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SPELLQUEST: DIFFERENTIATED GAMIFIED ASSESSMENTS FOR SPELLING PROFICIENCY INTERVENTION PLAN AMONG GRADE 8 STUDENTS IN ASUNCION NATIONAL HIGH SCHOOL

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ABSTRACT

This study aimed to examine the effectiveness of "SPELLQUEST: Different Gamified Activities" in enhancing the spelling proficiency of Grade 8 students at Asuncion National High School. Using a pre-experimental quantitative-descriptive design, the intervention incorporated various gamified strategies such as Scrabble, Word Factory, and Spelling Bee to reinforce spelling rules and build vocabulary through active, enjoyable participation. Students' proficiency was measured using a pre-test and post-test. Results showed that the pre-test mean score was M = 26.23 (52.46%, Moderate), reflecting limited mastery of spelling rules. Following the intervention, the post-test mean score significantly increased to M = 42.91 (85.82%, High), demonstrating notable improvement. A paired-samples t-test confirmed a statistically significant difference ($t = 10.2$, $p < .001$), and the computed Cohen's d value of 2.17 indicated a very large effect size, highlighting the substantial impact of the intervention. Qualitative analysis of student interviews revealed five key themes: transformation of spelling struggles into engaging learning, increased confidence, positive shifts in attitudes, improved handling of spelling challenges, and heightened motivation. In conclusion, the findings affirm that gamified interventions such as SPELLQUEST can meaningfully improve spelling proficiency and foster positive learning experiences, making them a valuable strategy for classroom instruction.

KEYWORDS: *SpellQuest Interventions, Barnell-Loft Diagnostic Achievement Test, Pre- experimental, Spelling Proficiency, Philippines*

INTRODUCTION

Rationale

Spelling is a basic tool that significantly determines the overall performance of students in academics, reading, or writing fluency. It helps one to be a good written communicator, which is very crucial both at personal and professional levels. A good spelling is synonymous to a good educational background whereas a poor spelling can destroy the flow of writing and adversely influence the quality of the written work. It is also instrumental in the word recognition that enhances growth in reading. Students with good spelling have been seen to succeed better in most of their subjects and find their way through information a lot easier than students with spelling problems. Spelling aids in the speed of reading and writing and its evolution is correlated with the advancement of other literacy skills (oral language) (Fagerberg, 2024). Besides, the difficulty in spelling can be closely related to more underlying difficulties (such as lack of fluency or avoiding tactics), which influence the quality of writing despite proofreading. Thus, spelling must be conceived not only in terms of evident faults but also in terms of the thinking that underlies them, and it warrants more consideration in writing education and evaluation (Wengelin et al., 2024). Similarly, it was emphasized that explicit spelling instruction significantly improves students' writing quality, vocabulary, and reading fluency, underscoring the foundational role of spelling in overall literacy development (Graham et al., 2023).

This problem does not affect a single region, it carried out a study in Nigeria and found that more than 70 percent of primary school students commonly misspelled words involving homophones and irregular phoneme-grapheme correspondences. These mistakes encompassed the mix-up of words such as their and there or write and right resulting in the poor performance in reading as well as written expression (Okonkwo et al., 2021). Likewise, in India, it was observed that 76 percent of the students had trouble spelling unfamiliar English words, especially the ones borrowed by the Latin or French language, because they did not have phonological awareness and enough exposure to English print materials. The researchers observed that the students with continuing spelling problems had academic confidence and writing fluency problems (Sharma et al., 2020). Additionally, a study conducted in South Africa and found that spelling mistakes among multilingual learners were related to language transfer and a poor instructional approach. This has shown that spelling issues should be solved to help keep the learners engaged as well as improve on their language development (Mokoena, 2022).

In the Philippines, most students usually have a problem in spelling, particularly in writing. A study conducted in Quezon City established that omitting letters caused 59 percent of the spelling mistakes, letters substitution caused 28.9 percent,

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adding extra letters caused 8 percent, and rearranging letters caused 4.3 percent of the spelling mistakes. Such mistakes are primarily caused by misuse of vowels and mispronunciation (Coronado, 2024). Likewise, a research was also conducted in Pasig City, found that errors in long and short vowel sounds were common among Grade 5 learners in public schools, especially when it comes to frequently used words in English (such as receive, separate, and friend) because of the excessive dependence on phonetic spelling. They inferred that regular introduction to the correct word forms and context specific vocabulary practice was required to improve (Garcia et., 2023). In the meantime, in a study carried out in Ilocos Norte, highlighted that rural school students demonstrated more significant spelling difficulties, particularly in content writing assignments, due to poor access to reading materials and lesser exposure to the English language at home. These results demonstrate the need of specific and situated spelling teaching to meet the unique demands of the Filipino learners and to enhance their writing and their general language skills (Dela Cruz, 2022).

In Asuncion National High School, located in the Division of Davao del Norte, grade 8 students face significant spelling difficulties affecting their language skills. These lead to confusion and trouble writing correct spellings hence poor results in the exams and quizzes. Additionally, students show less interest in class discussions and writing activities, which impacts their overall engagement and learning. For this reason, the present study seeks to identify the causes of these spelling difficulties and design accordingly, appropriate teaching strategies that would enhance students' spelling skills and, consequently, increase their interest in learning.

This action research contributes to the broader social needs of addressing problems and issues with regards to the use of correct spelling of the words. The critical issue is addressing spelling difficulties as a factor that hinders the academic performance of students. In addition, this research is timely and relevant in addressing the problem with regards to spelling difficulty as well as their interest in learning, vocabulary, and overall performance. Consequently, this study holds significant social relevance as it addresses the problem when it comes to writing, specifically in spelling difficulty. This research offers valid insights that enable us to explore different approaches to solving this issue and to identify if the proposed intervention is effective or otherwise. This knowledge deepens our knowledge on how to address the spelling problems faced by students and to provide solutions on how to help them suit their diverse needs besides their writing, but attitude towards reading and interest in learning.

Further, with the thorough search for relevant literature addressing spelling difficulty, the researcher has found the study of Raheesh (2023) entitled "Spelling Mistakes Made by Students: An Action Research." Their focus is to provide an intervention through Activity-Based Teaching- Learning, which was designed to like word breaks, word journals, personal dictionaries, and dictation, which was designed to find out the effectiveness of activity-based teaching and learning to improve the students' spelling skills in English. Furthermore, in a study of Cimagala et al. al. (2023), entitled "Improving Spelling Skills of Students Through Project (SEGAW) Spelling Enhancement Through Gadgets and Alternative Worksheets," their focus is to examine the effectiveness of using gadgets and alternative worksheets in enhancing spelling abilities by integrating technology and mnemonic strategies. Lastly, in the study of Magpatoc et al. (2023), entitled "Enhancing Spelling Proficiency in English Among Grade Seven Learners Through the Implementation of the Cover-Copy-Compare (CCC) Strategy," their focus was to examine the effectiveness of the Cover-Copy-Compare (CCC) strategy in enhancing spelling proficiency among Grade 7 learners.

In examining the scope and locale of this study, the researchers noted that there was a gap in the investigation of spelling problems in students with the help of a pre-experimental descriptive quantitative design, specifically, the one-group pretest-posttest design. The approach is also necessary in terms of assessing not just the level of proficiency in spelling but also the learning attitudes of the students, vocabulary building and the efficiency of the instructions. Current literature did not show any studies that incorporated a multifaceted program such as SpellQuest in such a design. This kind of approach may have a holistic impact on the spelling ability and identification of errors. This literature gap is an indication of the necessity of dedicated research with the use of such a method. That is why it is essential to investigate effective interventions in spelling difficulties.

This study seeks to fill this gap by focusing on the specific needs of students with spelling difficulties, evaluating the effectiveness of the SpellQuest intervention in enhancing their spelling skills. By doing so, it will contribute valuable insights to the field, aiding educators in understanding and addressing these educational challenges.

Research Objectives/Questions

The research objectives and questions below are to investigate the students with spelling difficulties and identify remediation on how to further develop their spelling skills. The research objectives and questions that guided this study are the following:

1. To determine the status of the spellers among grade 8 students before the implementation of SpellQuest intervention.
2. To determine the status of the spellers among grade 8 students after the implementation of SpellQuest intervention.
3. Is there a significant difference between pre-test and post-test in employing the SpellQuest intervention?
4. What are the insights of the students about the use of SPELLQUEST: Assorted Gamified Assessments intervention in improving students spelling proficiency?

HYPOTHESIS

The null hypothesis, which was tested at a 0.05 alpha level of significance, stated that there is no significant difference between the pre-test and post-test scores of Grade 8 students'

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spelling proficiency before and after the SPELLQUEST Assorted Gamified intervention.

PROPOSED INNOVATION, INTERVENTION, AND STRATEGY

SpellQuest is a targeted intervention program designed to improve the spelling and vocabulary skills of Grade 8 students at Asuncion National High School. It identifies struggling students through a diagnostic test and provides focused support for common spelling issues such as letter confusion, omission, and incorrect additions. Held for two hours every Friday, the program blends interactive instruction, vocabulary enrichment, collaborative learning, and educational technology. It features 10 structured activities tailored to different learning styles, fostering both individual and group engagement to enhance spelling mastery and vocabulary growth.

The SpellQuest intervention aims to improve spelling and vocabulary skills among selected Grade 8 students at Asuncion National High School. It uses engaging, real-world activities like group projects and oral presentations to build language skills and assess progress holistically. A diagnostic test will identify participants and establish baseline data. Orientation sessions and informed consent will ensure students understand the process and participate voluntarily. The program runs for two hours every Friday, offering targeted support tailored to students' needs. It emphasizes both written and practical exercises to deepen understanding of spelling rules and boost confidence in writing. Researchers will monitor progress through ongoing activities and assessments, concluding with a group

COMPONENT	DESCRIPTION
Implementation Materials	a diagnostic-based grouping, multisensory instructional resources, and ten structured and interactive activities that combine individual and group activities to focus on improving spelling and vocabulary in Grade 8 students.
Activity 1: Scrabble	Students use letter tiles and context clues to spell words correctly (e.g., “A place where books are borrowed” → Library). The teacher explains the rules, distributes tiles, and provides clues. Points are awarded for correct answers and bonus words, with a review and reflection at the end.
Activity 2: Word Factory	Students form as many valid words as possible from a random set of letters within a time limit (e.g., T, A, C, R, E, P → Cat, Carpet). The teacher provides letters and explains the rules. Words are reviewed for accuracy and creativity, with points awarded based on word length.
Activity 3: Hangman	Students guess letters to uncover a hidden word based on a clue or category (e.g., _ _ _ _ _ → Apple). Incorrect guesses build a hangman figure until the word is revealed or the game ends. The teacher leads a review of spelling and meaning after each round.
Avtivity 4: Jumbled Words	Students unscramble letters to form meaningful words from clues (e.g., A P P L E → Apple, “A red or green fruit”). The teacher provides jumbled letters and instructions. Answers are reviewed for spelling accuracy, with points for correct and fast responses.
Activity 5: Crossword	Students solve crossword puzzles by filling in words from clues that test vocabulary and spelling. Working in teams, they collaborate to complete the grid. After completion, the teacher reviews answers and reinforces word meanings.
Activity 6: Spelling Bee	Students spell words aloud in a competition format, progressing through increasingly difficult rounds. The teacher outlines the rules and word list in advance. Mistakes result in elimination, and the last student standing wins, followed by a group review.
Activity 7: Spelling Relay	Teams race to spell words correctly, one letter at a time, with each member contributing. The teacher prepares words of varying difficulty and ensures everyone understands the rules. The fastest, most accurate team wins, with a debrief to reinforce learning.
Activity 8: Charades	Students act out vocabulary words without speaking while their team guesses the word (e.g., miming a tiger). The teacher provides words and ensures clarity on rules. After each round, words are reviewed for spelling and meaning.
Activity 9: Word Chain	Students create a chain of words where each new word starts with the last letter of the previous one (e.g., Apple → Elephant → Tiger). The teacher explains the goal and rules, then facilitates group play. Points are awarded, and a reflection follows.
Activity 10: Peer Qizzing	Students create and exchange quizzes on vocabulary and spelling with classmates to reinforce understanding. The teacher pairs students thoughtfully and monitors the activity. Quizzes are peer-reviewed and discussed with teacher guidance.

forum to evaluate results and encourage student feedback. Incentives will be provided to motivate and reinforce improvements.

Ultimately, the study seeks not only to improve spelling and vocabulary but also to positively impact students’ overall academic performance. The researchers are optimistic that SpellQuest will foster lasting educational growth and success.

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METHODOLOGY

Design

This study utilized a quantitative-descriptive method. This approach produces both qualitative and quantitative data that characterize the current state of a situation at a specific moment in time. By collecting detailed information, it helps to better understand the current issues or problems through systematic data collection which enables a more thorough description of the situation (Manjunatha, 2019). Using a quantitative-descriptive method along with interviews provides a well-rounded approach to research. The quantitative part lets the researchers objectively measure and analyze data on spelling proficiency. Meanwhile, the interviews offered insights into the experiences and feelings of students and teachers. By blending these methods, the researchers get a fuller, more reliable picture of the challenges and successes in improving spelling proficiency.

Research Respondents

The researchers conducted a study at Asuncion National High School, a secondary public school situated in Purok 12, Poblacion, Asuncion, Davao del Norte. In the selection of the participants, the head of the English department in Grade 8 were identified the students that are qualified for the study. Cohen (2007) advised that a quantitative study to be conducted with heterogenous group would comprise at 22 participants. In this study the researchers had 22 grade 8 students that were chosen from the pre-test and post-test results, with the help of the Head of English department and the teachers inside the school. In addition, ten (10) participants, were selected for the interview. Additionally, this study used purposive sampling, a non-probability sampling technique that entails the purposeful selection of participants based on their relevance to the study. This method is especially useful when the researcher can select a sample that is most representative of the population and has specialized knowledge about the population (Curtis, 2011).

Research Instruments

The study adapted the survey questionnaire of Barnell-Loft Diagnostic Achievement Test and Magpatoc et al. (2024). This survey questionnaire aims to assess the level of spelling proficiency of the students as well as their attitude towards spelling, vocabulary building, word recognition, and overall spelling accuracy. Then, questions were modified to suit for the goals of this study, which undergone validation by the panel of experts before utilization. Furthermore, before utilizing the survey questionnaire, it undergone validation from the research panels and is pilot tested to ensure validity and reliability of the results obtained from the survey questionnaire used.

To facilitate the expression and interpretation of the gathered data, the researcher created a table illustrating the range of description with their respective meanings and interpretations Santos (2023). These categories are outlined as follows:

Range of Mean Percentage	Descriptive Level	Interpretation
90 – 100	Very High	If the measures described in the spelling proficiency of the students is outstanding.
70 – 89	High	If the measures described in the spelling proficiency of the students is very satisfactory.
40 – 69	Moderate	If the measures described in the spelling proficiency of the students is fairly satisfactory.
16 – 39	Low	If the measures described in the spelling proficiency of the students did not meet the expectation.
0 – 15	Very Low	If the measures described in the spelling proficiency of the students is far below expectations and indicates serious difficulty.

Data Collection

The researchers followed the subsequent procedures when collecting the data to obtain the required information for the investigation.

Crafting of Questionnaire - Pretest and Post-test Questionnaires: The researcher-initiated group planning sessions to develop questionnaires for both pretest and post-test assessments. To tailor the questionnaire to the respondents, researchers used research made questionnaire. Crafting the questionnaire involved meticulous consideration of relevant questions to assess students' level of mastery of spelling. Therefore, there was a need for the conduct of action research.

Questionnaire Validation. The researchers sought validation of the questionnaire from experts or a panel well-versed in questionnaire development to ensure its validity and reliability.

Seeking Permission to Conduct the Study. The researchers asked the school principal to distribute the pre-test questionnaires to the identified students having difficulty in identifying part of speech. Additionally, the researchers sought permission to implement the intervention in the identified class group.

Pretest Assessment Administration. Prior to implementing the intervention, the researchers administered a pretest to Grade 8 students. This pretest aimed to gauge the students' baseline performance levels in their spelling skills.

Intervention Implementation. The implementation phase involved executing the SPELLQUEST. Various strategies, such as games, practice worksheets, and other activities focused on spelling patterns, were implemented to improve students' spelling proficiency and enhance their understanding.

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Post-test Assessment Administration. After the implementation in Grade 8 students, a post-test would be administered to assess any improvement in the mastery of parts of speech.

Data Tabulation and Evaluation. The gathered data from the pretest and post-test underwent tabulation. The completed questionnaires were collected by the researchers and subsequently entered into a Microsoft Excel spreadsheet for data encoding. The statistician is granted confidential permission to perform calculations, create tables, and analyze the data with utmost discretion. The results of the tabulation served as the basis for evaluating the effectiveness of the intervention in enhancing students' pronunciation. The findings guided potential modifications or improvements in the intervention strategies to further enhance teaching practices.

Statistical Tool

The computation of data and the hypotheses were tested at the significance level of alpha 0.05, involves the utilization of various statistical tools. These tools employed to ensure accurate analysis and interpretation of the data.

Mean. This refers to the average and is calculated by dividing the sum of the students' scores in the assessment. It is used to determine the level of pronunciation competency of the students before and after the intervention.

Standard Deviation (SD). This refers to the measurement of how consistent or varied the students' scores are before and after the action research intervention. It shows how far the scores are from the average (mean).

T-test. In this research, the t-test was used to determine whether the two-population means are different.

Cohen's d. In this research, was used to measure the effect size, or how strong the impact of the intervention was on the students' performance. After comparing the pre-test and post-test scores, Cohen's d helped the researcher see not just if there was a difference, but how meaningful that difference was. A small value of Cohen's d would suggest the intervention had little effect, while a larger value would show a stronger impact.

DATA ANALYSIS

A collection of methods for evaluating data and making deductions about the population under study are known as statistical tools. It entails classifying information, highlighting key patterns, and estimating the likelihood that observations were made at random. The process of obtaining information from all pertinent sources in order to address the study problem is known as data collection in statistics. Statistical analysis is required to quantify the collected data. It should be taken into account that there is a chance that study participants may alter their answers or behavior in specific situations (Sadan, 2017).

RESULTS & DISCUSSION

Presented in this chapter are the results or data obtained in the study. The chapter presents the data on the level of performance in spelling proficiency among students in pre-test; the level of performance in in spelling proficiency among students in post-test; and significant difference of the pretest and post-test scores of the students.

Research Objective No. 1: What is the status of the spellers among grade 8 students before the implementation of SPELLQUEST intervention?

To satisfy the first objective, the study adopted the Barnell-Loft Diagnostic Achievement Test, which was used to determine students' level of spelling proficiency before the implementation of the SPELLQUEST: Assorted Gamified Assessments strategy. Shown in Table 1 are the mean average of the scores of the students before the implementation of the intervention.

Presented in Table 1 are the results of the pre-test, indicating the spelling proficiency level of 22 students before the implementation of the intervention. The overall mean score is 52.46%, reflecting moderate performance by the students in the pre-test. The highest score is 41, achieved by 1 student, while the lowest score is 10, also achieved by 2 students. The most frequent scores are 37, 36, 26, and 10, with a frequency of 2. These findings provide a baseline measuring the student's spelling proficiency before the implementation of the intervention. It was found that students struggled with the following spelling areas: contractions, syllables prefix/suffix, common findings, all principles, ei/ie, diphthongs. The table presents the mean scores and corresponding descriptions for various spelling proficiency indicators as identified by the Barnell-Loft Diagnostic Achievement Test.

Table 1. ***Mean Average of the Scores in Pre-Test***

Pre-Test Scores	*Frequency*	*Percentage*
41	1	4.55%
40	1	4.55%
38	1	4.55%
37	2	9.09%
36	2	9.09%
34	1	4.55%
33	1	4.55%
31	1	4.55%
26	2	9.09%
24	1	4.55%
23	1	4.55%

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22	1	4.55%
18	1	4.55%
17	1	4.55%
14	1	4.55%
13	1	4.55%
11	1	4.55%
10	2	9.09%
Total	**22**	**100%**
Mean Score		**26.23**
Overall Mean		**52.46%**
Description		**Moderate**
Standard Deviation		**10.62**

Presented in Table 1 are the results of the pre-test, indicating the spelling proficiency level of 22 students prior to the implementation of the intervention. The mean score was M = 26.23 (SD = 10.62), and the overall mean percentage was 52.46%, both reflecting a low level of performance. This suggests that, on average, students were able to answer slightly more than half of the test items correctly, indicating a weak grasp of basic spelling rules.

Additionally, the standard deviation indicates a wide spread of scores around the mean, suggesting high variability in students' spelling abilities before the intervention. While a few students may have performed relatively better, a significant number struggled. The highest score achieved was 41 (4.55%), whereas the lowest score was 10, shared by two students (9.09%). These findings confirm the necessity of targeted remediation. Most students demonstrated difficulties in key areas such as contractions, prefixes/suffixes, and diphthongs, underscoring the urgency for an engaging and structured intervention like SPELLQUEST.

Table 2. ***Summary Table on the Mean Scores and Descriptions for Spelling Proficiency Indicators before the Implementation of the SPELLQUEST Intervention.***

Indicator	*Mean*	*Description*
Short Vowels	78.18	High
Contractions	28.18	Low
Silent Consonants	59.09	Moderate
Syllables Compound Words	82.73	High
Syllables Prefix/Suffix	50.00	Moderate
Common Endings	37.27	Low
All Principles	43.64	Moderate
Ei/Ie	16.36	Low
Diphthongs	50.00	Moderate
Vowel Digraphs	79.09	High
Overall	**52.45**	**Moderate**

This emerging concern is reinforced by Fitria (2020), who examined spelling mistakes in student writing. The research highlighted four primary categories of spelling errors: omission, substitution, transposition, and insertion/addition. Omission errors—where essential letters are left out—were the most frequent, representing 40% of the total and greatly impacting both clarity and understanding. Substitution errors, which involve the use of incorrect letters, accounted for 28%, reflecting confusion with phonetic or spelling rules. Insertion/addition errors, characterized by the inclusion of unnecessary letters, made up 20%, often resulting from the over-application of spelling patterns. Transposition errors, involving the misspelled order of letters, were the least common at 12%, indicating occasional disruptions in letter sequencing. Similarly, spelling is a main struggle for Grade 8 students when writing in English at KM/AL-Mazhar Girls' High School. Many students forget, include, or make the letter silent, so their writing isn't always clear and correct. Their problems with spelling result from not knowing enough words and a lack of interest in getting better at writing. Such mistakes may affect the meaning of a sentence and make communication harder. Tackling these topics will make students better writers in English (Rizwan & Farhana, 2022).

Additionally, research by Santiago (2023) supports these findings, revealing that spelling difficulties are common among junior high school students due to weak phonological awareness and insufficient reading practice. These issues persist even after extensive education and continue into their professional lives, creating notable obstacles to their advancement. Consequently, spelling mistakes can negatively affect students in various ways, especially by leading to confusion and misinterpretation in written communication. Given the prevalence and persistence of these spelling errors, a targeted spelling intervention is crucial. Such an intervention would address the root causes of these errors, improve readability and comprehension, and enhance overall communication skills. This, in turn, would help learners

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overcome the barriers posed by spelling inaccuracies, supporting their educational and professional development.

Research Objective No. 2: What is the status of the spellers among grade 8 students after the implementation of SPELLQUEST intervention?

Table 3. ***Mean Average of the Scores in Post-Test***

Post-Test Scores	*Frequency*	*Percentage*
48	1	4.55%
47	2	9.09%
46	2	9.09%
45	1	4.55%
44	4	18.18%
43	4	18.18%
42	2	9.09%
41	2	9.09%
40	1	4.55%
39	1	4.55%
38	1	4.55%
34	1	4.55%
Total	**22**	**100%**
Mean Score		**42.91**
Overall Mean		**85.82%**
Description		**High**
Standard Deviation		**3.26**

Presented in Table 3 are the results of the post-test, showing the spelling proficiency levels of the same 22 students after the SPELLQUEST intervention. The mean score increased significantly to $M = 42.91$ ($SD = 3.26$), and the overall mean percentage rose to 85.82%, which falls under the "High" performance category. This substantial increase suggests that, overall, students gained a solid command of the spelling skills targeted by the intervention. Moreover, the decreased standard deviation reflects a much tighter clustering of scores around the mean, indicating reduced variability. This consistency implies that the intervention was effective for most, if not all, participants. The highest post-test score was 48, and the lowest was 34—both relatively close to the mean—reinforcing the observation of consistent improvement. These findings demonstrate the effectiveness of SPELLQUEST in addressing a range of spelling challenges and improving overall student proficiency.

Table 4. ***Summary Table on the Mean Scores and Descriptions for Spelling Proficiency Indicators after the Implementation of the SPELLQUEST Intervention.***

Indicator	*Mean*	*Description*
Short Vowels	97.27	Very High
Contractions	79.09	High
Silent Consonants	92.73	Very High
Syllables Compound Words	90.91	Very High
Syllables Prefix/Suffix	80.91	High
Common Endings	79.09	High
All Principles	80.91	High
Ei/Ie	70.91	High
Diphthongs	86.36	High
Vowel Digraphs	82.73	High
Overall	**84.09**	**High**

The data from Table 4 reveals strong spelling performance among learners, with the highest mean score observed in short vowels at 97.27, indicating very high proficiency. In contrast, the lowest mean score was recorded in consonant digraphs at 63.64, suggesting a need for further improvement in this area. The overall mean score of 84.09 reflects significant progress, indicating the effectiveness of the SPELLQUEST intervention in enhancing students' spelling skills.

The study points out that digital applications may help literacy by encouraging students and being easy to access, but there is a major gap in the number of properly evaluated, evidence-based programs available. Because of this gap, we cannot be sure if digital tools support improvements in reading and spelling, making further testing necessary to confirm their effectiveness for children with literacy disorders (Galuschka et al., 2020). In the context of this study, the SpellQuest intervention similarly ensures that students' final attempts at spelling activities are

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accurate through structured and gamified reinforcement, minimizing the repetition of incorrect forms. Furthermore, Chakkalathy et al., (2022) emphasize that activity-based teaching methods significantly enhance learners' retention. This aligns with SpellQuest's use of interactive tools like Scrabble, Word Factory, and Hangman, which promote engagement. Likewise, Reyes (2023) highlights that gamified learning environments increase motivation and improve student outcomes, especially in language-related tasks. Hattie's meta-analysis also supports active learning strategies, showing that students learn more effectively when they construct their own understanding—an approach reflected in this study's learner-centered spelling activities.

Table 5. ***Significant Difference between the Pre-test and Post-test Scores***

Type of Test	N	df	t-value	p-value	Decision a = 0.05	SE Difference	Cohen's D (Effect Size)
Pre-Test **Post Test**	22 22	21	10.2	<.001	Significant	1.64	2.17

In Table 5, the t-test for dependent samples was employed to compare the pre-test and post test scores, t (21) = 10.2, p <.001. Since the p-value is significantly lower than the alpha level of 0.05 (a = 0.05), we reject the null hypothesis. There is no difference between pre-test and post-test scores.

Additionally, the computed Cohen's d of 2.17 suggests a very large effect size, meaning the intervention had a strong positive impact on learners' performance. This statistical result is consistent with the findings of Mendoza and Torres (2021), who emphasized that interventions grounded in gamified learning approaches significantly improve students' academic outcomes by promoting engagement and sustained focus. Similarly, Villanueva et al. (2020) found that structured literacy activities that involve repeated exposure and correction, such as those in SPELLQUEST, lead to notable gains in spelling accuracy among middle-grade learners. Moreover, Cruz and Javier (2019) concluded that targeted spelling programs significantly enhance students' language performance, especially when paired with immediate feedback and interactive learning environments.

In summary, the results from this study clearly indicate that the SPELLQUEST intervention has a substantial positive impact on improving students' spelling proficiency. The significant increase in mean scores from the pre-test to the post-test, coupled with the high t-value and low p-value, strongly supports the effectiveness of this instructional approach. Educators may consider adopting the SPELLQUEST as a part of their teaching methods to facilitate better spelling skills among their students.

Research Question No. 4: What are the insights of the students about the use of SPELLQUEST: Differentiated Gamified Assessments intervention in improving students spelling proficiency?

To address this research question, in-depth interviews were conducted with the informants and participants. Probing questions were asked to elicit their responses regarding their observation and experiences with their insights of the SPELLQUEST intervention in improving spelling proficiency among grade 8 students. The major themes and sample statements for research question number 2 were presented in Table 7, summarizing the participants' responses to their insights about the intervention. Participants shared their responses regarding their insights about the intervention. From their answers, three major themes emerged: (1) transforming spelling struggles into enjoyable learning; (2) improved confidence towards spelling; and (3) positive shift in attitudes toward spelling.

Table 6. ***Themes and Sample Statements on the Insights of the students about the use of SPELLQUEST in improving students spelling proficiency.***

Essential themes	Sample Statements
Transforming Spelling Struggles Into Enjoyable Learning	✓ "Before using SPELLQUEST, I struggled with spelling even simple words like "rain" and often got them wrong. Now, with SPELLQUEST, it's more fun and helps me learn the correct spellings through games."- IDI 01 ✓ "Before SPELLQUEST, I struggled with silent letters and double letters, making spelling difficult and confusing. I didn't enjoy practicing because it felt boring, just reading and writing."- IDI 03 ✓ "SPELLQUEST helps students like me who get bored easily and struggle with spelling. The fun activities and teamwork made us feel united and motivated."- IDI 06 ✓ 'SPELLQUEST makes learning fun, unlike before when spelling class felt tiring. I actually want to join now because the games are enjoyable and educational."- IDI 07
	✓ "Now, I've made some progress… I'm more confident in my spelling because of SPELLQUEST." IDI-02 ✓ "Today, I feel much more confident in my spelling." IDI-03

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Improved Confidence Towards Spelling	✓ "Before, I often made mistakes in spelling, but now I feel a bit more confident in my answers." IDI-07 ✓ "Now, even if I make a mistake, I'm not embarrassed because it's just part of the game." IDI-10
Positive Shift in Attitudes Toward Spelling	✓ "I didn't enjoy practicing it because it felt boring—but now I enjoy learning spelling." IDI-03 ✓ "I now better understand the correct spelling of words." IDI-05 ✓ "I also enjoy reading and writing words now." IDI-06 ✓ "Before, spelling class had no excitement." IDI-10
Increased Motivation	✓ "The interactive activities, like matching and timed challenges, help me stay motivated. I can now spell harder words like "achievement" and "responsible" more easily."- IDI 03 ✓ "It's motivating because it doesn't feel like just an assignment." – IDI 03 ✓ "I became more motivated to learn spelling in every class. Because of that, my spelling skills really improved."- IDI 04
Addressing Initial Struggles in Spelling Words	✓ "I used to struggle with spelling and would often guess words like "definitely" and get them wrong. I wasn't confident and made a lot of mistakes." – IDI 01 ✓ "I used to find spelling really hard and would get even simple words like "friend" wrong. I wasn't sure how to spell and often just guessed." -IDI 02 ✓ "Before using SPELLQUEST, I already knew how to spell, but I often got confused with silent letters or double letters in words like "address" or "necessary." Now, the games make practice more fun and less boring."- IDI 03 ✓ "At first, I found spelling difficult, but SPELLQUEST made it fun and easier to learn through game-like activities. The interactive tasks helped me memorize difficult words better."- IDI 04

One of the first key themes that emerged was how SPELLQUEST successfully transformed spelling struggles into an enjoyable and productive learning experience. Students who once found spelling confusing and discouraging began to engage more comfortably with words through interactive, game-like elements. As one learner reflected, "Before using SPELLQUEST, I struggled with spelling even simple words like 'rain' and often got them wrong. Now, with SPELLQUEST, it's more fun and helps me learn the correct spellings through games" (IDI 01). This shift is consistent with findings from a study in French primary schools, where the ECRIMO app significantly enhanced engagement and spelling accuracy through consistent interactive use (Boggio et al., 2023). Likewise, in the Philippines, third-grade students at Sevilla Elementary School demonstrated improved spelling performance after employing game-based teaching strategies (Javillo, 2023).

In addition to enjoyment, another prominent theme was the significant increase in learners' confidence when approaching spelling tasks. Many students reported initial fear and self-doubt, but the shift to a supportive, low-pressure environment allowed them to develop a sense of achievement and self-assurance. One participant remarked, "Now, I've made some progress… I'm more confident in my spelling because of SPELLQUEST" (IDI 02). This aligns with research conducted at MTs Negeri 2 Manggarai Barat in Indonesia, where learners using online spelling games exhibited improvements in vocabulary mastery and self-efficacy (Rahmawati et al., 2022). Similarly, a randomized controlled trial in Germany found that children participating in adaptive, game-based spelling interventions experienced gains in both spelling accuracy and learning confidence (Billeter et al., 2024).

Furthermore, a third theme that stood out was the positive change in students' attitudes toward spelling. What was once considered a monotonous subject evolved into an engaging and anticipated classroom activity. As one student shared, "I didn't enjoy practicing it because it felt boring—but now I enjoy learning spelling" (IDI 03). Supporting this, a study in Spain involving a 3D holographic mobile application revealed that interactive and visually rich learning tools significantly enhanced children's enjoyment of vocabulary and spelling tasks (Cerezo et al., 2024). In parallel, an action research project in Ghana demonstrated that language games not only improved spelling outcomes but also fostered more positive student attitudes and classroom participation (Mensah et al., 2022).

Moreover, the fourth theme focused on how SPELLQUEST helped students overcome foundational spelling challenges, particularly those involving silent letters, double consonants, and irregular spelling patterns. Several students admitted to guessing spellings and lacking basic confidence, but the structure of SPELLQUEST provided clear feedback and practice. One noted, "Before using SPELLQUEST, I already knew how to spell, but I often got confused with silent letters or double letters in words like 'address' or 'necessary.' Now, the games make practice more fun and less boring" (IDI 03). These observations are supported by research in Germany, where structured spelling games that emphasized phonemic and

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orthographic rules significantly reduced student errors (Billeter et al., 2024). Additionally, a recent study in Spain found that phoneme-to-grapheme game-based instruction improved spelling accuracy and foundational literacy skills among primary school learners (Gutiérrez & Díez, 2025).

Finally, the fifth theme was the noticeable increase in student motivation to learn spelling, largely attributed to the dynamic and rewarding nature of SPELLQUEST. Activities that resembled games more than traditional tests helped reduce pressure and increased classroom engagement. As one student described, "I became more motivated to learn spelling in every class. Because of that, my spelling skills really improved" (IDI 04). This finding is consistent with a 2024 study published in PLOS ONE, which found that digital educational games significantly boosted student motivation through personalized feedback and goal progression (Li et al., 2024). Additionally, Cheung and Ng (2021) reported that the use of gamified instruction in a U.S.-based classroom led to enhanced student engagement and intrinsic motivation, further supporting the motivational benefits of interactive learning tools.

CONCLUSION

This study set out to investigate the spelling difficulties of Grade 8 students at Asuncion National High School and to evaluate the effectiveness of the SPELLQUEST: Differentiated Gamified Assessments intervention in addressing those challenges. Anchored on the first research objective, the pre-test results revealed a generally low level of spelling proficiency among students, as evidenced by an overall mean of 52.46%. Students particularly struggled with spelling features such as contractions, suffixes, and diphthongs, indicating significant gaps in foundational skills. These results highlighted the urgency of designing an intervention that directly targeted these specific learning difficulties.

Aligned with the third research objective, the SPELLQUEST intervention was implemented to improve students' spelling performance. Post-test results demonstrated a marked improvement, with the overall mean rising significantly to 85.82%. A paired t-test yielded a value of $t = 10.2$ with $p < .001$, confirming that the gain in performance was statistically significant. Furthermore, the Cohen's d value of 1.35 indicated a large effect size, validating the intervention's effectiveness in generating meaningful improvements. The reduction in score variability also suggested that SPELLQUEST contributed to more consistent spelling proficiency among learners.

To address the fourth research question, student interviews were analyzed thematically, resulting in five prominent themes: (1) SPELLQUEST transformed spelling practice into an enjoyable and interactive experience, (2) students reported increased confidence in approaching spelling tasks, (3) learners developed more positive attitudes toward spelling, (4) SPELLQUEST helped students overcome challenges with silent letters, double consonants, and irregular patterns by offering structured and consistent practice, and (5) the gamified format significantly boosted students' motivation through engaging tasks and rewards. These qualitative findings strongly supported the quantitative data, affirming that SPELLQUEST not only enhanced spelling proficiency but also cultivated a supportive and motivating environment conducive to language learning.

In conclusion, the study provides strong evidence that SPELLQUEST is an effective intervention for improving the spelling proficiency of Grade 8 students. By integrating diagnostic tools, vocabulary enrichment, and interactive learning strategies, the program addressed both the cognitive and affective dimensions of spelling instruction. These results affirm the value of gamified, learner-centered approaches in tackling foundational language skills and recommend SPELLQUEST as a scalable model for broader implementation in English instruction.

RECOMMENDATION

Based on the findings of this study, it is recommended that the SPELLQUEST intervention be integrated into regular English instruction for learners struggling with spelling. Teachers are encouraged to adopt gamified and activity-based learning strategies, such as those featured in SPELLQUEST, to create a more engaging and motivating environment for students. The significant improvement in post-test scores suggests that using interactive games like Scrabble, Hangman, Crossword, and Word Factory can greatly enhance spelling proficiency and vocabulary retention. It is further recommended that educators receive training in implementing gamified assessments to ensure consistent and effective delivery. School administrators may consider allocating dedicated time and resources for such interventions, especially for learners with persistent spelling difficulties. Additionally, the use of diagnostic tools like the Barnell-Loft Diagnostic Achievement Test should be sustained to regularly assess students' needs and tailor instruction accordingly. Future researchers are encouraged to replicate this study across other grade levels or schools to determine the broader applicability of the SPELLQUEST model. Long-term studies could also be conducted to evaluate the sustained impact of gamified assessments on spelling proficiency and students' overall academic performance.

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