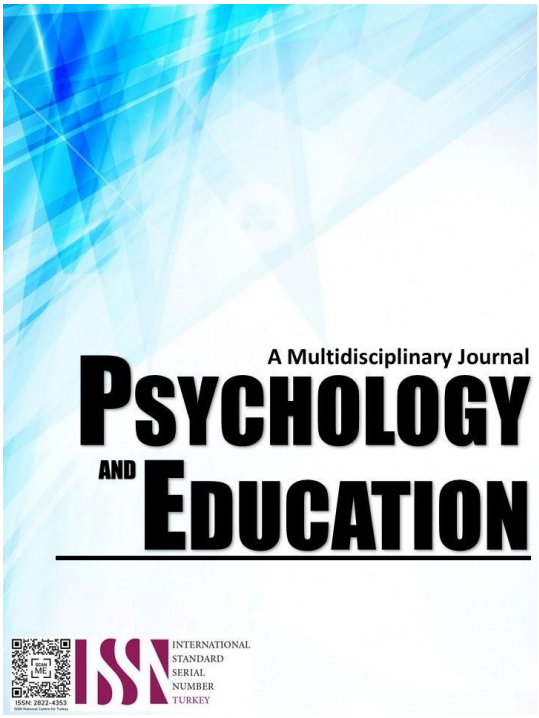
GAMIFIED ELEMENTS IN PHILIPPINE EDUCATION: A SYSTEMATIC REVIEW



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

Volume: 44
Issue 1
Pages: 142-152
Document ID: 2025PEMJ4245
DOI: 10.70838/pemj.440109
Manuscript Accepted: 07-15-2025

Psych Educ, 2025, **44**(1): 142-152, Document ID:2025PEMJ4245, doi:10.70838/pemj.440109, ISSN 2822-4353

Research Article

Gamified Elements in Philippine Education: A Systematic Review

Regine Grace Guisadio,* Apple Jane Tordos, Mitch Pocdol, Francine Lou Taboada, Yhena Kyla Petin, Lovella Asentista, Lyn Jane Sumampong, Febverly Catacutan, Ermie Gil Catamco, Katrina Delatado, Alona Lerio, Maria Luz T. Villanueva, Cyril A. Cabello
For affiliations and correspondence, see the last page.

Abstract

The rapid integration of digital technology in education has spawned the utilization of gamified components as an approach to increasing learner motivation, engagement, and learning performance. Gamified components—points, badges, leaderboards, levels, and quests—are integrated into instructional design for interactive and fun learning experiences. In the Philippines, interest in utilizing these tools has escalated at all levels of education. Yet, existing literature is still fragmented with differing implementation strategies, methodology procedures, and findings indicated in the study. This systematic review determined the Regional Distribution and Contextual Trends of gamified elements in the Philippine education, the Research Methodologies and Designs of the surveyed articles, the Comparative Analysis of Research Methodologies Across the Reviewed Studies, the Respondent Profiles and Sampling Techniques, and the Conclusions and Pedagogical Implications of the studies regarding the utilization of gamified elements inside the classroom. The study utilized a systematic review approach to integrate findings from nine peer-reviewed academic papers investigating the application of gamification in Philippine education. 9 out of 365 manuscripts were selected as part of the systematic review. The review found that there were common benefits including enhanced motivation of students, increased engagement, and increased learning gains—especially where gamified elements were included in terms of curriculum objectives and instructional clarity. In spite of such encouraging results, the review also pointed to challenges like unequal exposure to technology, lack of adequate teacher training, and inconsistent implementation—especially in rural or underprivileged schools. Also, few studies reported longer-term findings or theoretical rationale for studying gamified learning. Based on combined regional data and cross-mapping of effective practices, this study provides evidence-based recommendations to teachers, curriculum developers, and policy-makers who desire to adopt gamified components more equitably, effectively, and context-appropriately.

Keywords: *Gamification, Philippine Education, Student Motivation, Engagement, Instructional Design, Systematic Review*

Introduction

The fast development of computer and communications technology during the 21st century has revolutionized educational practices in meaningful ways, creating new pedagogy approaches to increase learner motivation, engagement, and academic achievement. One of these approaches is gamifying—adding game-related elements like points, badges, levels, leaderboards, and quests—to educational design. These elements seek to recast educational experience in more unconventional form by making interactivity more accessible, provoking challenging inquiry, and infusing learning with energizing fun.

In Philippine education, gamified elements have emerged as a playful way to address the learning and motivational requirements of this generation's tech-spawned students. As more and more students are engaged in tech-rich learning settings, technology-mediated games are integrated in most classrooms by teachers in the expectation that it would infuse vibrant, student-initiated learning spaces. This pedagogical method is highly congruent with theoretical models like Self-Determination Theory (SDT) where competence, autonomy, and relatedness have been identified as prime motivators in maintaining the motivation of students and academic resilience.

Though interest is increasing, adoption of gamified principles is still inhomogeneous and context-specific across the Philippines. Differences in geography, available resources, and preparedness of institutions have resulted in extremely varied uses of gamified tools ranging from sophisticated platforms like MOOCs to more local or even minimal game mechanics. In spite of research like that of Vrcelj et al. (2023) and Dehghanzadeh et al. (2023) confirming the success of such tools in promoting motivation and students' performance, they also reflect the absence of standardized protocols for determining the long-term and systemic effects of gamified education in the nation.

This lack of balance points to the critical necessity for a systematic review that synthesizes the evidence, discerns best practices, and critically examines the gamification uptake in Philippine classrooms. Drawing from nine peer-reviewed studies carried out in various regional settings, the review will chart the existing gamified pedagogy terrain in the Philippines, analyze how gamified strategies and resources build on curricular and learning objectives, and ascertain what is most pedagogically sound. The critique is also attempting to evaluate the largest shortcomings in the literature, such as underrepresentation of rural schools, few teachers' voices being heard, and no long-term gamified learning outcome measures.

The overarching goal of this study is to provide an integrative synthesis of the use of gamified features in Philippine education. Using comparative analysis between regional investigations, this review investigates research design, respondent profile, thematic results, and policy recommendations. Finally, the research hopes to guide subsequent research, inform effective classroom practices, and assist in developing an adaptive but standardized model for gamified teaching that could be adaptive to the varying requirements of Philippine learners.

The use of gamified elements has increasingly gained attention in primary and secondary education as a modern strategy for enhancing student motivation, participation, and engagement. Kamalodeen et al. (2021) point out that the application of game-like features in the class is a major development in reconfiguring conventional teaching-learning processes, especially in the transition towards more interactive and student-oriented formal education. Literature indicates that the application of these elements—points, badges, and level-based challenges—can lead to an enriched and more engaging learning process by provoking the internal motivation and continuous involvement of learners (Gaonkar et al., 2022).

By incorporating organized, game-like activities in classes, gamified teaching enables active participation and sustained attention across different levels of education. Hence, knowing how gamified components are being utilized and their benefits—especially in grade school and secondary classroom settings—is significant in order to take advantage of their pedagogical potential. In the Philippines, where disparities in education and technology use remain unequal across regions, studying how these game-based technologies are implemented, modified, and comprehended within different local classrooms is highly pertinent to subsequent policy work, course development, and research endeavors.

Research Questions

To provide a clear picture of the utilization of gamified elements embedded in Philippine Education, this study answered the following questions using a systematic review:

1. What is the Regional Distribution and Contextual Trends of gamified elements in the Philippine education?
2. What are the Research Methodologies and Designs of the included articles?
3. What is the Comparative Analysis of Research Methodologies Across the Reviewed Studies?
4. What is the Respondent Profiles and Sampling Techniques?
5. What is the Conclusions and Pedagogical Implications of the studies regarding the utilization of gamified elements inside the classroom?

Methodology

This study employed a systematic review approach, guided by principles of evidence synthesis and thematic analysis. A total of nine peer-reviewed research articles on gamification in Philippine educational settings were purposefully selected based on their relevance, regional diversity, methodological transparency, and clarity of reported outcomes. Each study was reviewed using a structured coding framework focusing on seven core dimensions: region, research design, respondent profile, sampling method, results/findings, conclusions, recommendations, and identified research gaps. Data from the studies were extracted, organized into comparative matrices, and thematically synthesized to identify cross-study patterns, shared conclusions, and recurring limitations. This review did not include statistical meta-analysis, as the primary aim was to provide a comprehensive qualitative understanding of the trends, methodological consistencies, and contextual influences on gamification's effectiveness in various Philippine educational settings.

A systematic and structured process of search was undertaken in identifying applicable studies dealing with gamification implementation in Filipino schools. An attempt to maximize coverage saw scholarly databases and repositories such as Google Scholar, ResearchGate, Academia.edu, and institutional repositories of local universities accessed. The search approach used keyword phrases like "gamification education," "Philippines," "interactive teaching," "gamified education," and "student engagement." Boolean operators (OR, AND) were used to limit searches and narrow down resulting hits based on inclusion priority.

After the first search, 30 studies were left after the removal of duplicate records. The studies underwent first screening at title and abstract levels, and finally to full-text examination. The entire identification, screening, and eligibility process is described in PRISMA flow diagram seen in Figure 1.

Following the last screening phase, all the remaining studies were screened against predetermined inclusion and exclusion criteria. The inclusion criteria needed (a) the study to be from the Philippine education system; (b) it must have integration or assessment of gamification features in elementary, secondary, or higher education; (c) it must have enough methodological description, such as respondent profile and learning context; and (d) it must yield results on motivation, engagement, or performance. On the other hand, research was excluded if it (a) did not present empirical data, (b) was not available in full-text form, or (c) researched general game-based learning without particular reference to structured gamification.

Nine studies retained the filtering process and were included in the final synthesis. The studies that were chosen and accessed from differing levels of academia and regional contexts formed the main sources for the thematic analysis of this review.

The analysis of the selected studies was guided by a thematic synthesis approach, commonly used in qualitative systematic reviews to identify patterns across diverse datasets. A coding matrix was developed to extract and organize information across seven dimensions: (1) region of implementation, (2) research methodology/design, (3) respondent profile, (4) sampling method, (5) key findings, (6) study conclusions, and (7) identified gaps and recommendations. Data from each study were manually coded, tabulated, and categorized to allow comparative analysis.

The extracted data were first compiled into structured tables to enable side-by-side comparison of methodological trends and research outcomes. Following the initial categorization, thematic clustering was performed to identify recurring patterns in the implementation and effects of gamification. Particular attention was given to how gamification strategies varied across academic levels, geographic regions, and subject areas. The synthesis was narrative in nature and did not involve statistical meta-analysis due to the heterogeneity of the study designs and outcome measures.

The goal of the analysis was to move beyond individual study results and generate higher-level insights on how gamification is contextualized, experienced, and assessed within the Philippine education system. These findings formed the basis for the discussion of regional trends, shared conclusions, and evidence-based recommendations later in the paper.

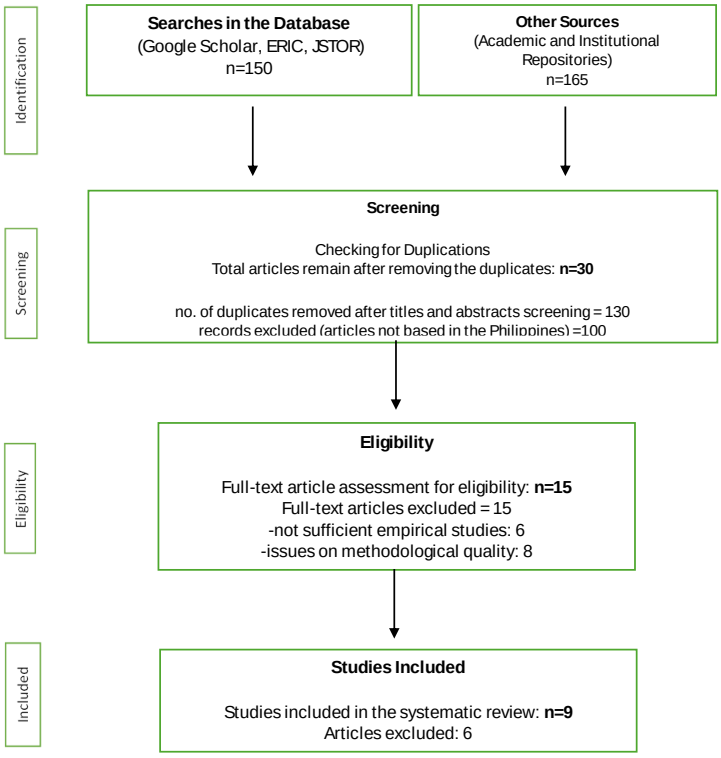


Figure 1. *PRISMA flow diagram illustrating the identification, screening, and inclusion of studies for systematic review.*

Results and Discussion

This section introduces the thematic analysis of the nine gamification studies in Philippine education reviewed. For ease and comprehensiveness, findings are herein displayed in four dimensions: regional distribution, methodology patterns, usual participants, results observed, and gaps in research. Appendix A includes a list of reviewed studies, such as author names, research design, education level, region, and findings.

The spatial distribution of gamification studies in the Philippines shows prominent patterns that reflect the heterogeneity of Philippine learning environments. As seen from the thematic synthesis, studies were carried out in different regions like NCR, Region IV-A, Region VI, Region VII, and more—each with different learning environments and technological competence. These local contexts had a heavy impact on the design, implementation, and acceptance of gamification by the students and teachers. The following analysis takes these contextual effects into account.

Regional Distribution and Contextual Trends

The reviewed studies on gamification in Philippine education represent diverse regional contexts, reflecting variations in technological access, curriculum implementation, and institutional readiness. As presented in Appendix A, the studies were conducted in Regions IV-A, VI, VII, VIII, IX, X, XI, NCR, and one national-level online learning environment. Table 1 below

summarizes the frequency of research distribution across these regions.

Table 1. *Frequency Distribution of Reviewed Studies by Region*

Region	*Commonalities*	*Significance to Gamification Research*	*Patterns Observed*
Region IV-A (CALABARZON) (Laguna, Los Baños)	Urbanizing areas with strong educational infrastructure (e.g., DLSU-Laguna, UPOU), presence of tech-driven schools, access to training and professional development	Regions IV-A served as test beds for innovative learning models (MOOCs, Self-Determination Theory-based design). The culture of technological adoption and policy support boosts experimentation with gamified tools.	Early adoption of gamified learning, emphasis on online platforms and student-centered instruction
Region VI (Negros Occidental)	Provincial but with growing educational technology use, CHED curriculum adherence	Strong localization of tools (e.g., GADIMATH). Teachers and students actively support curriculum-aligned gamified interventions.	Design of curriculum-based gamified apps in math—used both as supplementary and core tools
NCR (Manila)	Urban hub, high access to resources, multicultural and dense academic population	Focus on English learning, flexible teaching methods, learner-centered gamification that enhances performance and motivation	Emphasis on psychological engagement, autonomy, and evaluation of non-STEM gamified instruction
Region VII (Cebu City)	International student population, exposure to global educational standards, English-medium instruction	Research focused on foreign medical students, offering insights into cross-cultural adaptation of gamified systems	Shows gamification's effectiveness across cultures, especially in rigorous fields like medicine
Region VIII (Eastern Samar)	Rural and developing academic institutions with limited resources	Results in mixed findings due to low baseline performance, fewer materials, and possible lack of training for faculty	Reveals the challenge of effectiveness without infrastructure—gamification alone isn't a magic solution
Region IX (Zamboanga Peninsula)	Remote and mixed socio-economic status, dependent on digital learning platforms like GENYO	Study reflects students' adaptability and technical barriers like poor connectivity, highlighting infrastructural inequalities	Digital gamification is promising but highly dependent on stable access and teacher training
Region X (Camiguin, Northern Mindanao)	Rural public schools, very limited access to digital tools, total enumeration of teachers	Despite moderate use, students showed very satisfactory performance—gamification compensated for traditional deficits	Need for equity in tech access, but even minimal gamification use led to positive performance
Region XI (Davao)	Blend of urban-rural populations, strong academic institutions	Offers robust mixed-methods data, showing measurable improvements in learning through badges, points, etc.	Research-rich, with well-executed designs showing scalable outcomes and challenges
Philippines (summary)	Nation-wide trials in MOOCs, English and Math learning, varying infrastructure	Aggregated data contributes to gamification's national impact profile	National research reveals the gap between theory and localized practice

The studied research paints distinct patterns of employing gamification and experiencing it in various Philippine areas. Metropolitan and technologically developed areas like the National Capital Region (NCR) and Region IV-A were found to possess the optimal combination of sound gamification approaches. These research studies followed stringent classical pedagogic models like the Self-Determination Theory (SDT), thus enabling them to attain greater student motivation, academic achievement, and learner autonomy. As an example, the Region IV-A study of the UPOU Massive Open Online Course (MOOC) established a statistically significant relationship ($r = .77$, $p < .01$) between badge-based gamification and student engagement, indicating that carefully designed online gamification can tremendously increase student participation.

However, rural or resource-scarce areas like Region VIII (Eastern Samar), Region IX (Zamboanga), and Region X (Camiguin) suffered due to infrastructural limitations. These problems occasionally hampered the best gamified learning effects. However, students in both settings showed tremendous resilience and accommodation. In Zamboanga, for example, students resourcefully learned to troubleshoot technology problems involving the GENYO platform, while Camiguin students managed to obtain "Very Satisfactory" levels of performance despite the low-resource environment, showing that gamification still has so much promise despite the latter. Furthermore, Region VI (Negros Occidental) had highly positive results employing the locally constructed

GADIMATH app, which was completely in tune with the CHED curriculum and rated "Excellent" by students, illustrating the influence of localized and culture-sensitive gamified measures.

Effectiveness in gamification, then, is not just a matter of technological infrastructure but also of its integration into curricular objectives, pedagogical value of its form, and instructors' preparation. Although some areas, like Region VIII, revealed higher students' scores without statistical distinction, such results affirm the value of methodological quality and implementation quality to constitute gamified instruction as effective or otherwise. Additionally, Region VII (Cebu), through its research on foreign medical students, illustrated that gamification can even cut across cultures and be as successful in specialty and diversified educational environments if carried out effectively. The regional research supports the contention that gamification works best where technological readiness and pedagogical salience overlap. Yet even in less technologically advanced settings, deliberate and place-based application could still yield pedagogical dividends. This is proof of the value of gamification as a portable, multipurpose teaching tool—given that its implementation is contextualized and theory-driven.

Research Methodologies and Designs

The nine reviewed studies employed a variety of research designs, each chosen to align with the specific goals, educational levels, and contextual constraints of the respective researchers. As summarized in Table 1, these studies utilized a range of methodologies including quasi-experimental, phenomenological, descriptive, qualitative, and comparative designs. Most favored quantitative and quasi-experimental approaches, particularly in studies involving larger sample sizes or formal academic assessments, while others employed qualitative and interpretive methods to gain deeper insights into learners' subjective experiences.

Table 2. *Summary of Research Designs Used in the Reviewed Studies*

Article Title	*Method/Design Used*
GADIMATH	Acceleration Application Model
Gamification in English Higher Education (NCR)	Qualitative and Descriptive Research Design
Impact on Learning Outcomes (Region XI)	Mixed-methods / Quasi-experimental (pretest-posttest)
TLE Exploratory Courses (Region IV-A)	Phenomenological / Qualitative Study
Gamification Integration in Science & Math (Region X)	Descriptive-Correlational Design
Math Class Gamified! (Region VIII)	One Group Pretest–Posttest Experimental Design
GENYO E-Learning (Region IX)	Qualitative / Thematic Analysis (Multiple-case study)
Foreign Medical Students (Region VII)	Quasi-Experimental / Quantitative
UPOU MOOCs (Region IV-A)	Quantitative

Quantitative methods were more prevalent in higher education settings—such as in Regions VII, VIII, and XI, as well as UPOU—where research environments often featured larger student populations, standardized instruction, and a need for statistical validation. These studies were typically structured around pretest-posttest formats or experimental comparisons designed to evaluate gamification's impact on academic performance. By contrast, qualitative designs emerged in subjects and contexts where skills, emotions, or learner perspectives were central. For example, studies on TLE in Region IV-A and English language instruction in NCR used descriptive and phenomenological approaches to explore engagement, motivation, and emotional responses—factors that cannot be fully captured through numeric outcomes alone.

In some cases, regions with limited technological resources or less developed infrastructures leaned on interpretive methodologies. Thematic analysis and phenomenological designs, such as those applied in the GENYO platform study from Zamboanga, enabled researchers to understand how learners internalize and respond to gamified environments despite technological constraints. These regions emphasized lived experiences and behavioral observations rather than quantitative outcomes, highlighting how design choices are often driven by contextual realities.

Table 3. *Comparative Analysis of Research Methodologies Across the Reviewed Studies*

Design Type	*Articles That Used It*	*Characteristics*	*Strengths*	*Weaknesses*
Quantitative (Experimental/Quasi-experimental)	Eastern Samar (VIII), Cebu (VII), Region XI, UPOU MOOCs	Uses numerical data, pretest-posttest, statistics (t-test, p-value)	Allows measurable effect size, generalizability	May overlook qualitative experiences or contextual insights
Qualitative (Phenomenological/Descriptive)	TLE (Laguna), NCR English, GENYO	Focuses on lived experiences, themes, meanings	Captures deep, nuanced learner and teacher perspectives	Subjectivity, small samples, may lack measurable generalization
Mixed Methods	Region XI	Combines both statistical outcomes and student experiences	Strong triangulation of findings	Can be complex, needs integration skill
Correlational	Region X (Camiguin)	Examines relationship between	Shows natural associations, good	Doesn't confirm cause-effect

		gamification use and performance	for real-world settings	relationship
Specialized Models	GADIMATH (Acceleration App Model)	A project-based design for tool development and user evaluation	Custom fit for app-based education	May lack broader comparative perspective

The use of innovative models, such as the GADIMATH Acceleration App in Region VI, also introduced hybrid research strategies. These designs serve both developmental and evaluative purposes—testing the usability and instructional effectiveness of localized ed-tech tools. Descriptive-correlational studies, such as the one from Camiguin (Region X), demonstrated how natural classroom conditions could still yield valuable insights, even without strict experimental control.

This variation in methodological approaches reflects not only differences in research goals but also the academic priorities and structural limitations within each region. Quantitative designs were predominantly seen in research-driven universities and urban areas like Cebu and UPOU, where the infrastructure supports controlled environments and rigorous data collection—ideal for generating policy-relevant evidence. Meanwhile, qualitative and phenomenological designs were more commonly found in regions like Laguna, Zamboanga, and NCR, where access to technology varied and learner perspectives played a crucial role in shaping instruction. These studies underscore the importance of empathetic, learner-centered insights in contexts where gamification is still being adapted.

Ultimately, no single methodology dominated the field. Instead, each design was purposefully selected based on institutional capacity, subject focus, research intent, and learner needs. This methodological diversity enriches the overall landscape of gamification research in the Philippines, providing a multi-dimensional understanding of how gamified instruction operates across varied educational settings. It also reinforces the value of combining both empirical measurement and learner narratives—suggesting that future studies would benefit from mixed-methods designs that can holistically capture gamification's cognitive, behavioral, and emotional impact.

Respondent Profiles and Sampling Techniques

The selected studies displayed considerable variation in terms of respondent profiles, sampling strategies, and demographic characteristics. As presented in Table 4, most studies focused on student participants at varying academic levels, using diverse sampling methods reflective of their research designs and contextual limitations.

Table 4. *Summary of Respondents, Sampling Methods, and Characteristics of the Reviewed Studies*

Study Title	*Respondents*	*Sampling Method*	*Characteristics*
GADIMATH (Region VI)	10 teachers + 15 students (25 total)	Not specified (purposive implied)	Small sample, multi-perspective (teachers and students), focused on usability
Gamification in English (NCR)	English learners in higher education	Not detailed (descriptive)	General group, no clear number or sampling frame, lacks clarity
Learning Outcomes (Region XI)	133 undergrad students from Manila	Quasi-experimental	Large sample, structured testing with pretest-posttest
TLE Phenomenological (Region IV-A)	7 Grade 7 students (ages 11–13)	Purposive + snowball sampling	Very small, deep narrative data, qualitative richness
Gamification & Academic Performance (Region X)	All junior high school science/math teachers (3 districts)	Total enumeration	Complete population sampling, good for rural insights
Math Class Gamified! (Region VIII)	28 BEED students (Eastern Samar State University)	Convenience / One group pretest-posttest	Small single-group focus, localized
GENYO e-Learning (Region IX)	120 Grade 7–10 students using GENYO	Not clearly defined	Larger size, varied age, platform-based users
Foreign Med Students (Region VII)	415 freshman medical students	Quasi-experimental	Largest group, focused on international population
UPOU MOOCs (Region IV-A)	201 enrolled; 145 active participants	Self-selected participants in MOOC	High dropout (28.86% completion), realistic online behavior

In sample size, there was wide variation among the studies reviewed. Some of the quantitative approaches, like those applied in Regions VII and XI, employed large samples—in up to 415 respondents—so that statistical verification of gamification's efficacy could be achieved. Conversely, qualitative or phenomenology research-based studies had smaller samples, for instance, the Region IV-A TLE study with just seven participants, with more focus on depth of information rather than generalizability. Heterogeneity of sample size mirrors method variance and varying research objectives across studies.

Target population also exhibited noticeable patterns. A majority of the studies used students as subjects, even junior high school, senior high school, or tertiary students. Fewer studies with teachers as direct subjects were conducted, and only the GADIMATH study and the Region X pilot examined teachers as direct subjects. The imbalance reflects the lack of balance in current literature

and cautions that future research will need to put more focus on teacher opinion within gamification practice. A single study, conducted in Region VII, was notable for enrolling foreign medical students, providing a richness of cross-cultural input and further showing the extendability of gamification to student populations from diverse backgrounds.

Study designs did not align with sampling methods. Qualitative studies, such as the Region IV-A and GENYO platform studies, used purposive and snowball sampling most often, where researchers were able to invite participants with relevant experience to the study. Although quasi-experimental and total enumeration methods were frequently applied in quantitative studies to allow systematic and exhaustive data collection, they did not all use well-documented sampling protocols. For instance, some of them, such as the NCR English study and the GENYO study, did not explain sufficiently how samples were selected, thereby decreasing the replicability and transparency of methodologies in these studies.

Educationally, gamification was tested on a wide range. Junior high school pupils were where Region IV-A, Region IX, and Region X studies focused. Senior high school and first-year college students were where Region VI, Region VIII, and Region XI studies focused. Region VII's study of graduate medical students, and Region IV-A UPOU's research on students studying through MOOC, also took gamification studies a notch higher and more encompassing. This heterogeneity suggests that gamification is not limited to one level of education but may be applicable to heterogeneous learning environments.

The heterogeneity of participants and sampling procedures across the reviewed studies reflects a heterogeneous but asymmetrical gamification research landscape in the Philippines. Well-designed large samples generated stable, generalizable data appropriate for educational policy and curriculum development. Small, qualitative samples gave rich psychological and affective information required to learner-centered instructional design. Many studies, however, had methodological flaws by way of loosely specified or underreported sampling plans. In spite of that, representation of non-traditional student groups suggests gamification's potential for cross-cultural and scalable implementations. These results indicate that greater balance in sampling, more open methodology, and more comprehensive research designs incorporating both student and teacher views will be required in future research.

Conclusions and Pedagogical Implications

The reviewed studies consistently affirm that gamification has a transformative potential in education—enhancing student motivation, engagement, and, in many cases, academic performance. As outlined in Table 5, key findings vary across regional contexts, yet several unifying themes emerge from the collective analysis.

Table 5. *Summary of Key Findings from Reviewed Studies Across Philippine Regions*

Study Title	*Region*	*Key Results/Findings*
GADIMATH	Region VI	Game rated "Excellent" by both teachers and students; highly user-friendly and educational; mean feature scores between 4.79–4.91/5
Gamification in English	NCR	Improved learning performance, motivation, autonomy; fostered psychological engagement
Learning Outcomes Study	Region XI	Test scores rose from 65.4 to 78.9; motivation scores increased; points and badges were most effective
TLE Gamification	Region IV-A	Boosted motivation, engagement, and higher-order thinking; supported autonomy, competence, and relatedness
Camiguin Integration Study	Region X	70% learners scored 85–89 (very satisfactory); weak positive correlation between gamification and performance
Math Class Gamified!	Region VIII	Slight improvement (mean rose from 1.93 to 2.29), but statistically insignificant; learning gains limited
GENYO E-learning	Region IX	Games like Triviatron, Crossword were fun and educational; technical issues noted; coping strategies emerged
Foreign Medical Students	Region VII	PCM performance improved significantly; students cited enhanced engagement, retention, collaboration
UPOU MOOCs	Region IV-A	Badge engagement correlated strongly (r = .77) with task completion; completion rate was 28.86%; reactions were mixed (some liked it, some found it forced)

One of the most significant outcomes identified was gamification's ability to improve academic performance, particularly in well-supported educational environments. Studies from Region XI, VII, and VI reported marked improvements in learner outcomes. In Region XI, students' mean scores increased significantly from 65.4 to 78.9 following the integration of structured gamified instruction. Similarly, in Region VII, 415 foreign medical students demonstrated large-scale academic gains, while the GADIMATH study in Region VI revealed exceptionally high satisfaction ratings, ranging from 4.79 to 4.91 on gamified feature effectiveness. These results suggest that when implemented with thoughtful alignment to curriculum and context, gamification serves as an effective tool for academic enhancement. However, this is not universal—Region VIII, for example, exhibited statistically insignificant gains, highlighting that gamification's success depends on multiple variables, including design quality, content integration, and learner readiness.

Beyond test scores, the most consistent finding across all studies was the elevation of student motivation, engagement, and emotional involvement. In nearly every context, gamification fostered increased learner participation, enjoyment, and ownership over the

learning process. Region IV-A's study on TLE highlighted improved critical thinking and effort. The NCR study confirmed the alignment of gamified experiences with Self-Determination Theory (SDT), showing heightened autonomy and psychological involvement. In Zamboanga (Region IX), the GENYO platform encouraged participatory learning, while Region VII students expressed feelings of achievement, collaboration, and fun. These findings reinforce gamification's emotional appeal—particularly among Generation Z learners who respond positively to interactive, reward-driven environments.

Another key insight relates to the importance of game element selection and design quality. Effective gamification was consistently tied to tangible progress indicators such as points, badges, and leaderboards. Region XI specifically cited points and badges as the most influential game elements. The UPOU MOOC study in Region IV-A demonstrated a strong statistical correlation between badge accumulation and experience point (XP) gains, emphasizing the motivational power of visual progress tracking. GADIMATH and GENYO similarly used clearly structured indicators to guide student achievement. These findings imply that design elements must be intentional, measurable, and psychologically rewarding to ensure engagement longevity.

Despite these strengths, the studies also revealed barriers and limitations that must be addressed. In Region IX, students faced technical challenges, including weak connectivity, forgotten passwords, and insufficient instruction clarity within the GENYO platform. UPOU participants reported gamification overload and low course completion rates (only 28.86%), indicating that excessive or poorly contextualized gamification can be distracting or even counterproductive. Meanwhile, in Camiguin (Region X), gamification showed only a weak correlation with academic performance, suggesting that it is not a stand-alone solution, but rather one part of a broader instructional strategy.

Collectively, these findings suggest that gamification's pedagogical value is substantial—but context-dependent. It thrives in environments with solid technological infrastructure, motivated learners, and well-trained teachers capable of integrating it meaningfully into the curriculum. While motivational gains are almost universally observed, academic benefits vary depending on design sophistication, subject matter, and instructional alignment. Poorly implemented gamification—especially when rushed or unsupported—can lead to confusion, disengagement, or technical disruptions.

From a pedagogical standpoint, this review affirms that gamification should not be viewed as a novelty or mere add-on, but rather as a purposeful instructional tool grounded in theory and designed with learner experience in mind. Educators and policymakers are encouraged to adopt gamification strategies that emphasize clarity, progression, and feedback while remaining sensitive to contextual challenges. When implemented with intentionality, gamification not only motivates learners but also redefines the classroom into a more interactive, personalized, and emotionally resonant learning space.

Drawing from the findings and results presented in the foregoing section, the present section of the review integrates the universal conclusions and pedagogical implications derived from the nine studies being reviewed. These findings constitute a voice of gamification research in the Philippine classroom and pose serious considerations for possible pedagogical interventions and policy formulation. The summary of salient conclusions per study is displayed in Table 6.

Table 6. *Study Conclusions and Pedagogical Implications of the Reviewed Literature*

Study Title	*Region*	*Summary of Conclusion*
GADIMATH	Region VI	GADIMATH effectively supplements discrete math learning and aligns with CHED curriculum; enhances engagement and user experience.
English Learners in HEI	NCR	Gamified English instruction boosts performance and motivation, but calls for continued research and personalized teacher strategies.
Gamification & Learning Outcomes	Region XI	Educational gamification improves engagement and achievement, especially via points and badges; individual differences matter.
TLE Gamification	Region IV-A	Gamification answers the mismatch between traditional teaching and modern learners; aligns with Self-Determination Theory (SDT).
Gamification Integration (Camiguin)	Region X	Gamification positively influences performance, though effects are moderate; broader access and training are essential.
Math Class Gamified!	Region VIII	No significant improvement; gamification didn't improve problem-solving in non-routine math. Encourages further testing.
GENYO E-learning	Region IX	Gamification creates participatory classrooms; coping strategies for tech issues are essential for success.
Foreign Medical Students	Region VII	Gamification boosts learning, enjoyment, retention, and collaboration in medical education; it's highly effective across cultures
UPOU MOOCs	Region IV-A	Gamification increases motivation and task completion but mixed user feedback suggests the need for interactive improvements.

Across the reviewed literature, a central conclusion emerges: gamification is most effective when aligned with curriculum objectives and learner needs. In studies such as Region VI's GADIMATH initiative and Region VII's work with medical students, the integration of gamified tools directly into instructional goals produced more meaningful and impactful outcomes. In the same way, the UPOU and Region IV-A TLE study highlighted that gamification should be equally a reflection of Generation Z students' online tastes and psychological inclination—specifically, their interactivity, autonomy, and engagement requirements. These results confirm

that gamification is not just an appendage in the classroom, but a learning strategy that merits discussion and incorporation into education.

Many studies identified that gamification is designed to address a very large gap between the old modes of teaching and the learning styles of the present day. The Region IV-A TLE study contemptuously criticizes the inefficiency of archaic, passive teaching, while the GENYO and English-language studies bear witness to the new trend toward more student-participatory and student-centered styles. Such observations position gamification not as a gimmick but as a pedagogical bridge, one that brings teaching into the modern era and speaks about how learners today process information.

But the research in question also identifies the variability and the limitation in the effectiveness of gamification. In Region VIII (Eastern Samar), researchers did not come up with any statistically significant academic achievement, while Region X indicated that even if gamification is effective, its impact was only slight. These confessions are crucial because they represent the reality of the fact that gamification is not a one-size-fits-all solution. It operates on the basis of building careful design, instructional alignment, support from technology, and learning objectives. It supports the necessity for adaptive strategies and real-world expectations for applying gamified instruction.

In addition to learning outcomes, the research as a whole underscores the learner experience as the top priority. Distance and online learning platforms like GENYO and UPOU illustrated how emotional engagement, curiosity, teamwork, and student satisfaction are equally vital learning goals. The appeal of gamification is less about increasing test scores and more about creating healthy classroom cultures where students become empowered, engaged, and motivated. A recurring theme among the conclusions examined is that personalization and continuous development are required. A study by NCR and Region XI, for instance, underscores the need to adapt gamified materials to the local context, enhance teacher professional growth, and strengthen digital platforms. Generally, however, the agreement is that successful gamification must possess a responsive, dynamic instructional model-one underpinned by ongoing development, reflective teaching, and institutional investment.

The findings offer a rich portrait of gamification as an effective yet fragile instrument. Based on theory (Self-Determination Theory), rooted in curriculum, and concerned with student lived experience, gamification can revolutionize classrooms. But it depends on intentionality, teacher expertise, and responsiveness to context. Future applications need to be ambitious but flexible—raising not just academic performance but also enjoyment, agency, and humanness of learning.

Conclusion

This systematic review integrated evidence from nine studies from across regions in the Philippine learning environment, each of which explored the deployment and effects of gamified components in a range of learning environments. The evidence is conclusive that, if well-designed with intent and strategically aligned with the learning goals, these components—points, badges, leaderboards, and markers of progress—can radically boost students' motivation, motivation, and, in most instances, academic outcomes. If used with caution, gamified components allow for learner control, active engagement, and emotional investment in learning. They are especially popular among Gen Z students, who thrive in interactive as well as online settings.

It was also discovered, though, from the review that gamified components are not flawless at all occasions. Their influence is very susceptible to issues like curriculum alignment, instructional clarity, subject matter complexity, and institution technology readiness. Where design was cosmetic, infrastructure was minimal, or teacher facilitation failed to materialize, the positive effects of gamification were lost—sometimes triggering cognitive overload or learner disengagement. These results emphasize the importance of looking at gamified instruction not as an entertaining exercise, but rather as a deliberate pedagogical strategy, ideally on the basis of theoretical models like Self-Determination Theory and in relation to the particular requirements of teachers and students.

Future studies will need to center on the design of customized gamified instructional material that is compatible with national curricular standards but still flexible to local conditions. Educators should not just be implementers, but co-designers of gamified learning, facilitated by intensive professional development and collaborative design. Research designs need to broaden to accommodate mixed-method and longitudinal designs that allow researchers to test for both short-term and long-term effects while based on tested educational theory. Moreover, scientific study is required to explore how gamified features operate in every field and group of students, including early childhood education, indigenous societies, and postgraduate learning environments, so that their full potential and scope can be fully appreciated. Gamified features are not just a new technological add-on—they're a sign of a shift toward a more engaging, student-centered model of education. With good design, context sensitivity, and implementation backed by evidence, these aspects can be at the core of inclusive, responsive, and transformational pedagogical approaches to the Philippine education system.

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Affiliations and Corresponding Information

Regine Grace Guisadio
Cebu Technological University
Moalboal Campus – Philippines

Apple Jane Tordos
Cebu Technological University
Moalboal Campus – Philippines

Mitch Pocdol
Cebu Technological University
Moalboal Campus – Philippines

Francine Lou Taboada
Cebu Technological University
Moalboal Campus – Philippines

Yhena Kyla Petin
Cebu Technological University
Moalboal Campus – Philippines

Lovella Asentista
Cebu Technological University
Moalboal Campus – Philippines

Lyn Jane Sumampong
Cebu Technological University
Moalboal Campus – Philippines

Febverly Catacutan
Cebu Technological University
Moalboal Campus – Philippines

Ermie Gil Catamco
Cebu Technological University
Moalboal Campus – Philippines

Katrina Delatado
Cebu Technological University
Moalboal Campus – Philippines

Alona Lerio
Cebu Technological University
Moalboal Campus – Philippines

Maria Luz T. Villanueva, MAEd
Cebu Technological University
Moalboal Campus – Philippines

Cyril A. Cabello, PhD
Cebu Technological University
Moalboal Campus – Philippines