

Effect of gamified learning strategy on the writing proficiency of Grade 11 learners

Marylen E. Dapat*

Filamer Christian University, Inc., Roxas City, Capiz, Philippines

ABSTRACT

This quasi-experimental study aims to determine the effect of the Gamified Learning Strategy on the Writing Proficiency of Grade 11 STEM students of Filamer Christian University, Inc. for the School Year 2025–2026. Seventy-nine (79) students serve as participants in this study. Of this number, 42 students are assigned to the experimental group and are taught using the gamified learning strategy, while the remaining 37 students are taught using the conventional teaching approach. Students in the control and experimental groups are matched based on their second (2nd) grading English grade to address the issue of collective similarity. This study makes use of a 25-item researcher-made test to determine the students' writing proficiency in English in both the control and experimental groups before and after the intervention is introduced. The data obtained from the study are subjected to statistical analysis using the Statistical Package for Social Sciences (SPSS) software. Mean, standard deviation, and t-test are employed to determine and compare the results of the study, and inferential tests are set at a 5% level of significance. The findings of the study reveal that before the introduction of the intervention, the control group manifests a moderate level of writing proficiency, similar to that of the experimental group. Furthermore, the posttest scores of the control group reveal a high level of writing proficiency, while the experimental group also demonstrates a high level of writing proficiency after being exposed to the intervention. The t-test reveals that there is no significant difference between the pretest scores of the control and experimental groups, confirming their comparability at baseline. Moreover, a significant improvement is observed within both groups from pretest to posttest. In addition, the results show a significant difference between the posttest scores of the control and experimental groups.

Keywords: Gamified learning strategy, writing proficiency, Grade 11 learners.

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INTRODUCTION

Writing is a fundamental competency that enables learners to communicate ideas effectively, construct logical arguments, and demonstrate academic understanding across disciplines. Within the Philippine K to 12 curriculums, writing occupies a central role in developing learners' communication skills and preparing them for higher education and future professional endeavors. Despite its recognized importance, many Grade 11 learners continue

*Corresponding author / Email: marylendapat.school@gmail.com

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to experience difficulties in producing effective written compositions. Common challenges include weaknesses in grammar, organization, coherence, vocabulary, and the overall clarity of written expression, all of which limit students' ability to communicate ideas accurately and effectively. These persistent concerns indicate that developing writing proficiency requires not only mastery of technical writing conventions but also instructional approaches that actively engage learners in the writing process and sustain their motivation to improve.

Traditional writing instruction in many classrooms remains predominantly teacher centered, relying extensively on lectures, drills, and corrective feedback. Although these approaches contribute to learners' understanding of grammatical rules and writing mechanics, they frequently provide limited opportunities for meaningful participation and authentic engagement in writing activities. Consequently, students often perceive writing as a difficult, repetitive, and intimidating task, leading to reduced motivation, limited classroom participation, and slower improvement in writing proficiency. These concerns become increasingly significant at the senior high school level, where learners are expected to complete more sophisticated academic writing tasks that demand higher levels of organization, critical thinking, and effective communication. The literature therefore suggests that conventional instructional practices alone may be insufficient to address the increasingly complex writing demands placed upon senior high school learners, highlighting the need for more interactive and learner centered pedagogical approaches.

Responding to these educational challenges, contemporary teaching increasingly emphasizes instructional strategies that integrate motivation, interactivity, and technology to create more engaging learning experiences. Among these innovations, gamified learning has emerged as a promising instructional approach that incorporates game-based elements, including points, badges, levels, challenges, and immediate feedback, into educational activities without transforming lessons into complete games. Rather than replacing traditional instruction, gamification enriches existing learning tasks by making them more engaging, interactive, and rewarding. Applied to writing instruction, gamified learning transforms conventional writing activities into dynamic experiences that encourage active participation, continuous revision, persistence, and sustained effort. Previous research demonstrates that gamified instructional approaches significantly enhance learners' motivation, classroom engagement, and overall academic achievement by providing immediate feedback and meaningful rewards that reinforce learning behaviors (Subhash & Cudney, 2018). Likewise, empirical studies indicate that gamified writing instruction increases learners' willingness to participate in writing activities, reduces writing anxiety, and contributes to improved writing performance and overall learning outcomes (Liu et al., 2020; Dacumos, 2021). These converging findings suggest that gamification offers considerable potential for addressing the motivational and instructional limitations associated with conventional writing instruction.

Writing proficiency, within this context, encompasses learners' ability to produce clear, coherent, organized, and meaningful written compositions through the integration of grammatical accuracy, effective organization of ideas, content development, and clarity of expression. The acquisition of these competencies requires sustained practice, constructive feedback, and meaningful engagement with authentic writing tasks. However, without appropriate instructional support and sufficient motivation, many learners struggle to strengthen these interconnected writing skills. The literature therefore indicates that improving writing proficiency depends not only on repeated writing practice but also on creating instructional environments that actively encourage learners to participate, revise, reflect, and progressively improve the quality of their written work.

The theoretical foundation of the present study integrates several complementary learning theories that collectively explain how gamified learning contributes to the development of writing proficiency. Constructivist Learning Theory, as advanced by Piaget

and Bruner, views learning as an active process through which learners construct knowledge by engaging directly with meaningful experiences. From this perspective, gamified writing activities provide opportunities for learners to actively explore ideas, develop writing skills, and refine their understanding through continuous practice, reflection, and problem solving. This active engagement is further strengthened by Vygotsky's Sociocultural Theory, which emphasizes that learning is enhanced through meaningful social interaction, collaboration, and guided participation. Gamified learning environments naturally facilitate collaborative writing activities, peer feedback, and teacher guidance, thereby enabling learners to strengthen their writing abilities within supportive social contexts that promote shared learning and cognitive development.

The motivational dimension of learning is further explained through Self Determination Theory proposed by Deci and Ryan, which emphasizes that learners' intrinsic motivation is sustained when their needs for autonomy, competence, and relatedness are fulfilled. Gamified learning addresses these psychological needs by providing learners with opportunities to make choices, experience progressive achievement through attainable challenges, and interact meaningfully with peers and teachers. Closely related to this perspective is Flow Theory developed by Csikszentmihalyi, which explains that optimal learning occurs when individuals become deeply immersed in purposeful activities characterized by clear objectives, immediate feedback, and appropriately balanced challenges. Gamified writing activities create these conditions by maintaining learners' concentration, encouraging sustained engagement, and promoting persistence throughout the writing process. Together, these motivational theories explain how gamification enhances learners' willingness to participate actively in writing tasks while fostering sustained commitment to continuous improvement.

The cognitive dimension of writing development is further supported by Bloom's Taxonomy, which recognizes writing as a higher order cognitive skill requiring learners to analyze information, evaluate ideas, and create meaningful written compositions. Gamified instructional activities can therefore be designed progressively, enabling learners to develop fundamental writing skills before advancing toward more complex forms of written expression. Complementing this perspective, Krashen's Affective Filter Hypothesis emphasizes that positive emotional experiences and reduced anxiety facilitate more effective language acquisition. Because gamified learning provides an enjoyable and supportive environment characterized by manageable challenges and encouraging feedback, it helps lower learners' affective barriers and promotes greater confidence in expressing ideas through writing. Reinforcement Theory developed by Skinner likewise explains that positive reinforcement strengthens desired learning behaviors through rewards and timely feedback, while Bandura's Self Efficacy Theory emphasizes that learners' confidence in their abilities significantly influences their persistence, motivation, and academic performance. Visible indicators of progress, recognition of achievement, and successful completion of writing tasks within gamified environments strengthen learners' beliefs in their writing capabilities and encourage continued engagement with increasingly challenging writing activities.

Collectively, these theoretical perspectives provide a comprehensive explanation of how gamified learning creates instructional environments that simultaneously support cognitive development, social interaction, emotional well-being, sustained motivation, and writing competence. Constructivist Learning Theory emphasizes active knowledge construction, Sociocultural Theory highlights collaborative learning, Self Determination Theory and Flow Theory explain motivational engagement, Bloom's Taxonomy addresses progressive cognitive development, Krashen's Affective Filter Hypothesis emphasizes emotional readiness for learning, Reinforcement Theory explains the value of rewards and

feedback, and Self Efficacy Theory underscores the importance of confidence in academic performance. Their convergence establishes a strong conceptual foundation for understanding how gamified instructional strategies influence learners' writing proficiency.

Guided by these complementary theoretical perspectives and supported by existing empirical evidence, the present study is founded on the assumption that gamified learning strategy serves as the independent variable that positively influences Grade 11 learners' writing proficiency, the dependent variable. By integrating motivational elements, collaborative experiences, structured progression, constructive feedback, and meaningful learner engagement, gamified learning is expected to enhance learners' grammatical accuracy, organization of ideas, content development, and overall clarity of written expression. Despite growing international evidence supporting the effectiveness of gamified instruction, relatively limited research has examined its influence on writing proficiency among Filipino senior high school learners. This gap underscores the significance of the present investigation, which seeks to contribute empirical evidence regarding the effectiveness of gamified learning strategy in improving the writing proficiency of Grade 11 learners while providing practical insights for teachers seeking innovative approaches to strengthen writing instruction in contemporary classrooms.

Statement of the problem

Generally, this study was designed to investigate the Effects of Gamified Learning Strategy on the Writing Proficiency of Grade 11 learners at Filamer Christian University, Inc., for the School Year 2025–2026.

Specifically, it also seeks to answer the following questions:

1. What is the level of writing proficiency of Grade 11 students in the pre-tests and posttests of the control and the experimental group?
2. Is there a significant difference between the pre-tests of the control and the experimental group?
3. Is there a significant difference between the pretests and posttests of the control and the experimental groups?
4. Is there a significant difference between the posttests of the control and the experimental groups?

METHODOLOGY

This chapter is divided into three parts, namely the purpose of the study and research design, the methods, and the statistical data analysis procedures. The purpose of the study and research design restates the purpose of the study, describes the research design, and enumerates the variables used in the study. The methods section describes the participants, the data gathering instrument, and the research procedure employed in the study. The statistical data analysis procedures section discusses the procedure for scoring and the statistical tools used to test the hypotheses.

This study was conducted to determine the effect of a gamified learning strategy on the writing proficiency of Grade 11 learners at Filamer Christian University, Inc. during the School Year 2025–2026. Specifically, it examined whether the integration of game-based elements such as points, badges, progress levels, leaderboards, and rewards significantly improved students' writing skills in terms of content, organization, vocabulary, language use, and mechanics. In this context, the gamified learning strategy and the conventional teaching approach served as the independent variables, while writing proficiency functioned as the

dependent variable. The study compared the writing performance of learners who were exposed to gamified instruction with those who were taught using traditional classroom methods.

The study employed a quasi-experimental research design, specifically a non-equivalent control group pretest posttest design. This design was deemed appropriate because the participants were naturally grouped into intact Grade 11 classes, making random assignment impractical. As noted by Creswell (2014), quasi experimental designs are suitable in educational contexts where randomization is not feasible but where the effects of an intervention still need to be systematically examined. The study involved two groups, the experimental group, which received instruction through the gamified learning strategy, and the control group, which was taught using the conventional instructional approach followed by the school. Both groups were administered a pretest to determine their initial writing proficiency and a posttest after the intervention to measure any changes in performance. The differences in scores within and between the two groups served as the basis for identifying the effect of the gamified learning strategy. In classroom-based experiments, this type of design is commonly used when intact groups such as whole classes are involved, as these groups often share similar characteristics.

The pretest posttest non-equivalent control group design used in the study can be described as follows. For the experimental group, an initial observation, denoted as O1, was followed by the administration of the treatment, denoted as X, which was then followed by a posttest observation, denoted as O3. For the control group, an initial observation, denoted as O2, was followed, without the administration of treatment, by a posttest observation, denoted as O4. In this design, the intervention or treatment was introduced only to the experimental group, while it was not applied to the control group. Prior to the implementation of the intervention, both the experimental group, represented by O1, and the control group, represented by O2, underwent initial observation and testing. After the experimental group was exposed to the intervention, a posttest was administered to both groups, represented by O3 and O4, respectively. The pretest results were used to determine whether the two groups had comparable characteristics at the beginning of the experiment, indicating initial group equivalence. The posttest scores, O3 and O4, were then compared to assess the effect of the intervention (Falcis, 2016). For data analysis, descriptive statistics such as mean and standard deviation were utilized, while inferential analysis was conducted using the t test at a 5% level of significance.

This study was conducted during the first quarter of the second semester of School Year 2025–2026 and involved two sections selected from the eighth Grade 11 Science, Technology, Engineering, and Mathematics (STEM) classes of Filamer Christian University, Inc. The participants consisted of seventy-nine (79) Grade 11 learners. Section Love was composed of thirty-seven (37) students, while Section Dalton included forty-two (42) students. To determine group assignment, the names of the two sections were written on separate pieces of paper, rolled, and randomly drawn. The first drawn paper was assigned to the experimental group, while the second served as the control group. Learners assigned to the experimental group were exposed to the gamified learning strategy, whereas those in the control group were taught using the conventional teaching approach.

The study employed a Writing Proficiency Pretest, which served as the baseline instrument for measuring the learners' initial writing performance before the implementation of the gamified learning strategy. A researcher developed Writing Proficiency Essay Test was used for both the pretest and posttest, designed at the same level of difficulty to ensure comparability in assessing students' writing proficiency. The test required participants to compose an essay of at least 400 to 600 words based on a given prompt. Across the four-week

experimental period, two essay prompts were administered, one for the pretest and another for the posttest, resulting in a total of two essay tasks. The analytic writing rubric developed by Jacobs et al. (1981) was used to evaluate the participants' writing outputs and determine their level of proficiency. The rubric consisted of five criteria, namely content, organization, vocabulary or word choice, language use, and mechanics, each accompanied by specific performance descriptors. Each criterion was scored individually on a scale from one (1) to five (5), with five representing the highest level of performance. Each essay was worth twenty-five (25) points, and with two essays administered, the total possible score reached fifty (50) points at the end of the study period.

The pretest specifically addressed the learners' initial level of writing proficiency prior to the intervention. After the implementation of the gamified learning strategy, the same assessment tool was administered as a posttest to determine any changes in performance. This allowed for a direct comparison of results and an objective evaluation of improvement in writing proficiency. Both pretest and posttest outputs were assessed using the same five-dimensional analytic rubric, ensuring consistency in scoring and enabling a detailed evaluation of writing performance across key indicators of proficiency. The resulting scores were used to determine whether a significant difference existed between the learners' performance before and after the intervention. To ensure validity, reliability, and fairness, the rubric and writing tasks were subjected to expert evaluation by three English instructors to confirm clarity, relevance, and alignment with established writing assessment standards.

The interpretation of writing proficiency levels for both the control and experimental groups followed a standardized scoring scale, which was used as the basis for classifying learners' performance, wherein a mean score of 20.01 to 25.00 was described as Very High, a mean score of 15.01 to 20.00 was described as High, a mean score of 10.01 to 15.00 was described as Moderate, a mean score of 5.01 to 10.00 was described as Low, and a mean score of 0.00 to 5.00 was described as Very Low.

The researcher employed three phases in the conduct of the study, namely the pre-experimental phase, the experimental phase, and the post experimental phase. During the pre-experiment phase, the researcher secured permission from the School Administration of Filamer Christian University, Inc. to conduct the study and to utilize Grade 11 learners enrolled for the School Year 2025–2026 as respondents. Parental consent was also obtained through written letters to ensure approval of students' participation. The learners were informed about their involvement in the study, and an orientation was conducted to explain the purpose and important details of the research. Once approval was granted, the researcher identified the groups by drawing rolled papers containing the section names, which determined the assignment of the experimental and control groups.

The number of participants in both groups was determined by comparing their average English grades during the first semester of School Year 2025–2026 to ensure that the groups were comparable. The researcher prepared a Writing Proficiency Essay Test for both the pretest and posttest, along with the necessary instructional materials to be used prior to the actual implementation of the experiment. The completed instrument was presented to three English instructors of Filamer Christian University, Inc. and a panel of experts for face validation. Their comments, suggestions, and recommendations were incorporated to improve the final version of the instrument. Before the start of the lessons, the pretest was administered face to face to both the experimental and control groups. The results of the pretest were then checked, recorded, and tabulated for analysis using appropriate statistical tools.

During the implementation phase of the study, the experimental group was taught using the gamified learning strategy, while the control group was instructed through the conventional teaching approach. Both groups were exposed to similar learning environments, with instruction delivered through face-to-face classes. The study was conducted over four (4)

weeks, with two sessions per week. The researcher handled both groups, with the experimental class scheduled from 8:20 A.M. to 9:20 A.M., and the control class from 9:40 A.M. to 10:40 A.M., held from Monday to Tuesday. The lessons covered topics from the first quarter of the second semester, including pre writing strategies, thesis statement and text structures, paragraph writing (drafting), and mechanics and editing.

Throughout the implementation, specific procedures were followed for each group. In Week 0, the experimental group first took the Writing Proficiency Essay Pretest. This was followed by an interactive activity on the topic "The Importance of Digital Literacy," where students participated in a chain reaction sentence task to practice logical flow. Students then engaged in a gamified activity called "Organization Quest: Level Up Your Essay," which consisted of three stages, namely Paragraph Puzzle Race, Transition Word Treasure Hunt, and Boss Level: Outline Builder, with experience points (XP) awarded and leaderboards displayed through Kahoot. The teacher then discussed essay structure, text organization patterns, and the role of transitions, followed by guided practice in repairing a broken paragraph. Feedback was provided during monitoring, and an assignment was given afterward. In contrast, the control group also took the Writing Proficiency Essay Pretest during Week 0. Students then completed traditional activities such as arranging jumbled sentences into a paragraph, identifying parts of sample paragraphs, and participating in a teacher led discussion on structuring academic essays. They revised a disorganized paragraph individually, answered a 10-item multiple choice test, and were given an assignment for reinforcement.

During Week 2, the experimental group engaged in "Thesis Snap Match," where students identified strong and weak thesis statements using colored cards, earning points for correct answers. This was followed by "Thesis Arena: Level Up Your Argument," which involved progressive challenges across three levels, namely spotting, improving, and constructing strong thesis statements. The teacher presented model thesis statements and facilitated comparison with student outputs. A follow up activity, "Support Quest: Match the Detail," reinforced the concept of supporting ideas. Students then completed a short evaluation task and received an assignment. Meanwhile, the control group in Week 2 worked in pairs to classify thesis statements as strong or weak and justified their answers orally. They completed a worksheet matching thesis statement with explanations, participated in a lecture discussion on thesis characteristics, wrote their own thesis with supporting details, and completed a 5-item identification test as evaluation, followed by an assignment.

In Week 3, the experimental group participated in "Edit or Ignore?", where students identified sentence errors using colored cards, earning points for correct responses. This was followed by "Drafting Dungeon: The Quest to Revise," which included three progressive levels focused on drafting, revising, and editing. The teacher demonstrated essay development stages, facilitated discussion, and guided students in improving paragraph coherence, grammar, and transitions through a "Repair the Paragraph" activity. Students received feedback and completed an evaluation task, followed by an assignment. In the control group during Week 3, students engaged in an "Edit or Ignore" activity in a traditional format, wrote a short paragraph based on a given prompt about social media and study habits, and participated in a lecture on essay writing stages. They revised a faulty paragraph, answered a 5-item test identifying errors, and were given an assignment.

During Week 4, the experimental group participated in a grammar relay race and a "Fix the Essay" card game, where they matched error cards with correction cards. The teacher facilitated discussion on grammar, coherence, and vocabulary development, followed by a group activity where students revised paragraphs through progressive levels of improvement. A multiple-choice test was administered as evaluation. In the control group during Week 4,

students completed traditional grammar activities, answered guided questions, and revised sample paragraphs through teacher instruction. They also completed a multiple-choice test as evaluation. After the fourth week, both groups were administered a posttest. The essay prompt differed from the pretest, however, the level of difficulty remained equivalent to ensure comparability of results.

After the experimental phase, the scores from the three evaluators were consolidated. The results were recorded, tabulated, and analyzed using appropriate statistical tools. The pretest and posttest data were tallied and encoded using Microsoft Excel. Both pretest and posttest results were subjected to inferential statistical analysis in order to address the statement of the problem and test the hypotheses of the study. The findings were presented and interpreted using both tabular and textual formats.

The data gathered were subjected to computer based statistical analysis using the Statistical Package for the Social Sciences (SPSS) software. The mean was used to describe the central tendency of the writing proficiency scores for both the pretest and posttest results of the control and experimental groups. The standard deviation was utilized to determine the dispersion and variability of the scores in both assessments, which helped in evaluating the homogeneity or heterogeneity of the learners' writing proficiency before and after the intervention. The t test for dependent samples was employed to determine whether there was a statistically significant difference between the pretest and posttest scores within each group. This included comparisons between the experimental group's pretest and posttest scores, as well as the control group's pretest and posttest scores, and the paired comparison was applied to both total scores and component scores where appropriate. The t test for independent samples was used to examine whether a significant difference existed between the pretest and posttest results of the experimental and control groups.

RESULTS AND DISCUSSION

This chapter presents the results and discussion of both the descriptive and inferential data gathered from the eighty (80) Grade 11 learners of Filamer Christian University, Inc. who participated in this quasi-experimental investigation during the School Year 2025–2026, comprising thirty-six (36) students in the control group and forty-four (44) students in the experimental group. The study employed a non-equivalent control group pretest-posttest design, with participants assigned to their respective groups through a random drawing of section names. Data were gathered using a researcher-made English Performance Test administered as a pretest and posttest, and analysis was carried out through descriptive statistics, namely mean and standard deviation, as well as inferential statistics using the t-test for dependent and independent samples, with the 5% level of significance serving as the criterion for interpreting the inferential test results. The discussion that follows is grounded entirely in the data gathered from these instruments, and the results are interpreted in direct relation to the objective of determining the effect of the gamified learning strategy on the writing proficiency of Grade 11 learners.

The mean and standard deviation of the Writing Proficiency scores in the pretests and posttests of the control and experimental groups revealed that prior to the introduction of the intervention, the control group manifested "Moderate" ($M=10.25$; $SD=1.83$) Writing Proficiency, similar to the experimental group ($M=10.36$; $SD=1.77$), based on a scale wherein a mean score of 20.01-25.00 is described as Very High, 15.01-20.00 as High, 10.01-15.00 as Moderate, 5.01-10.00 as Low, and 0.005-5.00 as Very Low. After the intervention, the posttest scores of the control group reflected "High" ($M=15.58$; $SD=2.89$) Writing Proficiency, while the experimental group also demonstrated "High" ($M=16.34$; $SD=2.51$) Writing Proficiency. These findings indicated that both the control and experimental groups possessed comparable

levels of prior knowledge and writing competencies before the intervention, suggesting that the groups were relatively equivalent at the outset of the study, as reflected in the consistency of their pretest scores (Fraenkel et al., 2012). The "moderate" level of writing proficiency observed in both groups implied that the learners already had basic knowledge of writing concepts, although their skills were still in the process of development (Hyland, 2019), and this initial condition provided a fair basis for examining the impact of the two instructional approaches.

After the intervention, the posttest results showed that both the gamified learning strategy and the conventional teaching approach led to improvements in students' writing performance. This outcome suggested that conventional instructional methods remained effective, particularly because they focused on essential writing components such as grammar, sentence construction, spelling, and punctuation (Richards & Renandya, 2002), and since these foundational skills are typically introduced at earlier stages of education, students were still able to demonstrate progress under conventional instruction. However, a more detailed analysis revealed that the improvement was greater among learners who were exposed to the gamified learning strategy, indicating that gamification had a more significant positive impact on enhancing writing skills compared to traditional methods (Sailer & Homner, 2020; Deterding et al., 2011). Furthermore, the higher level of writing proficiency demonstrated by the experimental group appeared to be linked to the effective integration of language learning within a gamified environment, as the use of interactive and engaging activities encouraged continuous participation and sustained interest in writing tasks. Classroom observations supported this result, as students in the experimental group displayed greater enthusiasm and involvement during the lessons, an increased participation that reflected stronger motivation, which is an essential factor in the learning process (Ryan & Deci, 2017; Hamari et al., 2014). In addition, the incorporation of visual supports and interactive elements during instruction likely contributed to a better understanding of the lessons, making the content more accessible and meaningful to the learners, supporting the idea that the use of multimedia and interactive tools can enhance comprehension and retention (Mayer, 2005) while catering to the diverse learning needs of students and thereby contributing to improved learning outcomes (Tomlinson, 2014).

The results of the study were further reinforced by established learning principles. The observed increase in motivation and engagement aligned with Self-Determination Theory, which explains that learners are more motivated when they experience autonomy, competence, and social connection (Deci & Ryan, 1985), and gamified learning created opportunities for students to make choices, achieve goals, and interact with peers, thereby strengthening intrinsic motivation. Moreover, the findings were consistent with the principles of Constructivist Learning Theory, which emphasize that knowledge is developed through active participation and social interaction (Piaget, 1970; Vygotsky, 1978), as the collaborative and interactive nature of gamified learning environments enabled students to build understanding through shared experiences, guided tasks, and discussions, a process that supported deeper learning and contributed to the improvement of their writing proficiency.

The t-test result between the Writing Proficiency in the pretests of the control and experimental groups revealed that there was no significant difference between the pretests of both groups, as the obtained p value of 0.779 ($t=0.282$; $df=78$) was higher than the 0.05 level of significance. These findings implied that prior to the conduct of the intervention, students assigned to both the control and experimental groups possessed collective similarity in terms of their Writing Proficiency. Further, the participants in both groups were considered similar, possessing the same level of Writing Proficiency, which prompted the researcher to conclude

that both groups were very suitable for comparing the effect of the gamified learning strategy on writing proficiency. Hence, the participants in both the control and experimental groups initially demonstrated a moderate level of writing proficiency, reflecting foundational skills in grammar, mechanics, and composition but limited mastery in higher-order writing tasks, a moderate starting point suggesting that students had some exposure to writing instruction, but opportunities for practice, engagement, or application may have been limited prior to the study.

These findings can be anchored in the principles of constructivist learning theory, particularly the work of Jean Piaget (1972) and Lev Vygotsky (1978), which emphasize that learners construct knowledge based on prior experiences and existing cognitive structures. Since both groups demonstrated similar prior knowledge in writing, it can be inferred that they possessed comparable foundational skills upon which new learning could be built, an equivalence that is crucial in determining the actual impact of instructional strategies, such as gamified learning, on student outcomes. Moreover, the result aligns with the assumptions of gamified learning theory, which suggests that instructional innovations are most effective when learners begin at a similar level of competence, allowing the intervention to address diverse learning needs without bias. According to Karl Kapp (2012), gamification enhances engagement and learning by integrating game elements into instruction, but its effectiveness depends on fair and balanced initial conditions among learners. Hence, the null hypothesis, which states that there was no significant difference between the pretests of the control and the experimental groups, was accepted.

The t-test results between the Writing Proficiency in the pretests and posttests of the control and the experimental groups revealed that there were significant differences between the pretest and posttest of the control group, since the obtained p-value was 0.000 ($t=16.671$; $df=35$), and between the pretest and posttest of the experimental group, since the obtained p-value was 0.000 ($t=18.716$; $df=43$), both of which were lower than the 0.05 level of significance. Overall, the results showed that students' writing skills were improved by both the traditional teaching method and the gamified learning technique. From a "moderate" level of proficiency in the pretest to a "high" level in the posttest, the control group showed a discernible improvement. According to Richards & Renandya (2002) and Hyland (2019), this progression indicates that meaningful learning took place through the structured teaching-learning process, where elements like teacher guidance, organized instruction, student engagement, and ongoing assessment contributed to the development of writing skills. This outcome is in line with the findings of Delos Santos (2013), who found that students' performance significantly improved using traditional teaching approaches between the pretest and posttest.

Similarly, the experimental group showed a significant enhancement in writing proficiency, also progressing from a "moderate" to a "high" level after exposure to the gamified learning strategy. The more substantial improvement observed in this group may be linked to the engaging and motivating nature of gamified instruction, which promotes active involvement, collaboration, and immediate feedback. As noted by Kapp (2012), the inclusion of game-like elements such as rewards, challenges, and feedback can increase learners' motivation and participation, a perspective further supported by Self-Determination Theory, which explains that learners are more motivated when their needs for autonomy, competence, and social connection are addressed (Deci & Ryan, 1985), conditions that are often present in gamified learning environments. In addition, the improvement seen in the experimental group may also be interpreted through sociocultural views of learning, as Vygotsky (1978) highlighted the importance of social interaction and language in cognitive development. In this study, the flexible use of language during instruction appeared to help students communicate their ideas more effectively, contributing to better writing performance, an observation consistent with the concept of *lingua franca* described by Ellis (2001), which emphasizes that

using a familiar or shared language can support clearer understanding and communication among learners. Consequently, the integration of gamified strategies alongside flexible language use created a more supportive and inclusive learning environment that facilitated writing development. Based on these findings, the hypothesis stating that there was no significant difference between the pretest and posttest results of the experimental group was rejected, indicating that the gamified learning strategy had a significant and positive effect on the students' writing proficiency.

The t-test result between the control and experimental groups' Writing Proficiency on the posttests indicated a p-value of 0.000 ($t=1.255$; $df=78$), which was below the 0.05 level of significance, indicating that there is no significant difference between the control and experimental group posttest, with the table further reporting a significance value of 0.213 marked as not significant (ns) at the 5% alpha level. Additionally, the experimental group benefited from the substantial difference ($sd=2.51$). Although the statistical analysis did not show a significant difference, the experimental group achieved a slightly higher mean score ($M = 16.34$, $SD = 2.51$) than the control group ($M = 15.58$, $SD = 2.89$). This suggests that students exposed to the gamified learning strategy tended to perform better in writing compared to those who experienced the conventional teaching approach, even if the difference was not statistically strong. These findings indicate that both instructional methods contributed to improving writing proficiency, while gamified learning may offer subtle advantages in enhancing engagement and performance.

The observed improvement in the experimental group can be understood through the lens of David Kolb's Experiential Learning Theory (1984), which emphasizes that meaningful learning occurs through active participation and reflection. Within a gamified environment, students actively engage in tasks, receive immediate feedback, and reflect on their performance, creating opportunities for deeper skill development, and the interactive nature of gamification allows learners to apply concepts in contextually meaningful ways, which may have contributed to their slightly higher writing performance. Furthermore, this result is consistent with Mihaly Csikszentmihalyi's Flow Theory (1990), which posits that learners achieve optimal outcomes when fully immersed and focused in an activity. Gamified learning often fosters such engagement by presenting challenges that match students' skill levels, providing clear goals, and offering instant feedback, conditions that likely helped students in the experimental group remain motivated and attentive, which may explain their relatively higher posttest scores. The small advantage of the experimental group can also be linked to Howard Gardner's Multiple Intelligences Theory (1983), which recognizes that learners process information in diverse ways. Gamified strategies frequently incorporate a variety of elements, including visual cues, interactive storytelling, collaborative tasks, and kinesthetic activities, allowing students with different strengths to engage more fully, an inclusive approach that may have supported a more effective learning experience and contributed to improved writing outcomes, even if the overall difference was not statistically significant.

Taken together, the descriptive and inferential results establish that the control group ($N=36$) and the experimental group ($N=44$) began the study with statistically equivalent and moderate levels of writing proficiency ($M=10.25$, $SD=1.83$ and $M=10.36$, $SD=1.77$, respectively; $t=0.282$, $df=78$, $p=0.779$, not significant at the 5% alpha level), thereby confirming the appropriateness of comparing the two instructional approaches. Both groups demonstrated statistically significant gains in writing proficiency from pretest to posttest, with the control group improving from Moderate to High ($M=15.58$, $SD=2.89$; $t=16.671$, $df=35$, $p=0.000$) and the experimental group improving from Moderate to High ($M=16.34$, $SD=2.51$; $t=18.716$, $df=43$, $p=0.000$), leading to the rejection of the corresponding null hypotheses in

both cases. While the posttest comparison between the two groups did not yield a statistically significant difference ($t=1.255$, $df=78$, $Sig=0.213$, not significant at the 5% alpha level), the experimental group nonetheless achieved a numerically higher mean score than the control group, suggesting a practical, if not statistically pronounced, advantage associated with the gamified learning strategy. These findings directly address the objective of determining the effect of gamified learning on writing proficiency by demonstrating that while conventional instruction remains effective in developing foundational writing skills, the integration of game-based elements such as points, badges, progress levels, leaderboards, and rewards offers additional motivational and engagement benefits that translate into marginally stronger writing outcomes. The results affirm and extend theoretical perspectives grounded in Self-Determination Theory, Constructivist Learning Theory, Experiential Learning Theory, Flow Theory, and Multiple Intelligences Theory, while contributing empirical evidence to the growing body of literature on gamification in language education within the Philippine senior high school context. These conclusions provide the empirical foundation for the summary of findings, conclusions, and recommendations to be presented in the succeeding chapter.

CONCLUSION

This quasi-experimental study determined the effect of the Gamified Learning Strategy on the writing proficiency of Grade 11 STEM learners of Filamer Christian University, Inc. for the school year 2025-2026. Specifically, it examined the learners' level of writing proficiency in the pretests and posttests of the control and experimental groups, determined whether there was a significant difference between the pretests of the two groups, assessed whether significant differences existed between the pretests and posttests within both groups, and examined whether there was a significant difference between the posttests of the control and experimental groups. The study involved seventy-nine (79) Grade 11 STEM students, of whom 37 were assigned to the conventional teaching approach and 42 were taught using the gamified learning strategy. The students in the control and experimental groups were matched based on their second (2nd) grading English grade to establish collective similarity. A 50-item researcher-made test was used to determine students' performance in English before and after the intervention. The data were processed using the Statistical Package for Social Sciences (SPSS), and mean, standard deviation, and t-test were employed, with inferential tests set at the 5% level of significance.

The findings revealed that both the control and experimental groups initially demonstrated a moderate level of writing proficiency in the pretest and improved to a high level in the posttest. This indicates that the Grade 11 learners possessed foundational writing skills at the beginning of the study but still needed further opportunities for deeper engagement, application, and refinement of writing competencies. The improvement of both groups to a high level of proficiency suggests that structured instruction, whether conventional or enhanced through gamified elements, plays an important role in strengthening students' writing abilities. It further implies that organized, engaging, and learner-centered instructional practices can support sustained improvement in writing proficiency and may contribute to better academic performance in language-related areas.

The study also found no significant difference between the pretest scores of the control and experimental groups, confirming that both groups were comparable before the intervention. This initial equivalence provided a valid basis for comparing the effects of the conventional teaching approach and the gamified learning strategy. Since both groups began with similar levels of writing proficiency, the observed improvements after instruction may be reasonably linked to the instructional approaches implemented during the study. This finding highlights

the importance of maintaining balanced group conditions in future experimental studies to ensure more accurate and reliable evaluation of instructional effectiveness.

Furthermore, the results showed a significant difference between the pretest and posttest scores of both the control and experimental groups. This demonstrates that both instructional approaches contributed to the improvement of learners' writing proficiency. While structured teaching and guided instruction remained effective, the use of interactive and engaging elements in the gamified learning strategy may have enriched the learning experience by encouraging student motivation, participation, and active involvement in writing tasks. These findings suggest that writing proficiency can be enhanced when students are given meaningful opportunities to practice, receive guidance, and engage with writing activities in a supportive learning environment.

Although no statistically significant difference was found between the posttest scores of the control and experimental groups, the experimental group obtained a slightly higher mean score. This suggests a positive inclination toward the use of gamified learning as a supplemental instructional strategy. While gamification did not demonstrate statistical superiority over the conventional approach, it showed potential in improving the overall learning experience by fostering engagement, motivation, and active participation. Its continued and consistent application, particularly when integrated with established teaching practices, may lead to more meaningful gains in writing proficiency and broader academic achievement over time.

In view of these findings, teachers are encouraged to integrate gamified learning strategies into writing instruction to enhance student engagement, motivation, and participation. Careful planning and clear guidelines should be observed to ensure that gamified activities remain aligned with intended learning outcomes. School administrators may also support the adoption of gamified strategies, particularly in English and writing classes, to strengthen student interest and classroom involvement. Writing proficiency may further be improved through collaborative and learner-centered activities such as writing challenges, group projects, and performance-based outputs that incorporate gamified elements. Curriculum developers may likewise consider integrating interactive tasks, reward systems, and performance tracking into instructional materials to address diverse learner needs and make writing instruction more meaningful and engaging. Future researchers are encouraged to conduct similar studies using longer intervention periods, larger sample sizes, and different academic contexts to validate the findings further. They may also examine variables such as student motivation, engagement, attitude, and knowledge retention, or employ mixed-method approaches to gain deeper insight into learners' experiences, perceptions, and responses to gamified learning. Overall, the study concludes that both conventional and gamified approaches are effective in improving the writing proficiency of Grade 11 learners, and that the thoughtful integration of gamified elements may help create a more dynamic, supportive, and motivating environment for developing writing skills.

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