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Play Towards Excellence: An Analysis of the Effectiveness of Mobile Gamification in Expanding the Vocabulary of Grade 10 Students

Jay Mark S. Quimpan^{1*}, Elemr A. Taripe, PhD-Fil.EdD²

^{1,2} Assumption College of Nabunturan, Philippines

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*Corresponding author: Jay Mark S. Quimpan

Abstract

Aims: The purpose of this quantitative study is to determine the effectiveness of mobile gamification as an intervention in expanding the vocabulary of Grade 10 students in the Filipino subject.

Study Design: The study employed a quasi-experimental research design using a one-group pretest-posttest approach to measure the changes in students' vocabulary before and after the intervention.

Place and Duration of Study: The study was conducted at Tagum City National Comprehensive High School – Pagsabangan Campus during the School Year 2025–2026.

Methodology: The respondents of the study consisted of thirty (30) Grade 10 students from the Aristotle section. A researcher-made vocabulary test served as the primary instrument for data gathering. A pre-test was administered before the implementation of mobile gamification, while a post-test was conducted after the intervention. Mean, standard deviation, and dependent samples t-test were used to analyze the difference in students' scores before and after the intervention.

Results: The findings revealed that the students' mean score in the pre-test was 19.57 with a class proficiency of 65%, described as nearing mastery level. Meanwhile, the post-test mean score increased to 26.03 with a class proficiency of 87%, described as class has attained mastery level. The results indicate a significant improvement in the students' vocabulary level after the implementation of mobile gamification as an intervention. Furthermore, the dependent samples t-test showed a significant difference between the students' scores before and after the intervention.

Conclusion: Based on the findings, mobile gamification was proven to be an effective strategy in expanding the vocabulary of students in the Filipino subject. The use of interactive and gamified activities through mobile devices increased students' interest, motivation, and active participation in learning.

Keywords: Mobile Gamification, Vocabulary, Filipino, Vocabulary Development, Quasi-Experimental Design, Mobile Learning

INTRODUCTION

In the current state of education, the low level of students' vocabulary remains a major concern, particularly in the Filipino subject, because it directly affects their ability to comprehend texts, analyze content, and express ideas clearly. According to Nagy and Townsend (2019), students with limited vocabulary encounter difficulties in understanding reading materials and expressing their ideas clearly in both oral and written communication.

In the Philippines, the lack of motivation and enjoyment among students in learning vocabulary continues to be a challenge, especially in the Filipino subject. Many teachers still rely on traditional teaching methods such as memorization of words and dictionary use, which often result in students losing interest in learning (Del Rosario, 2022). Hence, there is a need to employ innovative and interactive strategies that can enhance students' engagement and participation.

One of the modern strategies used in education today is mobile gamification. According to Deterding et al. (2020), gamification refers to the use of game elements such as points, badges, levels, and rewards in non-game contexts like education in order to increase students' motivation and participation. When implemented through mobile devices such as smartphones and tablets, it is referred to as mobile gamification.

At Tagum City National Comprehensive High School – Pagsabangan Campus, the researcher observed that many students experience difficulty in understanding and using deep or unfamiliar Filipino words. Results from the Philippine Informal Reading Inventory (Phil-IRI) also reflected low performance in reading comprehension among some students, which may be associated with limited vocabulary knowledge. Because of this, the study was conducted to determine the effectiveness of mobile gamification as an intervention in expanding the vocabulary of Grade 10 students.

THEORETICAL BACKGROUND

This study is anchored on the Sociocultural Development Theory of Lev Vygotsky (1978), which states that learning occurs through social interaction and the use of cultural tools such as language and technology. In the context of this study, mobile gamification serves as a modern instructional tool that provides an interactive and meaningful learning environment.

An important concept in this theory is the Zone of Proximal Development (ZPD), wherein students learn through guidance, feedback, and activities suited to their abilities. Mobile gamification functions as scaffolding that helps students better understand and use new vocabulary words in the Filipino subject.

RESEARCH OBJECTIVES

The study aims to determine the effectiveness of mobile gamification in expanding the vocabulary of Grade 10 students.

Specifically, it seeks to answer the following questions:

1. What is the Filipino vocabulary score of the students before the intervention (pre-test)?
2. What is the Filipino vocabulary score of the students after the intervention (post-test)?
3. Is there a significant difference in the students' vocabulary scores before and after exposure to mobile gamification?

STATEMENT OF NULL HYPOTHESIS

There is no significant difference in the students' vocabulary scores before and after the use of mobile gamification as an intervention.

METHODS

Research Design

The study employed a quasi-experimental research design using a one-group pretest-posttest approach. This design was used to determine the effect of mobile gamification on students' vocabulary before and after the implementation of the intervention.

Location of the Study

The study was conducted at Tagum City National Comprehensive High School – Pagsabangan Campus.

Research Respondents

The respondents of the study consisted of thirty (30) Grade 10 students from the Aristotle section during the School Year 2025–2026.

Table 1

Distribution of Respondents

School	Grade/Section	No. Of Students
Tagum City National Comprehensive High School	10 - Aristotle	30
Total		30

Research Instruments

The researcher utilized a researcher-made vocabulary test consisting of 30 items for both the pre-test and post-test. The instrument underwent validation to ensure its accuracy and reliability.

Research Procedure

After securing permission from the panelists, adviser, and an endorsement letter from the Dean of Assumption College of Nabunturan, the pre-test was administered to determine the students' initial vocabulary level. Afterwards, mobile gamification was implemented as an intervention using Mentimeter and other gamified activities. Following the implementation, a post-test was conducted to measure changes in the students' vocabulary level.

Statistical Treatment of Data

Mean and standard deviation were used to determine the students' performance levels in the pre-test and post-test. Meanwhile, dependent samples t-test was used to determine whether there was a significant difference between the students' scores before and after the intervention.

RESULTS AND DISCUSSION

Teaching in Filipino subject plays an important role in developing students' communication skills, text comprehension, and vocabulary expansion. However, in the current educational context, the effective development of these skills remains a challenge, especially when inappropriate teaching strategies are used. According to studies in the field of education from 2019 to 2025, traditional teaching methods are not sufficient to sustain students' interest and active participation in language learning. Therefore, the use of innovative strategies such as mobile gamification is necessary to enhance students' motivation, interaction, and

academic performance. The data gathered show that students had an initial level of vocabulary proficiency that still required improvement before the intervention.

The pre-test results indicated that their skills were at a level that still needed continuous development, particularly in the use and understanding of words within the Filipino context. Meanwhile, after the implementation of mobile gamification, the post-test results revealed higher and more improved skills, indicating more active participation and a more effective learning process through the innovative strategy. In analyzing the difference between the two results, the statistical data clearly showed a significant change in the students' level of learning. This implies that the use of mobile gamification is not merely an additional classroom activity but an effective pedagogical approach that improves students' vocabulary performance. The results emphasize that modern technology combined with gamified learning has great potential as a strategy in language teaching, particularly in vocabulary enhancement in the Filipino subject.

Table 2 (for result 1 and 2)

Measure	Pre-Test (V2)	Post-Test (V3)
Bilang (N)	30	30
Mean	19.57	26.03
Standard Deviation	3.380	1.732
Minimum	15.00	23.00
Maximum	28.00	29.00

1. Filipino Vocabulary Scores of the Students Before the Intervention

It shows that the students' mean score in the pre-test was 19.57 with a class proficiency of 65%, described as nearing mastery level. This indicates that before the implementation of mobile gamification, the students had a moderate level of vocabulary knowledge but had not yet fully achieved the mastery level. The result highlights the need for an appropriate and innovative intervention to improve their level of learning.

2. Filipino Vocabulary Scores of the Students After the Intervention

Based on the data gathered, the students' mean score in the post-test was 26.03 with a class proficiency of 87%, described as "Class has attained the mastery level." This shows that after the implementation of mobile gamification, there was a clear and significant improvement in the students' vocabulary level. The result indicates that the intervention was effective in enhancing their learning and understanding of words.

3. Significant Difference Between Pre-test and Post-test

Table 4

Measure	Value
t-value	-14.83
df	29
p-value	< .001
Result	There is a Significant Difference

It shows that the t-value is -14.83 and the p-value is less than 0.001, which is lower than the 0.05 level of significance. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. The result indicates that there is a significant difference between the students' pre-test and post-test scores. The substantial increase in the mean score from 19.57 to 26.03 confirms that mobile gamification became an effective intervention in vocabulary enhancement. Overall, the findings of the study revealed that mobile gamification has a positive and significant effect on the students' vocabulary. From the nearing mastery level in the pre-test, the students improved to the mastery level in the post-test. The statistical analysis using the paired t-test confirmed that this change was not due to chance but rather a significant improvement. Therefore, mobile gamification is an effective and innovative strategy in teaching vocabulary in the Filipino subject.

CONCLUSION

Based on the findings of the study, mobile gamification was proven to be an effective strategy in expanding the vocabulary of Grade 10 students. The use of mobile-based gamified activities helped increase students' interest, motivation, and active participation in learning Filipino.

RECOMMENDATIONS

Based on the findings of the study, the following are recommended:

1. Filipino teachers should be encouraged to use mobile gamification as a strategy in teaching vocabulary.
2. Schools should conduct seminars and training programs on gamification and mobile learning.
3. The Department of Education should support the integration of modern technology in teaching Filipino.
4. Further related studies should be conducted using a larger number of respondents and different grade levels.

CONSENT

In compliance with ethical standards, the researcher obtained informed consent from the participants and their parents or guardians before conducting the study.

ETHICAL APPROVAL

The researcher complied with all ethical standards in conducting the study, including voluntary participation, confidentiality of data, and obtaining permission from the appropriate authorities and institutions.

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