

Implementation of Game-Based Learning Applications in English Instruction of Filipino Teachers in Nonthaburi, Thailand: Basis for an Integration Framework

Fariz M. Dela Cruz^{1*}, Krigher C. Simbulan, PhD^{1,2}, Regina F. Santos, EdD^{1,3}

¹ Pangasinan State University

*farizdcruz24@gmail.com,² ksimbulan_ms@psu.edu.ph,³ rfrondasantos1978@gmail.com

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ABSTRACT

Game-based learning (GBL) has gained significant attention recently as an innovative approach to education, offering engaging and interactive experiences that enhance student motivation and learning outcomes. This study evaluated the implementation of Game-Based Learning (GBL) applications in English instruction among Filipino teachers in Nonthaburi, Thailand, with the goal of proposing a GBL integration framework. Specifically, it examined the respondents' profile, the perceived level of implementation and effectiveness of GBL applications, the seriousness of challenges encountered, the relationship between implementation and profile variables, the relationship between effectiveness and profile variables, and the proposed GBL integration framework. The study used a descriptive-correlational research design. A survey questionnaire was employed to gather data from 109 respondents, which were analyzed using frequency counts, percentages, mean, and standard deviation. Findings showed that most respondents were young to middle-aged, early-career Filipino teachers, with 80% having 1–3 years of teaching experience and most holding bachelor's degrees. They regularly utilized common GBL applications despite limited formal training. The perceived level of implementation was rated highly implemented, with strong emphasis on instructional planning and lesson design, while assessment and feedback practices received relatively less focus. The perceived level of effectiveness was rated highly effective, with Learning Engagement and Interaction rated highest, while Learning Outcomes, Skill Development, and Classroom Facilitation and Management were rated lowest. Challenges were considered highly serious, particularly internet connectivity, device availability, and limited training. Age, teaching experience, and frequency of GBL use were significantly related to implementation, while educational attainment and frequency of GBL use were associated with effectiveness. The study concluded that a context-based GBL Integration Framework is necessary and feasible for Filipino English teachers in Thailand.

relationship between effectiveness and profile variables, and the proposed GBL integration framework. The study used a descriptive-correlational research design. A survey questionnaire was employed to gather data from 109 respondents, which were analyzed using frequency counts, percentages, mean, and standard deviation. Findings showed that most respondents were young to middle-aged, early-career Filipino teachers, with 80% having 1–3 years of teaching experience and most holding bachelor's degrees. They regularly utilized common GBL applications despite limited formal training. The perceived level of implementation was rated highly implemented, with strong emphasis on instructional planning and lesson design, while assessment and feedback practices received relatively less focus. The perceived level of effectiveness was rated highly effective, with Learning Engagement and Interaction rated highest, while Learning Outcomes, Skill Development, and Classroom Facilitation and Management were rated lowest. Challenges were considered highly serious, particularly internet connectivity, device availability, and limited training. Age, teaching experience, and frequency of GBL use were significantly related to implementation, while educational attainment and frequency of GBL use were associated with effectiveness. The study concluded that a context-based GBL Integration Framework is necessary and feasible for Filipino English teachers in Thailand.

Keywords: *Organizational Development, Local Government Units, Training and Development, Strategic Alignment, Competency-Based Capacity, Camarines Sur, Institutionalization, Training Transfer Gap*

INTRODUCTION

Today's student generations differ significantly from those of previous decades. Therefore, developing the skill sets required to create holistic learners is impossible using some out-of-date teaching approaches. Hence, teachers integrate digital tools in education to enhance students' engagement and improve learning outcomes.

Among these digital tools, game-based learning (GBL) has gained significant attention recently as an innovative approach to education, offering engaging and interactive experiences that enhance student motivation and learning outcomes (Tarigan et al., 2023).

GBL applications such as Kahoot, Quizlet, and Blooket offer new possibilities. These tools make learning enjoyable and create interactive opportunities for students to practice vocabulary, grammar, and communication skills in a way that feels less intimidating than conventional drills. However, despite the growing popularity of these apps, there is still little evidence of how effective they truly are when applied by Filipino teachers in Thai classrooms.

Gamification can be considered a subset of applied behavioral psychology because of its deep emphasis on motivation, feedback, progress, and reward, and it is an integral part of any game, not necessarily digital (Walter, 2020). In educational environments, "meaningful gamification" is a learner-centered approach that incorporates elements of game design to develop learners' intrinsic motivation (Nicholson, 2023).

Gamification is profound in applying game-like features to non-game stuff in order to build motivation and engagement. It is often comprised of building blocks like points, badges, levels, challenges, leaderboards, rewards, and so on. Simply put, it captures what is exciting about games and incorporates these elements into everyday activities or study (Deterding et al., 2024).

According to the latest EF English Proficiency Index (EF EPI) released by the Programme for International Student Assessment (PISA) in 2022, Thailand was 101st out of 113 non-native English-speaking countries worldwide with a score of just 416 and thus falls into the "Very Low Proficiency" category (the global average is 502). In Asia, Thailand ranked second to last in Asia when it comes to four assessed skills—reading, listening, speaking, and writing which is based on test results by the 2025 EF English Proficiency Index (Siradakul, 2025).

Hence, it is a huge challenge for the schools in Thailand to revamp their English language curricula and teacher training programs to move the country out of the 'very low proficiency' band. This urgent need for an innovative pedagogical approach, particularly one that increases student engagement and practical skill application, has spurred an emerging trend in the region, which is the implementation of GBL applications in English instruction.

Despite the growing body of research on GBL in Thailand, several gaps remain at the local, national, and international levels. Most existing Thai-based studies only focus on Thai teachers who are teaching English with limited attention given to foreign educators, particularly Filipino teachers. There is a lack of empirical studies that investigate how Filipino teachers implement GBL applications in English instruction. In addition, local studies in Thailand often emphasize student achievement outcomes or learner perceptions, while teachers' perceptions of implementation, effectiveness, and challenges remain underexplored.

Moreover, there is also limited research linking teachers' socio-demographic profiles with both the level of GBL implementation and perceived effectiveness. It indicated a need for studies in which Filipino teachers remain the primary respondents and explore their professional practices beyond Philippine borders.

Meanwhile, in an international context, most studies are concentrated in Western, East Asian, and Middle Eastern countries, such as the United States, China, Saudi Arabia, and Europe. Therefore, these studies often focus on single GBL platforms, short-term interventions, or student-centered outcomes which results to limited insight into long-term instructional integration.

Additionally, few studies attempt to develop a context-specific GBL integration framework grounded in empirical findings which creates a gap in translating international GBL research into practical and adaptable instructional frameworks suitable for diverse educational settings, especially from the teachers' perspectives.

Thus, this study aimed to evaluate the implementation of game-based learning applications in English instruction among Thai secondary students, focusing on both effectiveness and challenges as perceived by Filipino EFL teachers. By addressing these gaps, the study intended to offer feedback on how game-based applications can be effectively integrated into English classrooms, guide teachers in enhancing instructional delivery, and inform schools and policymakers about the potential of GBL to improve both teaching and learning outcomes in the Thai educational context as the basis for developing an integration framework.

English is essential in many fields such as business, education, science and technology in Thailand. For those who want to leave a good future for their children the English proficiency must be high, because this is indeed the way that we influence living. However, despite learning English for at least 12 years, Thai learners' English has been a significant concern with the 2025 EF English Proficiency Index ranking 116th out of 123 countries and placing it in "Very Low Proficiency" category (Siradakul, 2025).

The main objective of the study was to assess the implementation and effectiveness of the Game-Based Learning (GBL) Applications in the English Instruction of Filipino Teachers in Nonthaburi, Thailand, as the Basis for an Integration Framework.

LITERATURE REVIEW

Game-Based Learning Applications

Following the evidence from recent research on students' perceptions of game-based learning platforms based on digital technologies in tertiary education, Kahoot! is already the most widely used of the digital learning platforms. The results of the meta-analysis showed that with the help of Kahoot! Digital learning services, there were much better retention rates, student motivation was revitalized, and academic achievements and attitudes toward learning improved greatly. A reduction in anxiety (albeit slight) also made lessons more interesting and interactive (Ozdemir, 2024).

Alfares (2025) explored of how digital GBL exercises can support English vocabulary learning. The study found that students using Wordwall significantly improved their vocabulary scores compared to traditional methods, demonstrating that interactive exercises can actively engage learners and strengthen language skills.

Chau & Nguyen (2025) investigated students' experiences of using Blooket in EFL classrooms. Findings revealed that Blooket increased motivation and participation, though its effectiveness in reinforcing knowledge varied, and integrating it with conventional teaching methods was recommended for optimal learning outcomes.

Slattery et al. (2025) analyzed the educational benefits of Minecraft for children, adolescents, and young adults. Findings indicated that using Minecraft can improve academic performance, cognitive skills, and creativity and boost critical thinking, which indicates that it has a positive impact on social interaction. Furthermore, the evidence suggests it also enhances motivation and involvement.

Kahoot! in EFL Classrooms (Tao & Zou, 2023) examined students' perceptions of gamified learning in university English courses. The results showed that Kahoot! boosted engagement, classroom interaction, learning effectiveness, and student participation which highlighted its usefulness for making lessons more dynamic and motivating.

Wang & Tahir (2020) made a comprehensive literature review consisting of 93 studies, which revealed that Kahoot! can have a positive impact on various aspects of education, including learning performance, classroom dynamics, students' and teachers' attitudes, and the reduction of student anxiety.

Implementation of Game-Based Learning Applications

Implementing Game-Based Learning (GBL) into instructional planning requires a shift from traditional lecturing to a more interactive, feedback-driven design. The teacher clarifies the rules and connects the game to the lesson's goals (Chulalongkorn University, 2023). Students engage with the material through trial and error in a safe environment where they can fail without negative consequences (Hu, 2024). A critical instructional phase where the teacher and students discuss the gameplay experience to solidify the "knowledge transfer" (Chulalongkorn University, 2023; Hu, 2024). Plass et al. (2016) designed a GBL Instructional Design Model which emphasized the deliberate integration of cognitive, motivational, and emotional design principles to maximize the learning potential of the game.

Clark et al. (2016) emphasized the overall effectiveness of GBL applications, which provide critical insights into the conditions under which GBL works best. It discussed that GBL tends to be most effective when it is integrated thoughtfully with non-game instructional methods and when it is followed by teacher-led debriefing. Furthermore, they emphasized that learning improves when games are used as part of a structured lesson rather than when students simply play games without guided discussion or instructional support.

Wu et al. (2025) highlighted the particular competencies necessary for GBL educators, encompassing technological, pedagogical, and content knowledge (TPACK) pertinent to digital games. Further, they revealed significant challenges like technological issues and inadequate training in implementing GBL applications.

Burgos et al. (2025) stressed rapid feedback is motivating as a game element which can sometimes encourage surface learning or "try-and-error" strategies rather than deep reflections. They further noted that this technique can provide appropriate and context-dependent feedback in learning.

Game features in GBL applications must be implemented thoroughly, as external rewards can sometimes negatively affect the student's intrinsic motivation or lead them to choose easier tasks (Touati & Baek, 2023). They further indicated that game features can influence engagement, motivation, and self-regulation. The need for a well-designed platform can enhance engagement, while instructional approaches can also give learners a sense of agency and control. These can further support sustained participation and deeper learning (Liu et al., 2021).

Effectiveness of Game-Based Learning Applications

Eurokd (2025) developed a GBLE for primary students which is guided by Communicative Language Teaching and the Game-Based Learning Design model. The study found that GBL is highly dependent on students' basic language skills and highlights the need to strengthen prerequisite skills through proper design.

The use of games as supplementary instructional material was highly recommended, which implies a successful integration into the lesson structure. Hence, it can show a significantly high level of effectiveness of GBL in improving the English proficiency of ESL students (Rajasthali, 2022).

RSIS International (2025) confirmed that GBL is an effective instrument for fostering student engagement and retention by presenting vocabulary words in a fun and interactive way. In view of this, the competitive and cooperative elements of group games are crucial for increasing student enthusiasm and participation.

With the interactive nature and use of multimedia elements such as visuals and sounds in the GBL applications, it should cater to Gen Z's preference for digital and interactive learning that can lead to increased willingness to communicate and practice language skills (Henriques & Oliveria, 2024).

Another piece of literature suggested that students progressed from “developing proficient” to “proficient” in English grammar after GBL implementation. Aratea & Pasubillo (2024) stressed that GBL is effective when it provides real-life practice of grammar rules in enhancing the students’ understanding and retention of grammatical structures.

Games retain students’ interest and develop their commitment because the activities are fun, which helps students remain positive even if they are unsuccessful (Taub et al., 2017). Students may not achieve their final desired objective immediately, but since they can identify the progress they have made in the game, they are encouraged to try again in an attempt to improve their performance.

In cooperative learning, group members work towards the same goal, and inter act with their peers. In this way, the participation of all students is encouraged because they must assume responsibilities, talk, help each other, share tasks, and work together. This fosters students’ interdependence because when one student is successful, this has repercussions for the whole group, communication and leadership are improved, and everyone benefits. Active student participation is promoted; they work in small groups, help each other, and have a better understanding of the content of the courses (Blondeel et al., 2021).

Teachers’ preparation and acceptance of ICT integration are correlated significantly with their ICT integration practices. It implies that continuous professional development is needed to address specific technological and pedagogical needs that are essential (Nueva, 2019).

In addition, the perceived ease of use of technology and attitude towards using learning management systems among teachers has a significant positive-moderate correlation (Alharbi & Drew, 2014). Meanwhile, Tinambunan (2023) underscored that students want to use GBL applications to practice language skills, such as vocabulary and grammar. Hence, it can guide teachers’ utilization in emphasizing that technology use should be needs-driven and align with student deficits.

Teachers must manage the balance where the game's high engagement level does not devolve into distraction or circumventing the learning objective (Bui et al., 2020). The teacher's role is critical in strengthening weaknesses that games may pose (Nugraha, 2021).

Furthermore, general classroom management challenges remain highly common, such as behavior management, instructional management, and student engagement (Alajmi, 2020). The GBL environment requires teachers to integrate digital tools in behavior and instruction management and adopt innovative, student-centered approaches responsive to the new learning setting.

In this sense, by using playful and enjoyable activities, motivating, meaningful, and non-conventional environments, commitment, interest, and participation are promoted. In addition, individual, cooperative, and collaborative skills are strengthened (Hitchens & Tulloch, 2018). Marklund & Taylor (2016) discussed how the ability of teachers to manage GBL effectively is linked to professional competence and the availability of professional development programs focused on modern classroom management techniques.

Challenges in the Implementation of Game-Based Learning Applications

Although gamification represents new opportunities in education, including language teaching and learning, it also poses challenges to teachers. Teachers must decide whether to implement gamification or not in the view of expected challenges (Sánchez-Mena et al., 2017). While the benefits of GBL are well-documented, the literature also points to several challenges in its implementation. Brown (2019) stressed that the effectiveness of GBL depends heavily on the design of the game and its alignment with educational objectives. Games that are not well integrated into the curriculum or that lack clear learning goals may fail to produce the desired outcomes. Similarly, Hakim & Saputra (2023) recommended that educators need to carefully consider the cultural and contextual factors that may influence the effectiveness of GBL in different educational settings. Ensuring these games are culturally relevant and accessible to all students is crucial for maximizing the impact of GBL on grammar learning.

Reported problems might include issues with game complexity (Lomas et al., 2017), technological unreliability (Marklund & Taylor, 2016) or instabilities and imbalances. GBL might be laborious for students and the time the game needs to be played for meaningful effects to occur can be highly variable and unpredictable. Putting the GBL approach into practice can be extremely challenging and expensive because it frequently calls for customizing a freely available game to meet the needs of the specific course and making additional investments in the right equipment (Al-Azawi et al., 2016).

The implementation of GBL in educational contexts faces several barriers that hinder its effectiveness. Yaman et al. (2024) identified four main types of barriers: (1) behavioral and attitudinal, (2) school policy, (3) material and technological, and (4) game literacy barriers. These challenges include teachers' negative perceptions, limited access to suitable games or technology, restrictive school policies, and insufficient knowledge or skills to integrate GBL effectively.

One significant challenge is the lack of proper training among pre-service and in-service teachers in effectively integrating technology, including digital game-based learning (DGBL), into their language teaching practices (Dashtestani, 2022). Research has shown that many teachers lack the necessary pedagogical knowledge and skills to effectively incorporate technology into their instruction, resulting in underutilization or ineffective implementation of DGBL in language classrooms (Hubbard & Levy, 2016).

Students typically encounter unfavourable effects when teachers face challenges. Educators frequently lack the time and resources necessary to put in extra effort to find, study, and instruct educational games (Jääskä & Aaltonen, 2022). According to Molin (2017), there are several obstacles to implementing and embracing GBL, including instructors' lack of availability to plan gameplay periods (Jääskä, 2023), their lack of technical proficiency, their sense of alienation (Steiler-Hunt & Jones, 2017), and their inability to select and include appropriate games. While most teachers are aware of their necessity and efficacy, they do not have the skills and knowledge needed to implement them in the classroom (Lindgren, 2018).

Demirbilek et al. (2022) stated that it was evident that technical difficulties and issues with digital games were identified as significant barriers to adopting gamification in English as a Foreign Language (EFL) teaching. These challenges include problems with technology, internet access, and concerns about screen time and game addiction. Additionally, teachers reported difficulties such as irregularities, objections, and challenges during games, the creation of a negative competitive environment, extended game durations, and noisy classroom settings as obstacles to effective gamification implementation.

Teachers could want to use GBL, but they don't because they don't have enough time, training, or gaming resources, or they think it doesn't fit with the goals of the curriculum (Amaewhule et al., 2021). In India, Singh & Jha (2020) found that limited technological resources and inconsistent internet connectivity were significant barriers to the effective use of gamification in English language teaching. The digital divide between urban and rural areas also exacerbates these challenges, limiting students' access to this approach tools.

Students face challenges related to technical issues, such as unreliable internet connections, difficulty reading questions and answers on a projected screen, inability to change answers after submission, time pressure for answering questions, insufficient time to respond, fear of losing, and difficulties catching up if an incorrect answer has been given. Teachers also encounter challenges, including setting the appropriate difficulty level of questions and answers, network connectivity problems, scoring methods that encourage quick answers at the expense of thoughtful reflection, some students guessing without careful consideration, students struggling with the experience of failing a quiz, and some teachers finding it challenging to effectively implement the technology (Wang & Tahir, 2021).

METHODS

Research Design

The present study utilized a quantitative method of research, emphasizing the descriptive-correlational design as the primary approach. It aimed to determine the relationship between teachers' demographic profiles, their frequency of using game-based learning (GBL) applications, their perceived level of implementation of GBL applications, and their perceived level of effectiveness in English instruction.

As stated by Barooah (2025), the descriptive-correlational design is appropriate for studies that aim to uncover relationships between variables without manipulating them. In addition, the researchers can observe and analyze how two or more characteristics interact in their natural settings.

Research Locale

The study was conducted in Nonthaburi, Thailand. It was chosen as the research site because it is home to several schools that employ Filipino teachers in English programs at both public and private institutions. These schools provided a multicultural learning environment where game-based learning applications are increasingly being integrated into English instruction. This setting allowed the researcher to explore how Filipino teachers implement such applications to enhance student engagement and language learning outcomes.

Participants of the Study

The respondents of this study were randomly selected from the total population of 197 Filipino teachers currently teaching in Nonthaburi, Thailand, of which only 109 participated in the study. These teachers represented various schools and years of teaching experience which provided a diverse perspective use of GBL applications in English instruction. These teachers were employees of the Ramkhamhaeng Institute of Languages, which serves 36 องค์การบริหารส่วนจังหวัด (อบจ.) or OBJ schools, administered by the provincial government, and six (6) SOPOTO schools, which operate under non-government administration.

Sampling Technique

The study used purposive sampling to identify participants who are actively teaching English and have experience with game-based learning (GBL) applications. A key selection criterion is that each respondent must have used or be currently using at least three (3) different GBL applications.

Purposive sampling ensured that the participants can provide relevant and meaningful information, as their insights and experiences are valuable for understanding how GBL is applied and sustained in actual classroom settings.

Research Instrument

The researcher used a researcher-made questionnaire as the primary instrument to collect data. This questionnaire was carefully developed based on an extensive review of literature, related studies, and sample questionnaires to ensure that it is relevant and comprehensive. The instrument was designed to gather information on how Filipino teachers in Nonthaburi, Thailand integrate GBL applications in their English instruction, as well as to identify the benefits, challenges, perceived implementation, and perceived effectiveness of these tools in enhancing student engagement, learning outcomes, and instructional delivery.

To ensure its validity and reliability, the initial draft of the questionnaire was reviewed and refined with the guidance of experts and research associates. Five (5) experts with experience in education and research validation examined the instrument for content accuracy, clarity, format, and structure. The internal

consistency of the questionnaire was measured using Cronbach's alpha, with an acceptable coefficient set at 0.95, indicating a high level of reliability.

The research questionnaire was divided into four (4) parts. Part I contained the Socio-Demographic Profile which collects information about the respondents, including age, gender, marital status, highest educational attainment, years of teaching experience in Thailand, game-based learning (GBL) applications used, frequency of use, and attendance in related seminars or training.

Meanwhile, Part II assessed teachers' perceived level of implementation of GBL applications in English instruction in terms of instructional planning and lesson design, integration and delivery of GBL, digital tools and teacher competence, assessment and feedback practices, and learning engagement and support systems. Respondents indicate their level of implementation using a 5-point Likert scale (1 – Never, 5 – Always).

In addition, Part III evaluated teachers' perceived level of effectiveness of implementing GBL applications in terms of instructional design and delivery, learning engagement and interaction, learning outcomes and skill development, technology integration and utilization, and classroom facilitation and management. A 5-point Likert scale is used (1 – Not Effective, 5 – Very Effective).

Furthermore, Part IV explored difficulties teachers face, including technological issues, time constraints, classroom management, and student participation. Respondents indicate the extent of these challenges on a 5-point Likert scale (1 – Strongly Disagree, 5 – Strongly Agree). This structured approach ensured that the data collected is comprehensive and suitable for statistical analysis.

Data Gathering Procedure

The researcher followed several steps to collect the data. First, the researcher identified Filipino teachers in Nonthaburi, Thailand, who were teaching English and could provide insights about GBL. Next, the researcher prepared the research instrument and explained its purpose to the participants. The respondents were asked to answer the questions honestly based on their experiences. After all the collected responses, the researcher organized and prepared the data for analysis while ensuring the confidentiality of the participants.

The researcher followed a systematic procedure to collect data for this study. Before conducting the survey, permission was sought from the school authorities and the participants were informed about the purpose and scope of the research. The study adhered to the guidelines outlined in the Handbook of the National Policy on Ethics Oversight and the Ethical Guidelines for Research Involving Humans (คู่มือนโยบายแห่งชาติว่าด้วยการกำกับดูแลด้านจริยธรรมและแนวทางจริยธรรมสำหรับการวิจัยที่เกี่ยวข้องกับมนุษย์, March 2025).

Furthermore, the researcher sought permission from five (5) experts to validate the reliability and credibility of the survey questionnaire. The instrument underwent internal validation prior to its administration to ensure clarity, accuracy, and appropriateness of the items.

After validation, the researcher utilized the survey questionnaire to collect data from Filipino teachers in Nonthaburi, Thailand, in order to assess the implementation of GBL applications in English instruction.

A letter of consent was sent to the project director to formally request approval and inform the institution about the conduct of the study. Upon approval, the survey questionnaire prepared was distributed online by the researcher. Respondents were assured that their responses would be treated with strict confidentiality and that the results would be used for research and professional development purposes. It should be noted that the data collection started upon receiving the statistical clearance. After the retrieval of the questionnaire after two (2) months since the distribution, the researcher tabulated and an accredited statistician of Pangasinan State University-OUS processed the data for the statistical analysis.

Additionally, the ethical standards were followed throughout the research project. To avoid plagiarism, the researcher examined the authors' ideas and concepts and respected their rights by correctly

citing them. Once the study is completed and the results were in, the researcher deleted the data the researcher had collected from their end.

Statistical Treatment of Data

The data collected from the research-made questionnaire were organized, tabulated, and analyzed using descriptive statistics. Specifically, it was computed and analyzed using Statistical Packages for Social Sciences (SPSS) application, a statistical software program that was used to run and analyze the data confidently. Thus, the data were analyzed using standard deviation and mean as statistical tools to interpret the respondents' answers.

Frequency counts and percentages were used to summarize the socio-demographic profiles of the respondents. Mean scores was computed to determine the perceived level of implementation and perceived level of effectiveness of GBL applications and the extent of challenges experienced by teachers. The findings were presented in tables to make the information clear and easy to understand.

For sub-problem no. 1

To determine the profile of the respondents (age, gender, marital status, highest educational attainment, number of teaching years in Thailand, GBL applications utilized, frequency of integration of game-based learning applications, and number of seminars or training attended related to GBL), frequency counts and percentage distribution were employed in the study.

For sub-problem no. 2

To determine the respondents' perceived level of implementation of GBL applications in the English instruction, data was analyzed and interpreted using frequency counts and Weighted Mean through SPSS with the following mean scale range and descriptive ratings.

The computed mean will be interpreted using the Likert scale below.

Internal range and corresponding equivalence for perceived level of implementation of GBL applications

This table presents the scale used to interpret the weighted mean scores of the respondents. The range of means corresponds to qualitative indicators describing the level of agreement or extent of the variable measured, from never to always.

Numerical Rating	Mean Scale Range	Descriptive Rating	Interpretation
5	4.51 – 5.00	Always	Very high extent
4	3.51 – 4.50	Often	High extent
3	2.51 – 3.50	Moderate	Moderate extent
2	1.51 – 2.50	Seldom	Low extent
1	1.00 – 1.50	Never	Very low extent

For sub-problem no. 3

To determine the respondents' perceived level of effectiveness of GBL applications in the English instruction, data were analyzed and interpreted using frequency counts and Weighted Mean through SPSS with the following mean scale range and descriptive ratings.

The computed mean will be interpreted using the Likert scale below.

Internal range and corresponding equivalence for perceived level of effectiveness of GBL applications

This table presents the scale used to interpret the weighted mean scores of the respondents. The range of means corresponds to qualitative indicators describing the level of agreement or extent of the variable measured, from Very Low to Very High.

Numerical Rating	Mean Scale Range	Descriptive Rating	Interpretation
5	4.51 – 5.00	Very effective	Very high
4	3.51 – 4.50	Effective	High
3	2.51 – 3.50	Moderately effective	Moderate
2	1.51 – 2.50	Slightly effective	Low
1	1.00 – 1.50	Not effective	Very low

For sub-problem no. 4

To determine the perceived level of seriousness of the challenges being encountered by the respondents in implementing GBL applications in the English instruction, data were analyzed and interpreted using frequency counts and Weighted Mean through SPSS with the following mean scale range and descriptive ratings.

The computed mean will be interpreted using the Likert scale below.

Internal range and corresponding equivalence for perceived level of seriousness of challenges encountered

This table presents the scale used to interpret the weighted mean scores of the respondents. The range of means corresponds to qualitative indicators describing the level of challenges encountered or extent of the variable measured, from Strongly Agree to Strongly Disagree.

Numerical Rating	Mean Scale Range	Descriptive Rating	Interpretation
5	4.51 – 5.00	Strongly Agree	Very Highly Serious (VHS)
4	3.51 – 4.50	Agree	Highly Serious (HS)
3	2.51 – 3.50	Neutral	Moderately Serious (MS)
2	1.51 – 2.50	Disagree	Somewhat Serious (SS)
1	1.00 – 1.50	Strongly Disagree	Not Serious (NS)

For sub-problem no. 5

To determine the significant relationship between the level of implementation of GBL applications in English instruction of Filipino teachers and their profile variables, data were analyzed using Multivariate Analysis of Variance through SPSS.

For sub-problem no. 6

To determine the significant relationship between the level of effectiveness in the implementation of GBL applications in English instruction of Filipino teachers and their profile variables, data were analyzed using Pearson correlation for age, marital status, and years of teaching, Spearman rank correlation for educational attainment, and frequency of GBL use, and Point-Biserial correlation for gender.

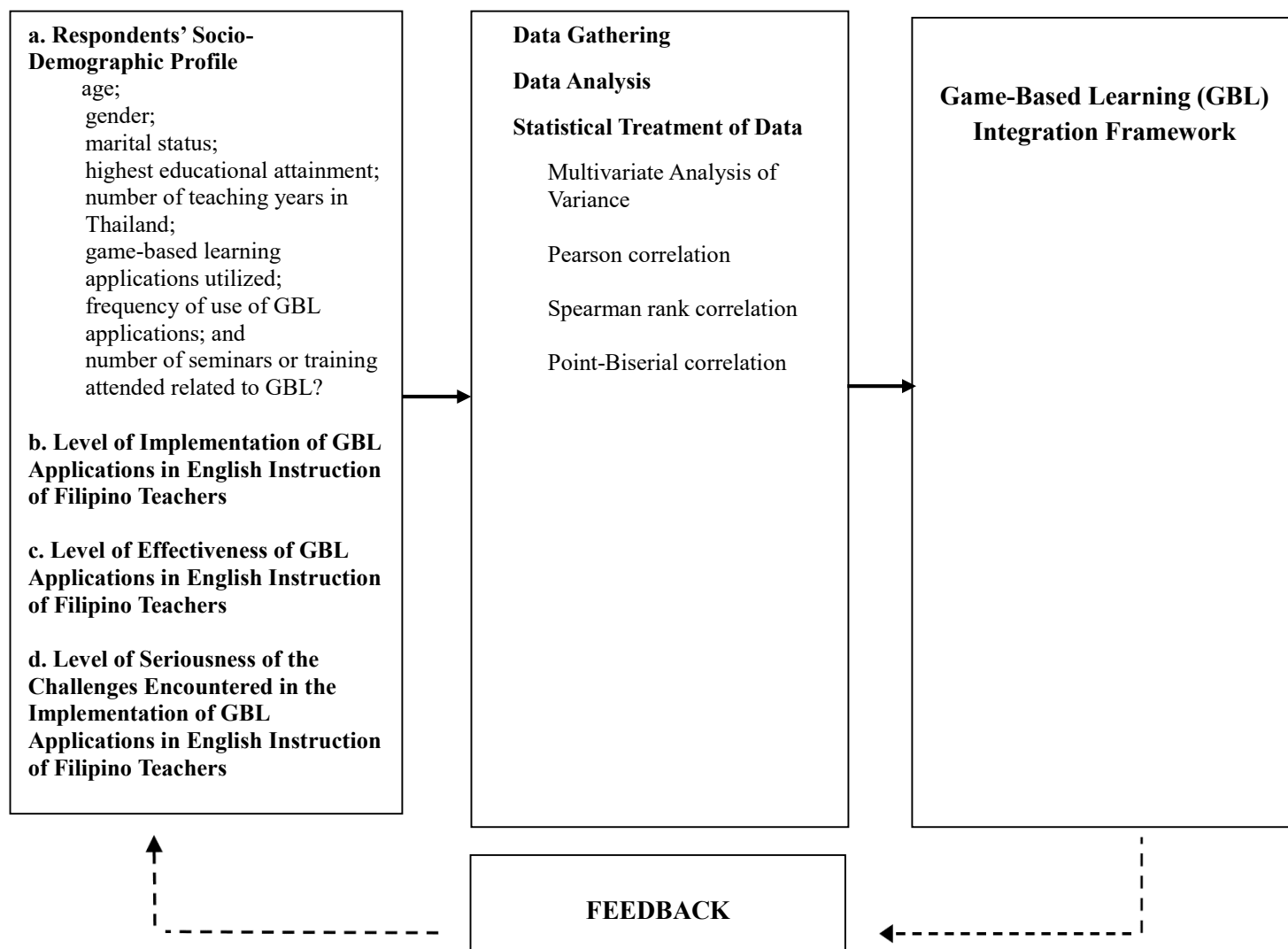


Figure 1. Research Paradigm

RESULTS AND DISCUSSION

Socio-Demographic Profile of the Respondents

Table 1. Socio-demographic Profile of the Respondents (n=109)

Profile	Category	Frequency	Percent
Age	20 – 25 years old	7	6.4
	26 – 30 years old	71	65.1
	31 – 35 years old	19	17.4
	36 – 40 years old	9	8.3
	41 – 45 years old	1	0.9
	46 – 50 years old	2	1.8
Gender	Male	53	48.6
	Female	53	48.6
	Transgender	1	0.9

	Non-binary	1	0.9
	Prefer not to say	1	0.9
Marital Status	Single	97	89.0
	Married	10	9.2
	Widowed	2	1.8
Highest Educational Attainment	Bachelor's Degree	83	76.1
	Master's Degree (Units)	19	17.4
	Master's Degree (Graduate)	5	4.6
	Doctorate Degree (Units)	1	0.9
	Doctorate Degree (Graduate)	1	0.9
Number of Teaching Years in Thailand	1 – 3 years	62	56.9
	4 – 6 years	22	20.2
	7 – 9 years	14	12.8
	10 – 12 years	3	2.8
	13 – 15 years	5	4.6
	More than 15 years	3	2.8
Number of Seminars or Trainings Attended Related to Game-Based Learning	1 – 3	87	79.8
	4 – 6	10	9.2
	7 – 9	3	2.8
	More than 10	9	8.3

The respondents were primarily young adult Filipino teachers, with 65% aged 26–30 years old and no respondents aged 51 years and above. Gender distribution was nearly balanced, consisting of 54 females (49%) and 52 males (48%), while 1 respondent (1%) each identified as transgender, non-binary, or preferred not to say. Most respondents were single, comprising 97 (89%), followed by married respondents with 10 (9%) and widowed respondents with 2 (2%).

In terms of educational attainment, 83 respondents (76%) held bachelor's degrees, 19 (17%) had master's degree units, 5 (5%) completed master's degrees, and only 1 (1%) each had doctorate units or a doctorate degree. Most respondents had 1–3 years of teaching experience in Thailand, accounting for 62 (57%), followed by 4–6 years with 22 (20%) and 7–9 years with 14 (13%).

Regarding GBL applications, Kahoot! was used by all respondents (100%), followed by Quizlet with 69 (63%), Quizizz with 56 (51%), Blookeyt with 55 (50%), and Wordwall with 48 (44%). Kahoot! was also the most frequently used platform, with 87 respondents (79.8%) reporting usage at least sometimes. Most respondents attended only 1–3 GBL-related seminars or training sessions, comprising 87 (80%), indicating limited formal preparation in GBL integration.

Perceived Level of Implementation of Game-Based Learning Applications

The perceived level of implementation of game-based learning applications reflects how frequently and effectively teachers integrate these tools into their English instruction.

Table 2. *Frequency of Implementation of Game-Based Learning Applications in English Instruction of Filipino Teachers (n=109)*

A. Instructional Planning and Lesson Design	Always		Often		Moderate		Seldom		Never	
	F	%	F	%	F	%	F	%	F	%
1. I match game activities with my lesson objectives.	94	86.2	6	5.5	4	3.7	5	4.6	0	0.0
2. I adjust game tasks to my students' English levels.	77	70.6	15	13.8	9	8.3	8	7.3	0	0.0

3. I use GBL applications to teach vocabulary, grammar, speaking, listening, or reading.	66	60.6	18	16.5	13	11.9	12	11.0	0	0.0
4. I include GBL applications when planning lessons.	59	54.1	19	17.4	17	15.6	13	11.9	1	0.9
Mean	4.40 - Often									
B. Integration and Delivery of Game-Based Learning	Always		Often		Moderate		Seldom		Never	
	F	%	F	%	F	%	F	%	F	%
1. I combine GBL applications with my regular teaching methods.	62	56.9	18	16.5	19	17.4	9	8.3	1	0.9
2. I use GBL applications at the right time in the lesson.	48	44.0	17	15.6	26	23.9	18	16.5	0	0.0
3. I balance lesson content and game activities.	64	58.7	11	10.1	18	16.5	16	14.7	0	0.0
4. I use GBL applications to make learning more engaging.	56	51.4	20	18.3	10	9.2	23	21.1	0	0.0
Mean	4.05 - Often									
C. Digital Tools, Platforms, And Teacher Competence	Always		Often		Moderate		Seldom		Never	
	F	%	F	%	F	%	F	%	F	%
1. I am confident using the digital tools needed for games.	54	49.5	17	15.6	17	15.6	21	19.3	0	0.0
2. I can prepare and manage game activities well.	52	47.7	23	21.1	9	8.3	25	22.9	0	0.0
3. I can solve basic technical problems.	38	34.9	24	22.0	16	14.7	31	28.4	0	0.0
4. I attend training to improve my skills in using games.	39	35.8	24	22.0	27	24.8	12	11.0	7	6.4
Mean	3.81 - Often									
D. Assessment and Feedback Practices	Always		Often		Moderate		Seldom		Never	
	F	%	F	%	F	%	F	%	F	%
1. I give quick feedback during GBL activities.	54	49.5	17	15.6	17	15.6	21	19.3	0	0.0
2. I check game results to monitor student progress.	52	47.7	23	21.1	9	8.3	25	22.9	0	0.0
3. I use points or rewards to support learning.	38	34.9	24	22.0	16	14.7	31	28.4	0	0.0
4. I use feedback from games to help students improve.	39	35.8	24	22.0	27	24.8	12	11.0	7	6.4
Mean	3.79 - Often									
E. Learning Engagement and Support System	Always		Often		Moderate		Seldom		Never	
	F	%	F	%	F	%	F	%	F	%
1. I design game tasks that motivate students.	34	31.2	19	17.4	26	23.9	30	27.5	0	0.0
2. I use games that require teamwork.	55	50.5	16	14.7	24	22.0	14	12.8	0	0.0
3. I create game tasks that help students become more independent.	53	48.6	18	16.5	11	10.1	27	24.8	0	0.0
4. I adjust game difficulty to keep students interested.	39	35.8	26	23.9	21	19.3	21	19.3	2	1.8
Mean	4.14 - Often									

Scale: 4.51 – 5.00 (Always), 3.51 – 4.50 (Often), 2.51 – 3.50 (Moderate), 1.51 – 2.50 (Seldom), 1.00 – 1.50 (Never)

On Instructional Planning and Lesson Design. The highest frequency was recorded for the indicator “*I match game activities with my lesson objectives*” with 94 respondents (86.2%) under *Always*, while “*I include GBL applications when planning lessons*” obtained the lowest frequency with 59 respondents (54.1%) under *Always*. These findings indicate strong pedagogical awareness, showing that teachers intentionally align games with lesson objectives to support learning outcomes rather than using games solely for engagement. This supports the findings of Karl Kapp (2022) and David Shaffer & James Paul Gee (2022), who emphasized that GBL applications must align with curricular objectives to ensure meaningful learning. Studies by Chulalongkorn University (2023), Sarias et al. (2025), and Muñoz et al. (2025) further highlighted that careful lesson alignment improves engagement, comprehension, and learning outcomes.

On Integration and Delivery of Game-Based Learning. The indicator “*I combine GBL applications with my regular teaching methods*” recorded the highest frequency with 62 respondents (56.9%) under *Always*, while “*I use GBL applications at the right time in the lesson*” obtained 48 respondents (44.0%) under *Always*. These findings suggest that teachers integrate GBL as a complementary strategy rather than a standalone approach. This corroborates the work of Boctor (2021), who emphasized that blended teaching approaches enhance engagement and learning effectiveness. Chen et al. (2020) also identified instructional organization and classroom management as essential for successful GBL implementation, while Yeboah et al. (2025) noted that teachers commonly use games as supplementary instructional tools due to curriculum and time constraints.

On Digital Tools, Platforms, and Teacher Competence. The indicator “*I am confident using the digital tools needed for games*” gained 54 respondents (49.5%) under *Always*, whereas “*I can solve basic technical problems*” recorded 38 respondents (34.9%) under *Always*. These results suggest that teachers possess confidence in using GBL tools but may face challenges in troubleshooting technical concerns. This aligns with findings from Wu et al. (2025), Chen et al. (2020), and Foster & Shah (2020), which emphasized that technological confidence, instructional competence, and continuous training are essential for effective GBL integration. Ongoro & Fanjiang (2024) further highlighted the importance of technical stability and feedback systems, while Muengsan & Chatwattana (2024) recommended targeted technical training to strengthen implementation.

On Learning Engagement and Support System. The indicator “*I use games that require teamwork*” recorded the highest frequency with 55 respondents (50.5%) under *Always*, while “*I design game tasks that motivate students*” obtained 34 respondents (31.2%) under *Always*. These findings indicate that teachers emphasize collaboration and student engagement through GBL activities, though learner independence may receive less attention. This supports the findings of Marc Prensky (2020), who emphasized that challenges and rewards increase motivation. Saks & Leijen (2020), Liu et al. (2021), and Dicheva et al. (2025) also highlighted that collaborative and adaptive game activities sustain engagement and support learner autonomy. Ungerleider (2022) emphasized personalized learning for independence, while Tang (2023) and Duncan (2020) noted that teamwork-based games strengthen engagement and cooperative learning.

On Learning Engagement and Support System. The indicator “*I use games that require teamwork*” recorded the highest frequency with 55 respondents (50.5%) under *Always*, while “*I create game tasks that help students become more independent*” obtained 53 respondents (48.6%) and “*I design game tasks that motivate students*” had 34 respondents (31.2%) under the same category. These results suggest that teachers prioritize collaboration and engagement in game-based learning (GBL), particularly through teamwork-oriented activities, while other strategies such as motivating task design and adjusting difficulty are also practiced but to a lesser extent. This indicates that teachers strongly emphasize social interaction, cooperative learning, and sustaining student interest in GBL. This finding supports Marc

Prensky (2020), who noted that challenges and rewards enhance motivation, as well as Saks & Leijen (2020), Liu et al. (2021), and Dicheva et al. (2025), who emphasized that well-designed game tasks, collaboration, and adaptive difficulty sustain engagement and support learner autonomy. Furthermore, Ungerleider (2022) highlighted the role of personalized learning in promoting independence.

Table 3. *Summary of Frequency of Implementation of Game-Based Learning Applications in English Instruction of Filipino Teachers*

Domain	Mean	Description
A. Instructional Planning and Lesson Design	4.40	Often
B. Integration and Delivery of Game-Based Learning	4.05	Often
C. Digital Tools, Platforms, And Teacher Competence	3.81	Often
D. Assessment and Feedback Practices	3.79	Often
E. Learning Engagement and Support System	4.14	Often
OVERALL MEAN	4.04	Often

Scale: 4.51 – 5.00 (Always), 3.51 – 4.50 (Often), 2.51 – 3.50 (Moderate), 1.51 – 2.50 (Seldom), 1.00 – 1.50 (Never)

Table 3 presents the summary of the frequency of implementation of game-based learning applications in English instruction among Filipino teachers. The results show that the domain “Instructional Planning and Lesson Design” obtained the highest weighted mean of 4.40, with a descriptive equivalent of Often. In contrast, the domain “Assessment and Feedback Practices” recorded the lowest weighted mean of 3.79, which also corresponds to the descriptive equivalent of Often. Overall, the domains yielded a mean score of 4.04 which indicates that GBL applications are often implemented in English instruction. These findings suggest that Filipino teachers consistently integrate game-based learning across various instructional domains, with particular emphasis on instructional planning and lesson design.

Based on the respondents’ perceptions, the findings implicate that Filipino teachers exhibit a generally positive and consistent attitude toward the integration of GBL in English instruction. The relatively high mean scores across all domains indicate that teachers recognize the value of game-based strategies in improving lesson delivery, student engagement, and overall teaching effectiveness. Nevertheless, the comparatively lower mean obtained in the domain of assessment and feedback practices implies that opportunities remain for improving the utilization of GBL tools in monitoring learners’ progress and providing systematic feedback. This underscores the need for targeted professional development initiatives that focus on strengthening teachers’ competencies in integrating GBL not only as an instructional strategy but also as a comprehensive tool for assessment and evaluation.

Perceived Level of Effectiveness of Game-Based Learning Applications

The perceived level of effectiveness of game-based learning applications shows how well these tools support teaching and learning outcomes in English instruction.

Table 4. *Effectiveness of Game-Based Learning Applications in English Instruction of Filipino Teachers (n=109)*

	VE		E		ME		SE		NE	
	F	%	F	%	F	%	F	%	F	%
A. Instructional Design and Delivery										
1. GBL helps my students learn vocabulary better.	45	41.3	44	40.4	16	14.7	4	3.7	0	0.0
2. GBL helps me adjust lessons to my students’ level.	46	42.2	40	36.7	23	21.1	0	0.0	0	0.0
3. GBL makes my teaching more effective.	58	53.2	35	32.1	13	11.9	3	2.8	0	0.0
4. Creating simple games improves my teaching.	62	56.9	35	32.1	11	10.1	1	0.9	0	0.0
5. Balancing fun and learning improves my lesson delivery.	68	62.4	29	26.6	12	11.0	0	0.0	0	0.0
Mean	4.34 – Effective									
B. Learning Engagement and Interaction										
	VE	E	ME	SE	NE					
	F	%	F	%	F	%	F	%	F	%

1. GBL increases student participation.	64	58.7	34	31.2	10	9.2	1	0.9	0	0.0
2. Competition in games encourages interaction.	58	53.2	40	36.7	11	10.1	0	0.0	0	0.0
3. Games keep students motivated.	60	55.0	39	35.8	10	9.2	0	0.0	0	0.0
4. Rewards in games increase students' interest.	68	62.4	29	26.6	11	10.1	1	0.9	0	0.0
Mean	4.47 - Effective									
C. Learning Outcomes and Skill Development	VE		E		ME		SE		NE	
	F	%	F	%	F	%	F	%	F	%
1. GBL applications improve vocabulary and grammar retention.	34	31.2	55	50.5	15	13.8	5	4.6	0	0.0
2. Students speak more confidently because of GBL activities.	35	32.1	38	34.9	27	24.8	9	8.3	0	0.0
3. Team games help students learn from each other.	45	41.3	47	43.1	16	14.7	1	0.9	0	0.0
4. GBL applications develop creativity and problem-solving skills.	44	40.4	47	43.1	16	14.7	2	1.8	0	0.0
5. GBL applications reduce anxiety and increase participation.	43	39.4	48	44.0	16	14.7	2	1.8	0	0.0
Mean	4.13 - Effective									
D. Technology Integration and Utilization	VE		E		ME		SE		NE	
	F	%	F	%	F	%	F	%	F	%
1. GBL tools support language learning.	45	41.3	45	41.3	16	14.7	3	2.8	0	0.0
2. Technology makes lessons smoother.	55	50.5	42	38.5	11	10.1	1	0.9	0	0.0
3. GBL applications provide quick feedback that helps learning.	48	44.0	36	33.0	23	21.1	2	1.8	0	0.0
4. GBL applications help students learn independently.	35	32.1	58	53.2	13	11.9	3	2.8	0	0.0
5. My knowledge of technology makes GBL more effective.	46	42.2	45	41.3	17	15.6	1	0.9	0	0.0
Mean	4.24- Effective									
E. Classroom Facilitation and Management	VE		E		ME		SE		NE	
	F	%	F	%	F	%	F	%	F	%
1. GBL applications keep students engaged without losing focus.	28	25.7	52	47.7	27	24.8	2	1.8	0	0.0
2. GBL applications help address behavior or participation issues.	34	31.2	42	38.5	31	28.4	2	1.8	0	0.0
3. GBL applications help me manage the class better.	36	33.0	52	47.7	19	17.4	2	1.8	0	0.0
4. GBL applications encourage student-centered learning.	46	42.2	50	45.9	10	9.2	3	2.8	0	0.0
5. Using GBL applications make me more effective as a teacher.	49	45.0	46	42.2	11	10.1	3	2.8	0	0.0
Mean	4.13- Effective									

Scale: 4.51 – 5.00 (Very Effective), 3.51 – 4.50 (Effective), 2.51 – 3.50 (Moderately Effective), 1.51 – 2.50 (Slightly Effective), 1.00 – 1.50 (Not Effective)

On Instructional Design and Delivery. The highest frequency was recorded for the indicator “Balancing fun and learning improves my lesson delivery” with 68 respondents (62.4%) under *Very Effective*, while “GBL helps my students learn vocabulary better” obtained 45 respondents (41.3%) under *Very Effective*. The findings indicate that teachers strongly value the balance between enjoyment and

academic content in improving lesson delivery. Respondents perceive GBL as an effective strategy for reinforcing vocabulary learning and enhancing instructional effectiveness through purposeful game integration. These findings align with the studies of Plass et al. (2016), Karl Kapp (2022), and David Shaffer & James Paul Gee (2020), which emphasized that balancing engagement with instructional objectives strengthens teaching quality and learning outcomes.

On Learning Engagement and Interaction. The indicator “*Rewards in games increase students’ interest*” recorded the highest frequency with 68 respondents (62.4%) under *Very Effective*, followed by “*GBL increases student participation*” with 64 respondents (58.7%) and “*Competition in games encourages interaction*” with 58 respondents (53.2%) under *Very Effective*. These findings suggest that teachers strongly recognize the motivational role of rewards, competition, and participation in sustaining engagement during GBL activities. This supports the work of Marc Prensky (2020), who highlighted motivation through rewards and challenges. Hakim & Saputra (2023) emphasized increased participation through GBL, while Romero et al. (2022) and Touati & Baek (2023) stressed that balanced competition strengthens interaction without reducing collaboration.

On Learning Outcomes and Skill Development. The indicator “*GBL applications improve vocabulary and grammar retention*” obtained the highest frequency with 55 respondents (50.5%) under *Effective*, while “*Students speak more confidently because of GBL activities*” recorded 38 respondents (34.9%) under *Effective*. Teachers perceive GBL as effective for strengthening vocabulary retention, grammar reinforcement, creativity, collaboration, and problem-solving skills. However, speaking confidence received comparatively lower ratings, suggesting that oral communication may require more intentional design within GBL activities. These findings corroborate Rahman & Munir (2021), Slamet & Meng (2025), Aratea & Pasubillo (2024), and Yang et al. (2024), who emphasized that GBL improves retention, reduces anxiety, and increases participation. Ho (2020) further highlighted that speaking confidence develops when games are intentionally designed for oral interaction.

On Technology Integration and Utilization. The indicator “*Technology makes lessons smoother*” had the highest frequency with 55 respondents (50.5%) under *Very Effective*, while “*GBL tools support language learning*” and “*My knowledge of technology makes GBL more effective*” both recorded 45 respondents (41.3%) under *Very Effective*. These findings indicate that teachers value technology as an important support system for GBL implementation, helping minimize disruptions and improve lesson flow. The results support Nueva (2019) and Alharbi & Drew (2014), who emphasized technological competence as essential for effective digital instruction. Lin (2024) and Hwang & Zhang (2024) also found that adaptive technologies strengthen learning outcomes and improve instructional delivery.

On Classroom Facilitation and Management. The indicator “*GBL applications help me manage the class better*” and “*GBL applications keep students engaged without losing focus*” both showed strong frequencies, with 52 respondents (47.7%) rating them as *Effective*, while “*Using GBL applications makes me more effective as a teacher*” recorded 49 respondents (45.0%) under *Very Effective*. These findings suggest that teachers perceive GBL as beneficial for maintaining student engagement, supporting classroom management, and encouraging student-centered learning. These results align with previous studies showing that GBL enhances classroom participation and management by promoting active involvement and reducing behavioral issues. Research by Dicheva et al. (2025), Duncan (2020), and Ungerleider (2022) emphasized that well-designed GBL environments improve facilitation, collaboration, and learner autonomy.

Table 5. Summary of Level of Effectiveness in the Implementation of Game-Based Learning Applications in English Instruction of Filipino Teachers

Domain	Mean	Description
A. Instructional Design and Delivery	4.34	Effective
B. Learning Engagement and Interaction	4.47	Effective
C. Learning Outcomes and Skill Development	4.13	Effective
D. Technology Integration and Utilization	4.24	Effective

E. Classroom Facilitation and Management	4.13	Effective
Overall Mean	4.26	Effective

Scale: 4.51 – 5.00 (Very Effective), 3.51 – 4.50 (Effective), 2.51 – 3.50 (Moderately Effective), 1.51 – 2.50 (Slightly Effective), 1.00 – 1.50 (Not Effective)

Table 5 presents the summary of the level of effectiveness in the implementation of game-based learning applications in English instruction among Filipino teachers. The results indicate that all domains were rated as Effective, with mean scores ranging from 4.13 to 4.47.

Among the domains, Learning Engagement and Interaction obtained the highest mean of 4.47, reflecting its strong contribution to the effectiveness of game-based learning. In contrast, Learning Outcomes and Skill Development and Classroom Facilitation and Management recorded the lowest mean scores of 4.13, although both were still described as Effective.

Overall, the domains yielded an overall mean of 4.26, with a descriptive equivalent of Effective, indicating that game-based learning is generally implemented effectively in English instruction.

These findings suggest that Filipino teachers are able to successfully integrate game-based learning strategies to enhance student engagement, improve learning outcomes, and support effective classroom management through appropriate instructional design and technology utilization.

Table 6. *Challenges Encountered in Implementing Game-Based Learning Applications* (n=109)

Challenges Of Implementing Game-Based Learning Applications	VHS		HS		MS		SS		NS	
	F	%	F	%	F	%	F	%	F	%
1. Internet connection limits my use of games.	62	56.9	26	23.9	19	17.4	0	0.0	2	1.8
2. Lack of devices makes GBL difficult.	48	44.0	42	38.5	12	11.0	5	4.6	2	1.8
3. Preparing game activities takes too much time.	12	11.0	31	28.4	48	44.0	16	14.7	2	1.8
4. Limited class time affects my ability to use games.	24	22.0	44	40.4	31	28.4	4	3.7	6	5.5
5. Students' different levels make using games challenging.	11	10.1	29	26.6	37	33.9	23	21.1	9	8.3
6. Some students are not interested in game activities.	11	10.1	33	30.3	42	38.5	21	19.3	2	1.8
7. Technical issues disrupt my lessons.	26	23.9	38	34.9	32	29.4	7	6.4	6	5.5
8. Some students struggle with technology.	15	13.8	36	33.0	49	45.0	4	3.7	5	4.6
Mean	3.63 - Highly Serious									

Scale: 4.51 – 5.00 (Very Highly Serious), 3.51 – 4.50 (Highly Serious), 2.51 – 3.50 (Moderately Serious), 1.51 – 2.50 (Somewhat Serious), 1.00 – 1.50 (Not Serious)

Among the identified challenges in Table 6, the indicator “Internet connection limits my use of games” procured the highest rating with 62 respondents (56.9%) selecting *Very Highly Serious*. It reveals that poor or unstable internet connectivity is the most crucial barrier to effective GBL implementation. Additionally, the indicators “Lack of devices makes GBL difficult” got 48 respondents (44%) and interpreted as Very Highly Serious.

In terms of instructional constraints, the indicator “Preparing game activities takes too much time” got 48 respondents (44%) and interpreted as *Moderately Serious*. Similarly, the indicator “Limited class time affects my ability to use games” was rated as Highly Serious by 44 respondents (40.4%). It delves to the notion that time limitations hinder teachers’ ability to design and implement effective GBL activities, especially in Thailand, where one (1) period is only allotted for 40-50 minutes only.

Moreover, both the indicators “Some students are not interested in game activities” got 42 respondents (38.5%) and “Students’ different levels make using games challenging” recorded 37 respondents (33.9%) were rated as *Moderately Serious*. These indicators imply the learner-related challenges which were also evident in the learners’ differences in ability and motivation which affects the effectiveness of GBL in the classroom.

Lastly, the indicators “Some students struggle with technology” marked 49 respondents (45%) rated as *Moderately Serious* and “Technical issues disrupt my lessons” displayed 38 respondents (34.9%) rated as *Highly Serious*. Both indicators also remain a concern as it corresponds to technical difficulties that both teachers and students may require additional technical support and training. This results corresponds with earlier empirical findings identified by Yaman et al. (2024) and Beavis et al. (2014) who both confirms that infrastructure limitations remain the most critical obstacles to GBL implementation.

Chen et al.’s (2020) and Hakim & Saputra’s (2023) findings that preparation and limited class time restrict instructional innovation is also supported by the moderate seriousness of time-related constraints. Meanwhile, the learner-related difficulties are consistent with Brown’s (2019) and Cong-Lem’s (2018) observations. Moreover, technical issues experienced by teachers and students reflect Camilleri’s (2023) argument that institutional technical support is necessary for effective implementation.

Therefore, the results underscore the need for improving infrastructure, strengthening institutional support, and sustaining professional development to ensure effective GBL integration.

Table 7. *Relationship Between the Level of Implementation of Game-Based Learning Applications in English Instruction of Filipino Teachers and Their Profile Variables (n=109)*

Profile	Level of Implementation of Game-Based Learning Applications						
		Instructional Planning and Lesson Design	Integration and Delivery of Game-Based Learning	Digital Tools, Platforms, And Teacher Competence	Assessment and Feedback Practices	Learning Engagement and Support System	Overall Mean
Age ^a	τ_B	-.252**	-0.112	-0.119	-0.112	-0.113	-.157*
	Sig.	0.002	0.159	0.131	0.152	0.161	0.038
Gender ^b	r_{pb}	0.089	0.046	-0.015	0.011	-0.036	0.021
	Sig.	0.365	0.641	0.880	0.915	0.716	0.834
Marital Status ^b	r_{pb}	-0.162	-0.073	-0.033	0.077	0.089	-0.021
	Sig.	0.094	0.455	0.734	0.429	0.361	0.829
Highest Educational Attainment ^a	τ_B	-0.074	0.041	0.107	0.012	0.055	0.051
	Sig.	0.380	0.614	0.185	0.878	0.511	0.518
Number of Teaching Years in Thailand ^a	τ_B	-.247**	-.207**	-0.145	-.217**	-0.147	-.215**
	Sig.	0.002	0.008	0.060	0.005	0.066	0.004
Number of Seminars or Trainings Attended Related to Game-Based Learning ^a	τ_B	-0.059	0.052	0.090	0.105	0.113	0.070
	Sig.	0.481	0.526	0.261	0.193	0.172	0.370
Game-Based Learning Applications Used ^a	τ_B	0.100	0.084	0.007	-0.022	0.049	0.055
	Sig.	0.218	0.287	0.927	0.774	0.537	0.468
Frequency of Use of Game-Based	τ_B	0.140	0.117	.250**	0.114	.159*	.201**

Learning Applications ^a	Sig.	0.054	0.096	0.000	0.103	0.027	0.003
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Note: Gender (Male-1, Female-2); Marital Status (Single-1, Married-2); Game-Based Learning Applications Used (refers to the total number utilized)

^aKendall's tau-b

^bBiserial correlation

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Computed using $\alpha = 0.05$

Table 7 presents the relationship between Filipino teachers' profile variables and their level of implementation of game-based learning (GBL) applications in English instruction. Result show that age has a significant negative relationship with instructional planning and lesson design ($\tau_B = -.252, p < .01$) and with the overall level of GBL implementation ($\tau_B = -.157, p < .05$). This indicates that younger teachers tend to implement GBL more extensively than older ones.

Similarly, the number of teaching years in Thailand is significantly and negatively correlated with several domains of GBL implementation namely, instructional planning and lesson design, integration and delivery, assessment and feedback practices, and the overall mean of GBL's implementation ($p < .01$). This indicates that teachers with fewer years of experience are more inclined to adopt game-based approaches.

With this instance, another reason is that younger teachers are often more exposed to digital technologies during their pre-service education which makes them more comfortable in navigating different GBL platforms. On the other hand, more experienced teachers may need more time to learn these tools which can limit their willingness to integrate them regularly into their lessons.

Moreover, younger teachers tend to be more flexible and open to trial-and-error approaches in teaching. These teachers are more willing to take risks, such as trying new game formats or modifying activities based on students' responses. Meanwhile, teachers with longer experience may prioritize maintaining classroom control and sticking to proven methods which can reduce opportunities for innovation.

Another important factor is the familiarity of younger teachers with students' digital preferences and interests. Since they are often closer in age or more attuned to current trends, they can design GBL activities that align with learners' interests, such as competitive games, rewards systems, or interactive challenges.

In addition, the frequency of use of GBL applications shows significant positive correlations with digital tools and teacher competence, learning engagement and support systems, and the overall mean ($p < .05$ to $p < .01$) which indicates that more frequent use of GBL is associated with stronger competence, higher student engagement, and more effective overall implementation.

One of the reasons is that frequent use of GBL tools enables teachers to refine their instructional strategies. Through continuous implementation, teachers learn which types of games work best for specific lessons or student groups. For instance, a teacher may discover that timed quizzes are effective for vocabulary recall, while collaborative games are better suited for speaking activities. This ongoing adjustment leads to more purposeful and effective use of GBL rather than random or occasional application.

In terms of student engagement, repeated exposure to GBL helps teachers create more interactive and dynamic classroom environments. Students become more familiar with game mechanics, allowing activities to run smoothly and with less time spent on instructions.

Frequent use also allows teachers to develop better support systems for learners. For instance, teachers can use game results to identify struggling students and provide targeted feedback or follow-up activities. A teacher who consistently uses GBL may notice patterns in student errors and adjust instruction accordingly, such as revisiting difficult grammar points or providing additional practice through customized games.

In contrast, gender, marital status, highest educational attainment, number of GBL-related seminars attended, and the number of GBL applications used show no significant relationships with any of the implementation domains which can be denoted that mere exposure to training does not necessarily translate into more frequent or effective implementation of GBL.

Based on the findings, the first null hypothesis was rejected since significant relationships were found between selected profile variables (age, years of teaching, and frequency of use) and the level of implementation of GBL applications.

The results are aligned with Chen et al. (2020) who reported that younger teachers and those with stronger digital literacy tend to adopt GBL more readily. Foster & Shah (2020) also emphasized that teachers' professional identities and openness to innovation shape their instructional practices. The inverse relationship between years of teaching in Thailand and GBL use aligns with theory of second-order barriers, wherein teachers' beliefs and habits influence instructional decisions.

The positive relationship between frequency of use and competence supports Tao & Zou's (2023) conclusion that regular practice strengthens instructional confidence. This indicates that experiential learning is more influential than formal training.

The absence of significant relationships for gender, marital status, educational attainment, and training attendance confirms Meredith's (2016) argument that professional development must be experiential rather than purely theoretical. Thus, effective GBL implementation depends more on actual classroom practice than demographic factors.

Table 8. *Relationship Between the Level of Effectiveness in the Implementation of Game-Based Learning Applications in English Instruction of Filipino Teachers and Their Profile Variables*

Profile		Level of Effectiveness in the Implementation of Game-Based Learning Applications					
		Instructional Design and Delivery	Learning Engagement and Interaction	Learning Outcomes and Skill Development	Technology Integration and Utilization	Classroom Facilitation and Management	Overall Mean
Age ^a	τ_B	-0.145	-0.102	-0.014	0.046	0.002	-0.048
	Sig.	0.069	0.214	0.856	0.563	0.978	0.526
Gender ^b	r_{pb}	-0.174	-0.149	-0.130	-0.067	-0.097	-0.137
	Sig.	0.074	0.127	0.182	0.492	0.322	0.162
Marital Status ^b	r_{pb}	-0.141	-0.119	-0.003	-0.038	-0.005	-0.065
	Sig.	0.148	0.223	0.974	0.694	0.959	0.505
Highest Educational Attainment ^a	τ_B	.188*	.191*	.184*	.172*	0.136	.163*
	Sig.	0.022	0.024	0.023	0.037	0.094	0.038
Number of Teaching Years in Thailand ^a	τ_B	-0.106	-0.094	-0.054	-0.051	-0.047	-0.073
	Sig.	0.181	0.247	0.484	0.523	0.546	0.329
Number of Seminars or Trainings Attended Related to Game-Based Learning ^a	τ_B	-0.106	-0.094	-0.054	-0.051	-0.047	-0.073
	Sig.	0.181	0.247	0.484	0.523	0.546	0.329
Game-Based Learning Applications Used ^a	τ_B	0.048	0.028	-0.084	-0.048	-0.068	-0.026
	Sig.	0.543	0.729	0.281	0.543	0.387	0.734

Frequency of Use of Game-Based Learning Application ^a	τ_B	0.128	0.072	.145*	.141*	.139*	.136*
	Sig.	0.071	0.319	0.037	0.047	0.046	0.044

Note: Gender (Male-1, Female-2); Marital Status (Single-1, Married-2); Game-Based Learning Applications Used (refers to the total number utilized)

^aKendall's tau-b

^bBiserial correlation

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Based on the results presented in Table 8, it shows the relationship between Filipino teachers' profile variables and the level of effectiveness in implementing game-based learning (GBL) applications in English instruction. The result indicates that age, gender, marital status, number of teaching years in Thailand, number of GBL-related seminars attended, and the number of GBL applications used are not significantly related to any dimension of effectiveness or to the overall mean.

Meanwhile, highest educational attainment shows a significant positive relationship with instructional design and delivery, learning engagement and interaction, learning outcomes and skill development, technology integration and utilization, and the overall level of effectiveness.

Another reason is that higher educational attainment often develops stronger research-based and reflective teaching practices. Teachers exposed to advanced studies are trained to analyze student performance, evaluate teaching strategies, and make data-driven decisions. In the context of GBL, this means they can interpret game results more effectively and adjust instruction accordingly. For instance, if students consistently perform poorly on certain quiz items, the teacher can modify instruction or provide targeted interventions.

Even if most respondents are bachelor's degree graduates, those with relatively higher qualifications may demonstrate greater confidence in integrating technology with pedagogy. They are more likely to explore different GBL platforms, maximize features such as analytics and feedback systems, and align these tools with lesson objectives. In contrast, teachers with only basic exposure may use GBL at a surface level, focusing mainly on engagement rather than instructional depth.

Moreover, the frequency of use of GBL applications is significantly and positively associated with learning outcomes and skill development, technology integration and utilization, classroom facilitation and management, and the overall mean, indicating that more frequent use of GBL contributes to more effective classroom practices and learning results.

This finding imply that consistent and sustained use of GBL is essential for achieving effective implementation, rather than relying on occasional or one-time use. Schools and administrators should encourage teachers to integrate GBL regularly across different parts of the lesson, such as motivation, practice, and assessment.

Moreover, the results highlight the importance of practice-based professional development. Instead of focusing solely on theoretical training, institutions should provide opportunities for teachers to apply GBL strategies in real classroom settings. For example, workshops can include hands-on activities where teachers design, implement, and reflect on GBL lessons.

The findings also suggest that teachers should be supported in developing routine use of GBL tools. Providing access to reliable technology, ready-made resources, and collaborative platforms can help teachers incorporate GBL more frequently without increasing their workload.

In lieu with this, the second null hypothesis was rejected as educational attainment and frequency of use showed significant relationships with the level of effectiveness. The positive relationship between educational attainment and GBL effectiveness supports Foster & Shah's (2020) and Ali et al.'s (2025)

findings that higher academic preparation enhances instructional quality. Teachers with advanced degrees may possess stronger theoretical and practical foundations for effective GBL integration.

The significant association between frequency of use and effectiveness confirms Cong-Lem’s (2018) and Meredith’s (2016) assertion that sustained practice refines teaching strategies. This indicates that repeated implementation enables teachers to improve classroom management, feedback systems, and learner support.

The lack of significant relationships for age, gender, and teaching experience aligns with Ongoro & Fanjiang’s (2024) findings that instructional effectiveness depends more on pedagogical competence than demographic characteristics.

As a conclusion, the findings indicate that academic preparation and consistent practice are key predictors of effective GBL implementation, reinforcing the importance of advanced education and continuous classroom engagement.

Game-Based Learning (GBL) Applications Integration Framework

This section presents the proposed framework, which contains the key components, theoretical foundations, and structural processes that guide the effective integration of game-based learning applications in English instruction. It outlines the relationships among inputs, processes, mediating factors, and outcomes that collectively contribute to improved teaching practices and learner performance.

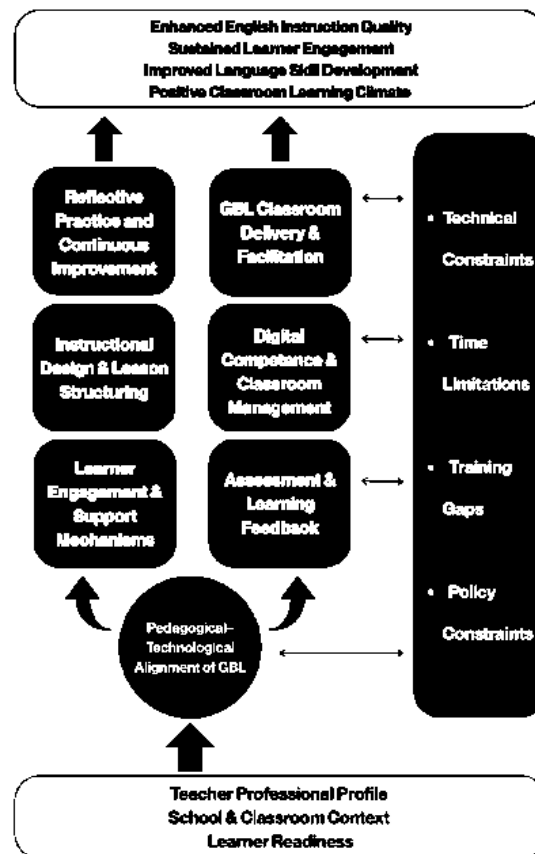


Figure 2. *Game-Based Learning Integration Framework for English Instruction*

This framework presents a structured model illustrating how Game-Based Learning (GBL) is implemented in English instruction among Filipino teachers in Nonthaburi, Thailand. It emphasizes the

interaction of teacher-related, contextual, pedagogical, and technological factors that influence the effectiveness of GBL. The framework aims to explain how these elements collectively contribute to improved teaching practices and enhanced student learning outcomes.

The framework is anchored on constructivist learning theory, which emphasizes active, student-centered learning, and the Technological Pedagogical Content Knowledge (TPACK) model, which highlights the integration of technology, pedagogy, and content knowledge. It also draws from engagement theory, which underscores the importance of meaningful interaction and participation in the learning process. These theories collectively support the use of GBL as an interactive and effective instructional approach in English language teaching.

The framework illustrates how the implementation of Game-Based Learning (GBL) in English instruction is shaped by the dynamic interaction among teacher-related, contextual, pedagogical, and technological factors. At the foundational level, the professional profile of Filipino teachers—such as their educational background, teaching experience in Thailand, and exposure to GBL training—works alongside the school and classroom context and learners' readiness. Together, these elements establish the conditions necessary for aligning game-based learning with instructional goals.

At the core of the framework is the pedagogical–technological alignment of GBL, which reflects teachers' intentional efforts to integrate game-based applications with English language objectives, teaching strategies, and classroom realities. This alignment ensures that GBL functions as a purposeful instructional tool rather than mere entertainment, enabling teachers to translate contextual conditions into meaningful classroom practices.

Surrounding this core are interconnected instructional practice domains, including instructional design and lesson structuring, GBL classroom delivery and facilitation, digital competence and classroom management, assessment and learning feedback, and learner engagement and support mechanisms. These domains operate simultaneously and interactively. Lesson planning structures GBL activities, facilitation promotes active participation, digital competence supports classroom management, assessment utilizes in-game data to guide instruction, and learner support sustains motivation and addresses diverse needs.

Through the continuous interaction of these practices, the framework leads to enhanced English instruction quality, sustained learner engagement, improved language skill development, and a positive classroom learning climate. These outcomes result from the consistent alignment of pedagogy and technology, reinforced by reflective teaching practices.

The framework also acknowledges contextual constraints, such as technical limitations, time constraints, training gaps, and policy restrictions, which influence both instructional alignment and classroom practices. By recognizing these challenges, the model reflects the real conditions in which Filipino teachers implement GBL in Thai educational settings. Continuous reflection and adaptive practices allow teachers to refine their strategies and improve the effectiveness of GBL integration over time.

CONCLUSIONS

Based on the merits of the findings, the following conclusions were drawn:

1. Filipino teachers in Nonthaburi, Thailand actively utilize GBL applications in English instruction despite being largely early-career educators and having limited formal training in GBL. Many teachers are new and have attended few seminars. This means good GBL depends not only on experience or training, but also on being flexible, learning independently, and practicing in class.
2. GBL is widely used across key teaching areas. High ratings in lesson planning and design, lesson delivery, use of digital tools, teacher skills, assessment and feedback, and student engagement show that GBL is not just an extra activity. Instead, it is carefully integrated into English teaching.

3. GBL is seen as highly effective in improving English instruction. High effectiveness ratings in lesson design and delivery, student engagement, learning outcomes, technology use, and classroom management show that GBL improves class interaction, student participation, and teaching efficiency.
4. Challenges in using GBL exist but are manageable. The challenges were rated as highly serious which means that while Filipino teachers face technical, logistical, and classroom management issues. These challenges may not stop them from continuing to use GBL in English classes but it can lead to possible hindrances in implementing GBL applications in the English instruction.
5. The level of implementation of game-based learning in English instruction is significantly influenced by selected profile variables, particularly age, number of teaching years in Thailand, and frequency of use of GBL applications. This suggests that younger teachers, those with fewer years of teaching experience, and those who use GBL more frequently tend to implement game-based strategies more extensively than their counterparts.
6. The perceived level of effectiveness in the use of GBL applications is significantly related with highest educational attainment and frequency of use of GBL applications. This points to the notion that teachers with higher academic qualifications and those who consistently utilize GBL tools exhibits greater effectiveness in instructional design, technology integration, classroom management, and learning outcomes, thereby enhancing the overall impact of GBL in English teaching.
7. A context-based GBL Integration Framework is both needed and possible. The high level of GBL use, strong effectiveness, and manageable challenges support the development of a GBL framework designed for Filipino teachers teaching English in Thailand. This framework should focus on lesson alignment, teacher skills, assessment methods, and student support.

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Author's Bionote

Fariz Montemayor Dela Cruz earned a bachelor's degree in education major in English from Pangasinan State University Bayambang. He is currently finishing his Master of Arts in Education major in Educational Management at Pangasinan State University – Open University Systems. His interests include languages, literature education, and translation studies.

AI Use Declaration:

During the development of this manuscript, the author used QuillBot for Chrome and the free version of Grammarly. These were used to refine language, check grammatical errors, and improve sentences for clarity. After using the AI and AI assisted technologies, the author reviewed and edited the content. The intellectual content of this manuscript remains entirely the responsibility of the author.

Correspondence concerning this article should be addressed to Fariz M. Dela Cruz at *farizdcruz24@gmail.com*.