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Impact of Traditional Gamification on Reading Performance of Grade 3 Pupils of Gloria District

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Abstract

This study determined whether traditional gamification improved the reading performance of struggling grade III learners in the Gloria District. Quantitative research method particularly quasi-experimental design was employed to examine and compare existing relationships of the variables. The researcher used Cochran's formula to take a sample from the ten selected schools that had the lowest in the Phil-Iri results and 141 grade III pupils who were purposively selected to be his participating respondents in the study. Moreover, the pupils underwent one-quarter of traditional gamified activities namely: Domino, Bingo, and Scrabble. The mean was computed to determine the pretest and posttest scores of the pupils. Standard deviation was used to identify if there were significant differences between the two groups of respondents. Likewise, it was utilized to determine significant increases between pretest and posttest scores before and after the implementation of gamified activities. Furthermore, the result of the study showed that there was a significant improvement in the posttest mean scores after the implementation of traditional gamification. The results indicate that using traditional gamification inside the classroom greatly enhanced pupils' motivation, vocabulary, and reading performance levels. On this basis, it is recommended that teachers should use this in developing pupils reading ability.

Keywords: Traditional Gamification, Reading Performance, Gamified Strategies

Introduction

The province of Oriental Mindoro specifically in the Gloria district has shown low level performance in reading based on the Philippine Informal Reading Inventory results in 2024. Thus, reading is the foundational skill of all learning. It is the bridge to ensure a child's success in school. However, a global education assessment of Progress in International Reading Literacy 2021 revealed that 67% of the students struggle to read and cannot cope with other learners as they enter fourth grade [1]. Furthermore, the Philippines Informal Reading Inventory (PISA) showed that the Philippines ranked sixth lowest in reading and Mathematics compared to 81 participating countries [2]. Educators struggle to bridge the gap between these grade levels as learners are expected to be readers at this level. At the same time, they were crafting and designing interventions that would address the problem. One of these interventions that emerges as an effective strategy in the realm of literacy education is Traditional gamification [3].

Traditional gamification refers to those games played for centuries that were passed down from one generation to another. These games involved board, cards, outdoor games, and puzzles [4]. Traditional games are one of the game strategies that is considered to contribute to language development. Participants participating in the games will develop qualities like comprehension, listening, conversation, and asking

questions that increase creativity and imagination [5]. Games create a meaningful context for language and stipulate competition, leading to positive attitudes and improved learning outcomes. By integrating games, teachers can create an enjoyable and effective vocabulary learning environment that enhances pupils' reading levels [6].

To improve the reading performance level of grade 3 pupils, traditional gamification is beneficial since the schools in Gloria district have limited access to an internet connection. Aside from that, the number of pupils enrolled per school cannot be accommodated 1 to 1 ratio of gadgets. Then the internet connection was limited to teachers since it could not hold several connectors. Offline games such as board games are the only possible games that help these children at school.

Given the importance of gamified strategies and the current situation of Grade 3 pupils, this study is conceptualized to address struggling readers by using traditional gamification as an intervention among Grade 3 pupils of Gloria District. By focusing on primary education, the study sought to explore the significant impact of gamification on the teaching and learning process during the learners' formative years. Further, find valuable ideas for educational leaders, curriculum planners, and educators in creating an active and playful environment that would enhance learners' reading performance, aligned with the Department of Education's goals and objectives.

Experimental Method

This study employed a quantitative research method, particularly the quasi-experimental design. The design was used to investigate the effectiveness of intervention between the two groups of respondents which were the control and experimental groups. Furthermore, the study population was 222 pupils from the ten schools of Gloria District who obtained the lowest scores in the Phil-Iri results for the school year 2024-2025. The Cochran formula was used to determine the target population resulting in 141 pupils. These respondents were divided into two groups which were control and experimental. 71 grade III pupils of which were from Agos, Agsalin, Almavilla, Batingan, and Bulaklakan were part of the experimental group, and 70 pupils from Kawit, Langgang, Melecio D. Cantos, Tambong and Tinalunan ES will be part of the Control Group.

Moreover, the method employed for collecting essential data was the administration of pretest and posttest using the Philippine Informal Reading Inventory (Phil-Iri). It is a standardized assessment tool designed to measure and evaluate pupil's reading performance whether they belong to Independent, Instructional, Frustration, or Nonreader. Phil-Iri is composed of reading passages used by teachers as diagnostic test tools to determine students' abilities and needs in reading.

Conversely, the second instrument was a self-developed tool known as Gamification. It was a traditional game modified and designed to aid struggling readers, enhance their reading performance, and help them enjoy learning. The gamification tool comprised three traditional games: Domino Word, Bingo, and Scrabble. For Bingo word game, pupils played by finding similar words matched to the given words. This was an easy level since pupils were practicing being familiar with the words exposed to them. The second game was the average level. This game comprised a bingo caller card and a bingo card for the players. The role of the Bingo caller was to announce the meaning of the word before revealing the word's being defined. This was to help pupils understand the meaning of the words. Whoever matches all the announced words on their cards would be the winner. The last and the most difficult level game was the Scrabble. This game was the application of familiar words (Domino) and the meaning of their words (Bingo). Pupils in this game thought of a word they could place on the board. Each of them must put a word to gain points.

If the player said passed, other players placed their formed words to beat other players. If all the tiles were used, the remaining tiles and accumulated points were counted. However, the remaining tiles would not add up to their points but deducted. Whoever players accumulate the highest point would be the winner.
Preceded to the implementation, the researcher underwent the research ethics review to determine if the researcher was permitted to proceed with the data-gathering phase. After securing it, he also requested a letter of authorization from the authorities of Gloria District to conduct the study. This letter served as permission to conduct the study within the district. Once the necessary permissions were secured, the researcher visited the school to explain how to use the Game Kits with the grade III advisers. The modified intervention, Traditional Gamification, was conducted during the second quarter of the academic year 2024-2025. The game was played during lunch breaks from Monday to Thursday and any time on Friday. Subsequently, the researcher administered the Phil-Iri test to determine the pupil's reading performance. Then the first two weeks of the quarter, the experimental group played the Domino Word Game. The words used in this game were the selected words from the reading passages in the Phil-Iri survey questionnaire. The purpose of the game was to be familiar with the words. The other two weeks were spent on the BINGO game. This game was a continuation of the second game, but in this game, they focused on the meaning of the words. Instead of announcing the words solely, the teacher defined the meaning before the word. This was to help the learners understand the meaning and build their vocabulary.
The remaining weeks were for the Scrabble Game. In this game, all the words learned from the previous game were applied. The test measured learners on how far they remembered the words introduced to them. After the games, the pupils underwent a posttest. This test measured if the intervention implemented enhanced their reading performance. The collected test was compiled for encoding and organizing. The collected data served as a basis for subsequent analysis. Thus, the outcome of this study was treated as evidence for the findings and for drawing a conclusion.

Results And Discussion

This study aims to determine the impact of traditional gamification on the grade 3 pupils reading performance in Gloria District. The analytical procedures are presented according to the order of the questions.
Pretest scores of the grade III pupils before implementing traditional gamification.

Table 1: Pretest Score of Control Group

Pretest Scores	Frequency	Percentage	Description
16 to 20	1	1.4	Independent Level
11 to 15	18	25.4	Instructional Level
6 to 10	42	59.2	Frustration Level
1 to 5	10	14.1	Non-Reader Level
Total	71	100.0	
Mean: 8.76			Frustration Level

As reflected in the table 1, pupils' reading performance is at the Frustration level (M = 8.76). The data also shows that 1 or 1.4 percent of the respondents are at the independent level, 18 or 25.4 percent are at the Instructional level, 42 or 59.2 percent are at the Frustration level, and 10 or 14.1 percent are at the Non-

reader level. This implies that most of the respondents in the control group have difficulty understanding the reading passages. This means that the control group has limited vocabulary building which hinders them from connecting sentences to comprehend the idea of the passage. This result supports the study conducted by Minciano which found that Filipino learners have two main problems with reading. First is their difficulty understanding what they have read. She added that most Filipinos could understand what they were reading if the article was properly labeled. However, they often missed the main idea. The second problem is their reading skills which result in poor vocabulary building [7].

Pretest Scores	**Frequency**	**Percentage**	**Description**
16 to 20	2	2.9	Independent Level
11 to 15	20	28.6	Instructional Level
6 to 10	38	54.3	Frustration Level
1 to 5	10	14.3	Non-Reader Level
Total	70	100.0	
Mean: 9.20			Frustration Level

Table 2: Pretest Score of Control Group

As presented in table 2 above, grade III pupils acquired a mean score of 9.20 classified as Frustration level (M = 9.20). The data shows that 2 or 2.9 percent are Independent level, 20 or 28.6 percent are Instructional level, 38 or 54.3 percent are at a Frustration level, and 10 or 14.3 percent are Non-readers level. This implies that most of the respondents in the experimental group have difficulty understanding and comprehending reading passages. This means that the experimental group has a limited number of words in their mind which hinders them from connecting ideas in the passages. In support, students' reading practices were just text users and code breakers. They have limited vocabulary to understand the deeper meaning of the text aside from that they focus on reading without understanding. In the classroom, teachers focus students to oral reading rather than comprehension [8].

Significant difference between the Pretest Scores of the Control and Experimental groups.

Table 3: Difference between the Pretest Scores of the Control and Experimental

Variable	**Types of Respondents**	**Mean Score**	**t-value**	**p-value**	**Conclusion**
Pretest Scores	Control	8.76	-0.875	0.383	Insignificant
	Experimental	9.20			

Table 3 above displays the results of the independent sample t-test for the mean score of the control and experimental groups before the implementation of traditional gamification. There is no significant difference between the mean score of the control group (M = 8.76) and the experimental group (M = 9.20). Thus the null hypothesis is accepted. These results indicate that all the respondents find it challenging to process and understand the reading selection. Without playful activities, pupils' motivation is poor, which demotivates them to perform in class. Thus, lose the encouragement to read and build their vocabulary. In support, if students do not master the fundamental reading abilities from the beginning, they will find it difficult to succeed in the other learning areas. Furthermore, reading proficiency at the end of the third

grade is the final year of children's learning to read journey. As measured by NEAP at the beginning of fourth grade, it might be make-or-break challenges for learners in their reading endeavors. If these children were not proficient readers as they are in fourth grade, these students would likely fail and not understand the learning competencies in the curriculum [9].

Posttest scores of the grade III pupils after implementing traditional gamification.

Posttest Scores	Frequency	Percentage	Description
16 to 20	1	1.4	Independent Level
11 to 15	18	25.4	Instructional Level
6 to 10	42	59.2	Frustration Level
1 to 5	10	14.1	Non-Reader Level
Total	71	100.0	
Mean: 9.30			Frustration Level

Table 4: Posttest Score of Control Group

This result has supported the study of Lerners, where learners with poor start in reading will find it challenging to catch up with others. Poor primary graders readers will eventually continue to be poor readers. Some parents do not have time to make follow-ups or teach basic reading skills. They just let their child engage on their phones all day long [10]. In addition, revealed that motivation plays an imperative role in the teaching and reading process, as it initiates learners toward specific objectives and goals. Studies indicate that motivated learners tend to perform at higher levels of engagement and academic achievement than their less motivated friends or classmates [11].

As illustrated in Table 5 below, grade III pupils acquired a mean score of 12.61 in the posttest after implementing traditional gamification classified as Instructional level. This implies that the reading performance level of grade III pupils is enhanced and it is 3.41 higher than the pretest result. Meanwhile, 10 or 14.3 percent are independent level, 47 or 67.1 percent are Instructional level, 12 or 17. 1 percent are Frustrated level, and 1 or 1.4 percent are Non-readers level. This represents that the majority of the grade III pupils are enhanced and find it easy to process reading passages and selections. This means that pupils' vocabulary has enhanced enabling them to connect ideas to better understand the reading passages. This result supports the study conducted by Yolageldili and Arikan, where using gamified strategies promotes a positive classroom setting where learners feel confident. At the same time, teachers can direct the learners during the process without concerning classroom management factors that hinder learners' learning [12].

Table 5: Posttest Score of Experimental Group

Posttest Scores	Frequency	Percentage	Description
16 to 20	10	14.3	Independent Level
11 to 15	47	67.1	Instructional Level
6 to 10	12	17.1	Frustration Level
1 to 5	1	1.4	Non-Reader Level
Total	70	100.0	
Mean: 12.61			Instructional Level

Significant difference between the posttest scores of the control and experimental groups.

Table 6: Difference between the posttest scores of Control and Experimental

Variable	Types of Respondents	Mean Score	t-value	p-value	Conclusion
Pretest Scores	Control	9.30	-7.164	0.0001	Significant
	Experimental	12.61			

Table 6 above illustrates the significant difference between the posttest scores of the control and experimental groups. In the control group, the respondents obtained a mean of 9.30, 1 higher than the pretest score. However, most respondents fall under the frustration level. On the other hand, the experimental group obtained a mean score of 12.61 which is higher than the pretest score. Thus, there is a significant difference between the mean score of the two variables, and the null hypothesis is rejected. This implies that traditional gamification helps the experimental group understand the reading selection and develop their vocabulary. With the right reading strategies, pupils' performance increased, enabling them to better understand the concepts read in the reading selection. This result only proves the article of Yolageldili and Arikan, where gamification in education, respondents perceive games as an imperative role in classroom teaching and learning [12]. Furthermore, learners not only learn in a fun and engaging environment but also able to enhance their critical thinking and problem-solving skills which they develop subconsciously.

Significant difference between the pretest and posttest scores of the two groups of respondents.

Table 7: Difference between the pretest and posttest scores of Control and Experimental

Respondents	Scores	Mean Score	t-value	p-value	Conclusion
Control	Pretest	8.76	-2.523	0.014	Significant
	Posttest	9.30			
Experimental	Pretest	9.20	-12.559	0.0001	Significant
	Posttest	12.61			

These findings agree with the overall findings of Nicholson that the key to readers' developing internal motivation has something to do with the rewards cycle. To stress positive and motivational aspects, Nicholson describes the need for meaningful games and the integration of user-centered games designed for non-game contexts [13]. In support of the foregoing view, gamification leads to better vocabulary learning and increases students' intrinsic motivation. He recommended that gamification achieves the far-transfer effect of word reading. About this study, the article points out the importance of gamification in helping learners develop their reading level and motivating them intrinsically [14].

Conclusion

The findings of the study revealed that the mean score in the pretest of the control and experimental groups, pupils found it hard to comprehend and understand reading passages as their vocabulary-building was limited. Therefore, there was no significant difference between the two groups of respondents as their mean score belonged to the Frustration level. Conversely, after the implementation of traditional

gamification pupils' posttest scores in the experimental move towards the Independent level. This showed that the intervention utilized in the study had a significant impact on the reading performance of the grade 3 pupils of the Gloria District. Gamified activities truly shift the pupils' attention and engagement level which promotes a high level of reading.

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