive platforms not only stimulate engagement but also promote critical thinking and teamwork, both of which are essential skills in contemporary education. Furthermore, game-based environments provide immediate feedback, enabling students to learn from their mistakes in real-time and thereby deepening their understanding of complex concepts. Teachers who adopt these strategies often align game objectives with academic standards to ensure that while students are immersed in play, they also achieve essential learning outcomes.

The growing use of digital curricula has further expanded the potential of game-based learning. Nadolny et al. (2020) describe this environment as one where game content and gameplay enhance knowledge and skills acquisition while engaging learners in problem-solving challenges that provide a sense of achievement. Similarly, Rajan (2022) highlights that game-based learning increases student engagement and performance by enabling them to practice and reinforce subject-specific knowledge through interactive play.

Additionally, games and gamification provide unique perspectives on student learning behaviors. Jutin (2024) notes that while some students excel through competition, others prefer self-improvement by surpassing their previous scores. Observing how learners engage with educational games can reveal their problem-solving approaches, strengths, and struggles, offering valuable insights for teachers. Such findings resonate with Magilvy (2011), who emphasized that gamification cultivates essential 21st-

century skills—communication, critical thinking, collaboration, and creativity—by aligning them with learning competencies to prepare students for real-world challenges.

However, research also underscores the complex and context-dependent nature of gamification in education. Sailer and Homner (2020) found that while the cognitive benefits of gamification remain relatively stable, they are not highly significant, whereas motivational and behavioral impacts tend to vary across contexts. Similarly, Chi-San et al. (2022) observed that competitive gamification often yields greater learning improvement than collaborative approaches, although their findings remain limited to studies published prior to 2019. These results suggest that situational factors such as learners' age, subject matter, and classroom dynamics significantly influence outcomes, highlighting the need for more updated and context-sensitive research.

Further studies have examined the role of specific game elements in shaping learning experiences. Filsecker and Hickey (2014), for instance, focused on rewards as a primary game element and reported negative effects on learning engagement, motivation, and achievement. Similarly, Attali and Arieli-Attali (2015) investigated the use of points as a standalone gamification feature, concluding that they had no significant effect on learning performance or motivation among both young and adult learners. These findings suggest that the effectiveness of gamification does not depend on the presence of individual elements, such as points or rewards, but rather on the meaningful integration of multiple elements within a holistic design.

More recent studies echo this point. Oliveira et al. (2022) argue that gamification must be tailored to students' individual needs, characteristics, and preferences to maximize engagement and learning benefits. Group-based game approaches also reinforce this principle, as they promote critical thinking, collaborative problem-solving, and management skills by engaging students in process-oriented tasks and role-based learning ("Benefits of Group Work," 2022). Similarly, Chans and Castro (2021) affirm that gamification can enhance motivation, engagement, and learning achievement when carefully designed to align with learners' contexts and educational goals.

Moreover, effective gamification requires thoughtful design grounded in pedagogical theory. Kode (2025) recommends integrating narrative elements, scaffolding challenges, and offering meaningful choices to support autonomy and competence. Clear learning goals, inclusive mechanics, and adaptive feedback are essential to ensure that gamification enhances—not distracts from—academic learning. Designers should also consider cultural relevance and learner diversity. For example, incorporating local stories or community-based challenges can make gamified learning more authentic and engaging, especially in multilingual or rural contexts.

Overall, the literature reveals that while gamification holds significant promise for improving motivation, engagement, and the acquisition of critical skills, its success largely depends on intentional design, the thoughtful integration of multiple elements, and sensitivity to learners' diverse needs and learning contexts.

Statement of the problem

This study aimed to examine the strategies and struggles of teachers in integrating gamification into the teaching–learning process. Specifically, it sought to answer the following research questions:

1. What are the effective strategies in integrating gamification into the teaching–learning process?

2. What challenges do teachers face when implementing game-based instruction and gamification?

Research methodology

This chapter presents the research design, sources of data, locale of the study, population and sampling, data-gathering instruments, procedures for data analysis, and ethical considerations observed throughout the study.

Research design

This study employed a descriptive qualitative research design to explore the strategies and struggles of teachers in integrating gamification into the teaching–learning process. This design was deemed appropriate as it allowed for a detailed understanding of teachers' experiences and practices in their natural classroom settings.

Locale of the study

The study was conducted in Hilario Valdez Memorial Elementary School, Brgy. 4 Nalupta, City of Batac, Ilocos Norte, where gamification has been gradually integrated into classroom instruction. The experiences of the 11 elementary teachers of Hilario Valdez Memorial Elementary School. The participants were chosen randomly because they represent diverse teaching contexts in terms of resources, learner population, and access to technology.

Population and sampling

The participants of the study consisted of 11 elementary teachers of Hilario Valdez Memorial Elementary School who had experience in implementing gamification or game-based instruction. A purposive sampling technique was used to identify respondents who could provide meaningful insights into the phenomenon under study. The sample size of 11 teachers allows for an in-depth phenomenological exploration of individual and collective experiences, ensuring a comprehensive analysis of the effectiveness and challenges when implementing game-based instruction.

Data gathering instrument

The study used an online interview, and researcher-made questionnaires were used as the primary data-gathering instruments. The interview guide was designed to elicit in-depth information on teachers' strategies and struggles in implementing gamification, while the questionnaire gathered additional demographic information and contextual details. Both instruments were validated by experts in education and research.

Data gathering procedure

The data were collected through online interview questionnaires administered via Google Forms. This approach ensured accessibility and convenience for participants while adhering to ethical and logistical considerations. The collected qualitative data were subjected to thematic analysis, a method that systematically identifies, analyzes, and reports patterns within textual responses.

The responses provided by elementary teachers were initially reviewed in detail to achieve familiarity with the content. Significant phrases and concepts relating to the strategies and struggles encountered in the implementation of game-based instruction were highlighted and coded. These initial codes were then grouped and organized into overarching themes that encapsulated the participants' experiences.

The emerging themes were subsequently reviewed, refined, and validated to ensure that they accurately represented the data and provided a comprehensive understanding of the effectiveness, challenges, and coping mechanisms in teaching with gamification. This iterative process of coding and theme development facilitated the extraction of meaningful insights, which contributed to the overall phenomenological analysis of the study.

Ethical considerations

The study adhered to ethical research standards. Informed consent was obtained from all participants, and they were assured of the confidentiality and anonymity of their responses. Participants were informed that their involvement was voluntary and that they could withdraw at any stage without penalty. All data were securely stored and used solely for academic purposes.

Results and discussion

This section presents the findings derived from structured interviews with elementary teachers of Hilario Valdez Memorial Elementary School, highlighting their experiences with the effectiveness and challenges of implementing game-based instruction. The data are organized and discussed according to key themes that emerged during the interviews, providing insights into both the strategies employed and the struggles encountered in integrating gamification into the teaching–learning process. These findings are further examined in relation to existing literature on gamification in education, allowing for a deeper understanding of how the present results align with or differ from previous studies.

Problem 1. What are the effective strategies in integrating gamification into the teaching-learning process?

Table 1. Effective strategies in integrating gamification

Themes	Categories	F
Theme 1: Instructional design	Game formats	6
	Mechanics	5
Theme 2: Measures of effectiveness	Quantitative measures	5
	Qualitative measures	3

	Observation engagement	3
Theme 3: Best practices	Alignment with the learning competencies	7
	Simple rules	4

Note. *Data were gathered from open-ended questionnaire responses and follow-up informal interviews with 11 teachers from Hilario Valdez Memorial Elementary School.*

Table 1 presents the **effective strategies in integrating gamification** in educational settings, organized into three major themes: *Instructional Design*, *Measures of Effectiveness*, and *Best Practices*. Each theme includes specific categories and their corresponding frequencies (F), which indicate how often these strategies appeared or were emphasized in the data.

Instructional design, the most common strategies involve *game formats* (F=6) and *mechanics* (F=5), suggesting that careful design of the game structure and its operational rules is essential for successful gamified learning experiences. This theme highlights the types of games or game elements they used in the teaching-learning process. These range from game formats and mechanics of gamification in the teaching-learning process.

"I used game-based instruction with the use of technology offline and online. I often used Kahoot, Quizziz, and Microsoft Powerpoint. My learners were active and very eager to participate in class. " (P5)

"I integrated game mechanics in the lessons I taught which arouse my learners to boost their participation in the teaching-learning process." (P3)

"As a teacher in the elementary, including games or game elements in our lesson is something that we also do because game catch the attention of our learners. Gamification in our lesson like cabbage rely makes our lesson livelier and improve the retention of the lesson to the learners." (P1)

These responses underscore that adding game-like elements like challenges, levels and rewards to lessons can make learners motivate to learn more about the lesson. Academics are very interested in the widespread and quick development of digital games in the field of education (Mayer, 2019). The possibility of using digital games as a tool for learning and teaching or as a method of learning in the field of education has raised interest in research in this area (Whitton, 2010). Due to this interest, there have been an increasing number of studies in the literature on digital game-based learning that are based on games with various features. In fact, digital game-based learning has received a lot of attention in recent years and has established itself as a significant topic of study in the literature (Chen, Zou, Cheng & Xie, 2020; Koparan, 2021).

The next is Measures of Effectiveness, *quantitative measures* (F=5) were slightly more prominent than *qualitative measures* (F=3) and *observation engagement* (F=3), indicating that both numerical data and observed behaviors are used to assess the impact of gamification on learning outcomes. This theme focuses on the experiences of elementary teachers on how the game-based instruction and gamification

improves the learners' performance. Teachers share how this gamification is used to measure the knowledge gained by the learners. These are used in qualitative and qualitative.

"Based on my experience, I incorporate gamification into lesson activities, particularly in the motivation and application parts, because more children are able to retain the lesson." (P6)

"I measure the effectiveness of gamification by observing the students' level of participation and engagement during activities, as well as through their improved scores and performance in assessments."(P4)

These responses underscore game-based instruction, and including gamification in the lessons makes learners more active and improves their retention of the lesson, whether or not technology is used. Game-based instruction is used in the teaching-learning process, and gamification has enhanced teaching methods by facilitating learning, improving participation, and expanding knowledge (Zainuddin et al., 2020).

And finally, the Best Practices highlights *alignment with learning competencies* (F=7) as the most frequently cited category, followed by the use of *simple rules* (F=4). This suggests that effective gamification should not only be engaging but also closely connected to curriculum goals and kept easy to follow. This theme explores specific areas where gamification improves the teaching-learning process. The teacher shared how gamification had an effect with the learners during the teaching-learning process.

""One best practice I recommend is aligning the game mechanics with the learning objectives so that the activity remains meaningful and not just entertaining."(P1)

"I make sure to set clear and simple rules before starting the gamified activity to maintain order, fairness, and inclusivity among students." (P7)

"Proper preparation of materials and flexibility in designing activities are important because not all students respond the same way to gamification." (P9)

Gamification has been recognized as an innovative approach that enhances teaching methods by facilitating learning, improving participation, and expanding knowledge (Zainuddin et al., 2020). Kapp (2012) further defines gamification as "using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems." In line with this, GamifyingEducation.org emphasizes that the use of game mechanics positively influences motivation and learning in both formal and informal educational settings. Although definitions of gamification vary, they commonly overlap and can be synthesized as the integration of game elements and game thinking into activities that are not inherently games. This unified perspective underscores the potential of gamification to transform traditional learning environments into more engaging and motivating experiences.

Overall, the table emphasizes that a balance between thoughtful design, measurable outcomes, and alignment with learning objectives contributes to the effective integration of gamification in education

Problem 2. What challenges do teachers face when implementing game-based instruction and gamification?

Table 2. Challenges in implementing gamification

Themes	Categories	F
Theme 1: Challenges in implementing gamification	Complexity of game preparation	4
	Classroom management	4
	Time constraints	3
Theme 2: Limitations of gamification	External awards	7
	Overemphasis on competition	4
Theme 3: Concerns and ethical considerations	Emotional impacts	6
	Digital divide	5

Note. *Data were gathered from open-ended questionnaire responses and follow-up informal interviews with 11 teachers from Hilario Valdez Memorial Elementary School*

Table 2 presents the **challenges in implementing gamification** in the classroom, as identified by 11 teachers from Hilario Valdez Memorial Elementary School. The data were collected through open-ended questionnaire responses and follow-up informal interviews. The challenges are grouped into three main themes: *Challenges in Implementation*, *Limitations of Gamification*, and *Concerns and Ethical Considerations*.

Challenges in implementing gamification, the most common issues include the *complexity of game preparation* (F=4) and *classroom management* (F=4), followed by *time constraints* (F=3). These findings suggest that while teachers recognize the potential of gamification, practical barriers—such as planning effort, maintaining order, and managing time—make implementation difficult. This theme emphasizes the challenges faced by teachers in implementing gamification in the teaching-learning process. There is always a con of implementing gamification from the technical difficulties, classroom management, time constraints and complexity of game preparation.

"One of the primary challenges in implementing gamification within the teaching–learning process is the limited availability of resources and materials, particularly in public school settings." (P2)

"The integration of game-based learning requires substantial preparation time and often consumes a significant portion of instructional time during its implementation." (P4)

"Some learners were unmanageable on the reactions when implementing the game-based learning in the lesson." (P9)

The integration of game-based learning in classrooms involves the use of various technological tools to enhance teaching and learning. However, May (2021) emphasizes that many teachers feel inadequately prepared for this task, leading them to avoid the use of such tools and instead rely on traditional instructional approaches. This challenge is consistent with the findings of Smerdon et al. (2000), who identified the lack of computers at school or at home, as well as limited access to other forms of technology, as significant barriers to technology-driven instruction. While providing teachers with the necessary technological resources can help mitigate these issues, disparities in access and the evolving nature of educational technology continue to present obstacles in fully implementing game-based learning.

Another idea is **Limitations of gamification** highlights *external awards* (F=7) as the most frequently mentioned concern, indicating that excessive reliance on tangible rewards may overshadow intrinsic motivation. *Overemphasis on competition* (F=4) also emerged as a limitation, suggesting that competitive elements might negatively affect collaboration among students. This theme presents the limitation of gamification in the teaching-learning process. This included the external awards, overemphasis on competition, and risk of superficial learning.

"I saw their effort to participate in class, but their competitiveness with their classmates is more dominant. They no longer pay attention to the lesson." (P8)

"Some learners were focused on the rewards, not on the lesson they can get from that activity." (P3)

"Sometimes external rewards can distract students from the real purpose of learning. There are also cases when the overemphasis on competition causes stress among learners. Because of this, some students only focus on winning the game, which can lead to superficial learning instead of deeper understanding."(P5)

The statements of teachers were supported by the study of Yildirim (2017), the study states that some learners lose their focus on the true essence of integrating game-based instruction because they are more focused on the competition. Competition may just act oppositely to what is originally expected because students may lose motivation to actually learn the material when they are so focused on winning. Losing in a game can perhaps not trigger motivation to learn and repeat the levels, and only serve to lower self-esteem.

The last topic is **Concerns and ethical considerations,** includes *emotional impacts* (F=6) and the *digital divide* (F=5), reflecting teachers' awareness of potential negative feelings from losing or exclusion, as well as unequal access to technology. This theme underscores the concerns and ethical considerations of implementing gamification in the teaching-learning process. This ranges from emotional impacts to the digital divide.

“I observed that while some learners are motivated by games, others become anxious because they don’t want to make mistakes in front of their classmates." (P2)

"Gamification can sometimes cause frustration among learners who struggle to keep up, making them feel left out of the activity." (P11)

"Some learners are at a disadvantage because they don’t have the same level of access to technology as their classmates, which affects their performance in gamified tasks." (P10)

"The lack of reliable internet connection in some areas is a challenge, especially when gamification requires online platforms."(P3)

The findings reveal that while gamification can enhance engagement, it also raises ethical concerns and equity issues that must be addressed for its effective implementation. Learners’ varied emotional responses—ranging from increased motivation to anxiety and frustration—underscore the need for sensitive instructional design that minimizes competition-induced stress (Deterding et al., 2011; Mekler et al., 2017). Moreover, the digital divide emerges as a critical factor influencing the success of gamified instruction. Limited access to devices, unequal technological competencies, and unreliable internet connectivity can exacerbate educational inequalities, as also emphasized by Zainuddin et al. (2020) and Koivisto & Hamari (2019). These insights suggest that gamification, while promising, must be approached with a strong ethical framework that prioritizes inclusivity, accessibility, and learner well-being.

Overall, the table illustrates that while gamification offers engaging learning opportunities, teachers face notable practical, motivational, and ethical challenges that must be addressed to ensure equitable and effective implementation.

Conclusion

This study affirms that when gamification is thoughtfully and ethically woven into the teaching–learning process, it can become a powerful catalyst for student engagement, motivation, and retention—especially among elementary learners. Drawing from the lived experiences of 11 dedicated educators at Hilario Valdez Memorial Elementary School, the research paints a vivid picture of how game mechanics, when aligned with learning competencies and supported by simple rules, can transform classrooms into inclusive, participatory spaces. Whether through digital platforms or low-tech alternatives, these strategies helped foster joyful learning environments that honored diverse learner needs.

Yet, the journey was not without its hurdles. Teachers grappled with the time-consuming nature of preparing game-based materials, managing classroom dynamics, and balancing instructional time. Emotional strain, the risk of overemphasizing competition, and unequal access to digital tools added layers of complexity. Most critically, the absence of a guiding pedagogical framework made it difficult to sustain and scale gamified instruction with coherence. These insights call for intentional design, robust

professional development, and supportive policies to ensure gamification uplifts learners equitably and meaningfully—not merely as entertainment, but as a tool for deep learning.

However, the study's scope was limited. Conducted in a single school with a small sample size, its findings may not be broadly generalizable. It relied primarily on qualitative data, lacking longitudinal or comparative metrics to assess long-term academic outcomes. Moreover, platform-specific insights (e.g., Kahoot, Quizziz) may not capture the full range of gamification tools, and the study did not explore variations across subjects, learner profiles, or grade levels.

To build on this foundation, future research should expand to include diverse schools, regions, and learner demographics across the Philippines. Mixed-methods and longitudinal designs could offer richer insights into sustained academic and behavioral impacts. There is also a pressing need to explore gamification's role in inclusive education—particularly for learners with disabilities and those navigating multilingual or low-resource contexts. Co-developing pedagogical frameworks with educators and examining the role of teacher training and support systems will be essential in shaping gamified instruction that is ethical, competency-based, and aligned with national curriculum standards.

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