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# Gamification Teaching Strategy and its Effect to Learners' Classroom Engagement in Cabiao, Nueva Ecija

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Abstract

This research examined the impact of gamification teaching practices on student engagement in designated public elementary schools in Cabiao, Nueva Ecija. It specifically investigated gamification tactics, including digital gamification, that influenced the cognitive, emotional, behavioural, and social aspects of classroom participation. The research utilised a quantitative descriptive design, employing a survey instrument approved by specialists, and gathered responses from fourth-grade pupils. The findings indicated a substantial correlation between the gamification teaching technique and students' participation in the classroom. A substantial correlation existed between the gamification teaching technique and cognitive engagement. A substantial correlation existed between the gamification teaching technique and behavioural engagement. A substantial correlation existed between the gamification teaching technique and social engagement. A substantial correlation existed between the gamification teaching technique and emotional engagement. The research indicated that the gamification teaching technique positively influenced learners' engagement in the classroom. In light of the findings and conclusions, it is recommended that educators persist in integrating diverse gamification strategies—such as storytelling, simulations, collaborative games, and digital incentives—to enhance the engagement and significance of courses.

Article Info

*Keywords: Polytechnic University of the Philippines–Cabiao Campus, Bachelor in Elementary Education, Gamification, Cognitive Engagement, Behavioral Engagement, Social Engagement, Emotional Engagement*

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## INTRODUCTION

Learning engagement affects student interest, participation, and academic progress. Bond et al. (2020) found that active pupils retain more, think critically, and thrive academically. Many teachers used gamification to engage students. Non-game tasks, rewards, badges, and points were incorporated. Traditional teaching methods bored many elementary school students, lowering grades and commitment (Fredricks et al., 2019). Learners should enjoy gamification (Sailer et al., 2017). Gamification engages students by making activities entertaining, competitive, and rewarding (Landers, 2019). Students who learned for personal growth and success were more intrinsically motivated (Ryan & Deci, 2017). Gamified learning promotes student creativity, critical thinking, cooperation, and problem-solving (Buckley & Doyle, 2016; Kim et al., 2018). It engaged students and improved learning (Huang & Soman, 2016). Gamification had numerous issues. I loved how it challenged, gave immediate response, and was current. But it has several downsides. Sánchez-Mena & Marti-Parreño (2017) found that less competitive students failed due to high competition and an emphasis on incentives above learning goals. Poor schools struggle with ICT. They can't use computers or slow internet (Faghihi et al., 2021). The programme needed expensive and time-consuming teacher training (Bicen & Kocakoyun, 2018). Gamification helped personalize education to different students despite these issues (Landers, 2019). For 21st-century learners, it promoted independent learning (Kim et al., 2018). However, traditional instructors' criticism, ethical worries regarding excessive use, and the danger of gamification abuse may hamper its effectiveness (Buckley & Doyle, 2016). This study examined how gamification affects low-engagement elementary students in Cabiao, Nueva Ecija, at four local schools. Haackiewicz et al. (2016) suggest primary school fostered academic success and a passion of learning. Gamification's impact on learner engagement helps educators construct more engaging and effective student-centered teaching approaches.

## REVIEW OF LITERATURE

Gamification is a proven approach to improve motivation, engagement, and learning (Rayan et al., 2024; Fatemah, 2024). Gamification enhances learning with points, badges, leaderboards, challenges, and incentives. This fosters pride, competition, and advancement, keeping people motivated (Zhao et al., 2016; Huseman, 2023). The Four-Dimensional Student Involvement Model (Bowden et al., 2019) emphasises behavioral, cognitive, emotional, and social engagement in student learning. Gamification improves these traits by encouraging cognitive engagement, problem-solving, involvement, perseverance, enjoyment, pride, and teamwork. Piaget (1936) and Vygotsky (1978) emphasize active learning and social engagement, while Deci and Ryan's (1985) Self-Determination Theory emphasizes intrinsic motivation. Gamification's goals match these. Gamification can enhance engagement in various ways (Landers, 2014; Buckley & Doyle, 2016), but it's crucial not to focus too much on competition and to encourage everyone to participate, especially in diverse classes.

## METHODOLOGY

Our demonstration approach is crafted to proficiently illustrate the research design, data collection methods, and analytical techniques employed in investigating the impact of gamification teaching practices on classroom engagement among Grade 4 students in Cabiao, Nueva Ecija. The methodology is organised into the subsequent principal phases:

### 1. Objective Definition

This study aimed to assess the impact of gamification teaching practices on the classroom engagement of Grade 4 students in selected public elementary schools in Cabiao, Nueva Ecija. The objective was to investigate the correlation between gamification strategies—namely narrative, simulations, team-based games, and digital rewards—and four dimensions of engagement: cognitive, behavioural, emotional, and social. The study tackled issues including low participation, diminishing motivation, and restricted collaborative learning chances by suggesting the incorporation of game-based aspects into instructional methods. Success was quantified via statistical analysis of correlations between gamification and engagement metrics, assessment of weighted mean

scores, and validation from educators, who affirmed the practical significance of gamification in improving classroom participation and interaction.

**2. Scenario Development**

The research was conducted in four public elementary schools—San Fernando Sur, San Fernando Norte, Entablado, and Palasinan—which were selected to reflect diverse classroom environments within Cabiao, Nueva Ecija. These schools were chosen because they serve mixed-ability learners and actively explore innovative teaching strategies. The study focused on Grade 4 pupils, a level where engagement plays a critical role in sustaining academic interest. Teachers noted that while students enjoyed certain interactive activities, sustained participation was inconsistent. The classroom scenarios examined in the study reflected real-life challenges such as balancing competition and collaboration, adapting activities to technology availability, and maintaining inclusivity.

**3. Setup and Configuration**

A total of 201 Grade 4 pupils were selected using random sampling via the fishbowl technique to ensure equal selection probability. Data were gathered using a researcher-made questionnaire validated by experts in educational research. The instrument had three parts: demographic profile, teachers' use of gamification strategies, and learners' engagement in cognitive, behavioral, emotional, and social dimensions. A five-point Likert scale (1–Strongly Disagree to 5–Strongly Agree) measured responses, and reliability testing using JAMOVI software yielded a Cronbach's alpha of 0.766, indicating high internal consistency. Permissions to conduct the study were granted by Dr. Ronaldo A. Pozon, Division Superintendent of Nueva Ecija, Dr. Noemi C. Sagcal, District Supervisor, and all participating school principals. Ethical clearance was secured from the University Research Ethics Committee. Parental consent and school approval ensured that student rights and privacy were protected.

**4. Step-by-Step Execution**

The study followed a structured sequence to ensure clarity and validity. First, the researchers obtained the necessary approvals and scheduled data collection dates in coordination with the school administration. Next, the questionnaires were personally administered to the selected pupils during regular class hours, with instructions clearly explained. Teachers were present to provide classroom support and ensure understanding, but they did not influence student responses. Upon completion, questionnaires were retrieved immediately to prevent loss or alteration of data. The data were then encoded and prepared for statistical analysis, focusing on the correlation between gamification strategies and each engagement dimension.

**5. Data Collection**

Primary data were obtained from the completed questionnaires, while secondary information, such as school profiles, provided contextual background. The researchers recorded weighted mean scores for each engagement dimension and calculated Pearson's r correlation coefficients with corresponding p-values to assess statistical significance. Data collection adhered to ethical standards, ensuring accuracy, completeness, and confidentiality.

**6. Evaluation and Iteration**

The data analysis revealed significant positive correlations between gamification strategies and all four engagement dimensions: cognitive ($r = 0.437$, $p < .001$), behavioral ($r = 0.467$, $p < .001$), emotional ($r = 0.451$, $p < .001$), and social ($r = 0.453$, $p < .001$). The results confirmed that gamification enhances multiple aspects of classroom engagement, particularly in fostering participation, motivation, and peer collaboration. These findings were interpreted considering existing literature, and recommendations for classroom application were refined to suit varying resource levels and student needs.

**7. Conclusion and Next Steps**

The demonstration concluded with reflections on the benefits of the research and its instructional implications. While gamification teaching strategies such as storytelling, simulations, team-based games, and digital rewards were rated from "Agree" to "Strongly Agree" across all dimensions of engagement, the findings revealed

statistically significant positive correlations between gamification and cognitive, behavioral, emotional, and social engagement. This confirms that gamification is an effective approach for fostering active participation, enhancing motivation, and strengthening collaborative learning in the classroom. However, the results also suggest that gamification should be strategically integrated with other evidence-based teaching methods to address varied learning styles and ensure inclusivity. Clear and actionable recommendations emerged, including incorporating gamified activities into lesson plans weekly, using both digital and low-tech game elements to accommodate different school resources, and providing opportunities for peer collaboration and friendly competition. The report also recommends sustained professional development for teachers in game-based learning design, as well as partnerships with educational organizations and local government units to support resource development, technology integration, and the scaling of gamification practices across schools.

## RESULTS & DISCUSSION

The study found that all four measured dimensions of classroom engagement—cognitive, behavioral, emotional, and social—had significant positive correlations with learners' academic engagement when gamification teaching strategies were applied. Emotional engagement showed the strongest agreement among respondents, followed by behavioral, social, and cognitive engagement. These results affirm that students who are more engaged—whether through active participation, positive emotional responses, collaboration, or critical thinking—tend to achieve better learning outcomes. Where correlations were moderate, it suggests that other factors such as teaching style, learning resources, and classroom environment may also influence performance. Overall, the findings support the integration of engagement-focused strategies like gamification into teaching to enhance participation, motivation, and academic success.

## CONCLUSION

This study has highlighted the principal characteristics and advantages of employing gamification as an instructional method, showcasing its efficacy in augmenting learners' engagement in the classroom. The findings demonstrate that game components like prizes, challenges, and interactive activities enhance motivation and engagement, hence illustrating the value of gamification in both teaching and learning processes. It enhances efficiency in classroom instruction while aligning with the educational objective of fostering relevant, pleasant, and student-centered learning experiences. The findings confirm that gamification can enhance learner engagement and can be customized to address the specific requirements of varied educational environments.

## RECOMMENDATIONS

Teachers should integrate gamification strategies into their lessons to enhance learner engagement. Weekly gamified activities, including point-based challenges, group competitions, and interactive quizzes, help sustain motivation and involvement. Subsequent studies may investigate the application of gamification across different educational levels, disciplines, or larger cohorts to further substantiate and broaden the conclusions of this study.

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