

UTILIZING GENIAL.LY AS AN ICT-BASED INTEGRATION IN INCREASING COMPREHENSION SKILLS OF LEARNERS ON HOMOPHONES

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KeyWords

Action Research, Comprehension Skills, Genially, Homophones, ICT-Based, Intervention, Vocabulary and Spelling

ABSTRACT

This action research aimed to investigate the effectiveness of utilizing Genial.ly, as an ICT-based integration to increase comprehension skills on homophones among the Grade IV pupils of Buttong Integrated School. The study is motivated by the need of the learners to gain knowledge on how to distinguish the homophones to improve their vocabulary and spelling. The research is also guided by the understanding that integrating ICT tools, specifically Genial.ly into language instruction can potentially engage and motivate learners, leading to improved learning outcomes. The respondents of this study were chosen through convenience sampling. One group was exposed to traditional instruction methods and the other group to Genial.ly-based activities focused on homophone comprehension. The effectiveness of the intervention was evaluated through pre-tests and post-tests. The results showed that Genial.ly as an intervention to increase the learners' comprehension on homophones was more effective than the traditional method. Thus, the use of Genially is recommended to the teachers as an all-in-one online tool in improving the comprehension skills on homophones of the pupils.

CHAPTER I

This chapter provides an overview of the background of the study, theoretical framework, conceptual framework, statement of the problem, hypotheses, significance of the study and definition of terms.

Introduction

Students in the Philippines remain among the world's weakest in math, reading, and science, according to new findings by the Program for International Student Assessment (PISA), with recent test scores showing no significant improvement from the country's performance in 2018. The result showed that only 24% or just about one out of four Filipino students who took the PISA exam reached basic reading proficiency.

In connection with that, homophones are important in language learning and communication. According to Tomasi and Case (2019), research showed that the ability to distinguish between homophones is positively associated with vocabulary knowledge and reading comprehension. Their study found that learners who scored high in homophone discrimination tasks also scored high in vocabulary and reading comprehension tests. However, it is important to note that homophones are not only confusing but also play an indispensable role in widening one's knowledge and comprehension of the English language. Understanding homophones is crucial for improving one's vocabulary and communication skills. Homophones have different meanings and spellings, enabling individuals

to learn how to use words appropriately in different contexts. For instance, knowing the difference between "hear" and "here" can help individuals use the words correctly in written and spoken communication, which, in turn, can enhance their comprehension and accuracy. Moreover, homophones can also be used to develop wordplay and puns, often used in literature, jokes, and entertainment media. By understanding homophones, individuals can appreciate the clever use of language in various forms of media and entertainment.

On the other hand, one of the biggest challenges with learning homophones in the 21st century is the shift toward technology and text-based communication. In today's digital age, people increasingly rely on written forms of communication such as text messaging, instant messaging, and social media. This shift away from spoken communication has resulted in a decline in the ability to distinguish between homophones. David Crystal, a linguist, and author, notes in his book "Txtng: The Gr8 Db8" that "the problem of homophones is compounded by the rise of texting and other forms of digital communication" (Crystal, 2008). With the convenience of auto-correct and predictive text on devices, people are becoming less aware of the differences between homophones, leading to errors in spelling and grammar. This lack of exposure and practice with spoken language and homophones can negatively impact reading, writing, and comprehension skills. For example, learners who struggle with homophones may have difficulty understanding written instructions or communicating effectively in writing.

This is evident in the Department of Education, particularly the Grade IV pupils of Buttong Integrated School. For the three months of staying in this school for the Field Study course, the researchers observed that there was difficulty in the vocabulary and spelling of homophone words for the pupils. For example, some pupils use "deer" instead of "dear" in a sentence like, "I will visit my dear friend on Saturday". Based on their observation, they came up with the title "Utilizing Genial.ly as an ICT-Based Integration in Increasing Comprehension Skills of Learners on Homophones".

This is in connection to the the DepEd Computerization Program (DCP) or DepEd Order No.78, S. 2010 which aims to provide public schools with appropriate technologies that would enhance the teaching-learning process and meet the challenges of the 21st century. One of the objectives of this program is to integrate ICT into the teaching and learning process. Research has shown that digital tools and multimedia resources can enhance learning outcomes and comprehension skills. A study by Chiou, Tien & Lee (2015) found that the implementation of multimedia in text comprehension is also able to improve memory retention, learning satisfaction, and learning achievement on the information presented using multimedia learning. In line with that, one of the most innovative platforms for creating games is Genially, which has an intuitive and easy-to-use interface that facilitates content gamification and interactive communicative experiences (González, 2019). Therefore, the utilization of Genial.ly as an ICT-based integration in enhancing comprehension skills on homophones is an important and promising intervention that can improve language acquisition and communication skills.

Theoretical Framework

This study is anchored on three theories, the Schema Theory, Multimedia Learning Theory, and Mobile Learning Theory. According to the Schema theory (Carrell, P. L. 1984), the process of interpretation is guided by the principle that input is mapped against some existing schema and that all aspects of that schema must be compatible with the input information. This principle results in two basic information processing models, specifically bottom-up and top-down. The incoming data evokes bottom-up processing and is also called data-driven because the data enters the

system through the best-fitting, bottom-level schemata. Top-down processing occurs as the system makes general predictions based on a higher level, general schema, which means background knowledge in reading comprehension.

In the Schema theory, skill in reading depends on the efficient interaction between linguistic knowledge and knowledge of the world. Readers understand what they read because they can take the stimulus beyond its graphic representation and assign its membership to an appropriate group of concepts already stored in their memories. The reader brings information, knowledge, emotion, experience, and culture to the printed word during the reading process to decide what something is. In the context of homophones, the Schema theory suggests that learners need to identify and distinguish between words that sound alike but have different meanings, which requires attentional resources and working memory. The theory further suggests that providing learners with clear and organized information can enhance comprehension and retention of information. All in all, schemata are used to help readers strengthen memory or activate the existing knowledge structure to bridge the gap between what they have already understood and the whole details expressed in the passage for achieving the outcome of reading comprehension (Xue Jinyu, 2022).

Moreover, the Multimedia Learning theory proposes that, by combining information from the two channels, the information is transferred from short-term to working memory to be processed in-depth with the help of prior knowledge, and that processing helps the information stay in the learners' long-term memory (Yue et al., 2013). The key idea of the theory is that learners can learn more effectively when they are given two or more media and are engaged in processes of selecting the most relevant materials, organizing them into cognitive mental representations, and finally integrating them with their prior knowledge. In short, multimedia learning occurs when people build mental representations from words (such as spoken text or printed text) and pictures (such as illustrations, photos, animation, or video) to process information and integrate it with prior knowledge. This process improves the possibility that the information will go to long-term memory.

Lastly, the mobile learning theory is essential when considering the role of mobility and communication in learning environments. (Sharples, Taylor, & Vavoula, 2005). A key point in mobile learning theory is that the learner is mobile, not the technology (Shuler, 2009). Shuler identified key opportunities in mobile learning, such as the promotion of any-time, anywhere learning, the ability to reach under-served children (low cost, high accessibility), the ability to improve 21st-century social interaction, the flexibility to fit into diverse learning environments and the ability to enable personalized learning. Mobile learning theory emphasizes the im-

portance of using mobile devices to enable learners to access educational material anywhere and at any time. This has implications for the types of educational resources that are delivered through mobile devices.

Since mobile devices allow learners to access educational material in a variety of environments, there is a need for resources that can adapt to the learner's context. This is where homophones come in. One way to deliver educational content to learners is through interactive quizzes that test knowledge of homophones.

Genial.ly can be used to create mobile-friendly content that can be accessed through various mobile devices such as smartphones and tablets. This aligns with the principles of mobile learning theory, which emphasizes the importance of using mobile devices and technologies to support learning beyond the traditional classroom setting.

Furthermore, Genial.ly's interactive features, such as animations, quizzes, and interactive timelines, can enhance the engagement and interactivity of mobile learning activities. This can help learners to stay motivated and explore new topics and concepts beyond the classroom environment.

Conceptual Framework

This study aimed to determine if the utilization of Genial.ly as an Information Communication Technology (ICT) Based Integration increased the comprehension skills on homophones of the Grade IV pupils of Buttong Integrated School.

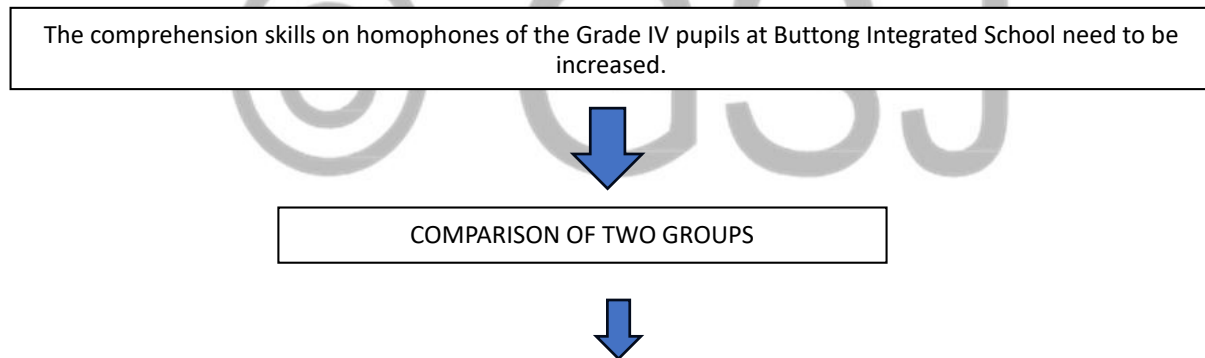
As illustrated in Figure 1, which depicts the research paradigm, the study consisted of four stages or processes: Identifying/Defining the research area, Planning, Intervention, and Evaluation/Assessment.

The first stage was identifying the research area including the location and the research problem.

The next stage in this conceptual framework refers to the plan of the researchers to identify and compare the initial comprehension level on homophones of the two sections of Grade IV pupils. The steps include a pre-test using printed materials which consisted of a 40-item test and the analysis of the pre-test result.

After this, the researchers utilized Genial.ly as their intervention for the experimental group and the traditional method for the control group. It consisted of five sessions and in each session, the researchers introduced 10 homophone words.

Lastly, the researchers conducted a post-test on both groups and analyzed the result using a Paired T-Test method to determine the significant difference before and after the intervention.



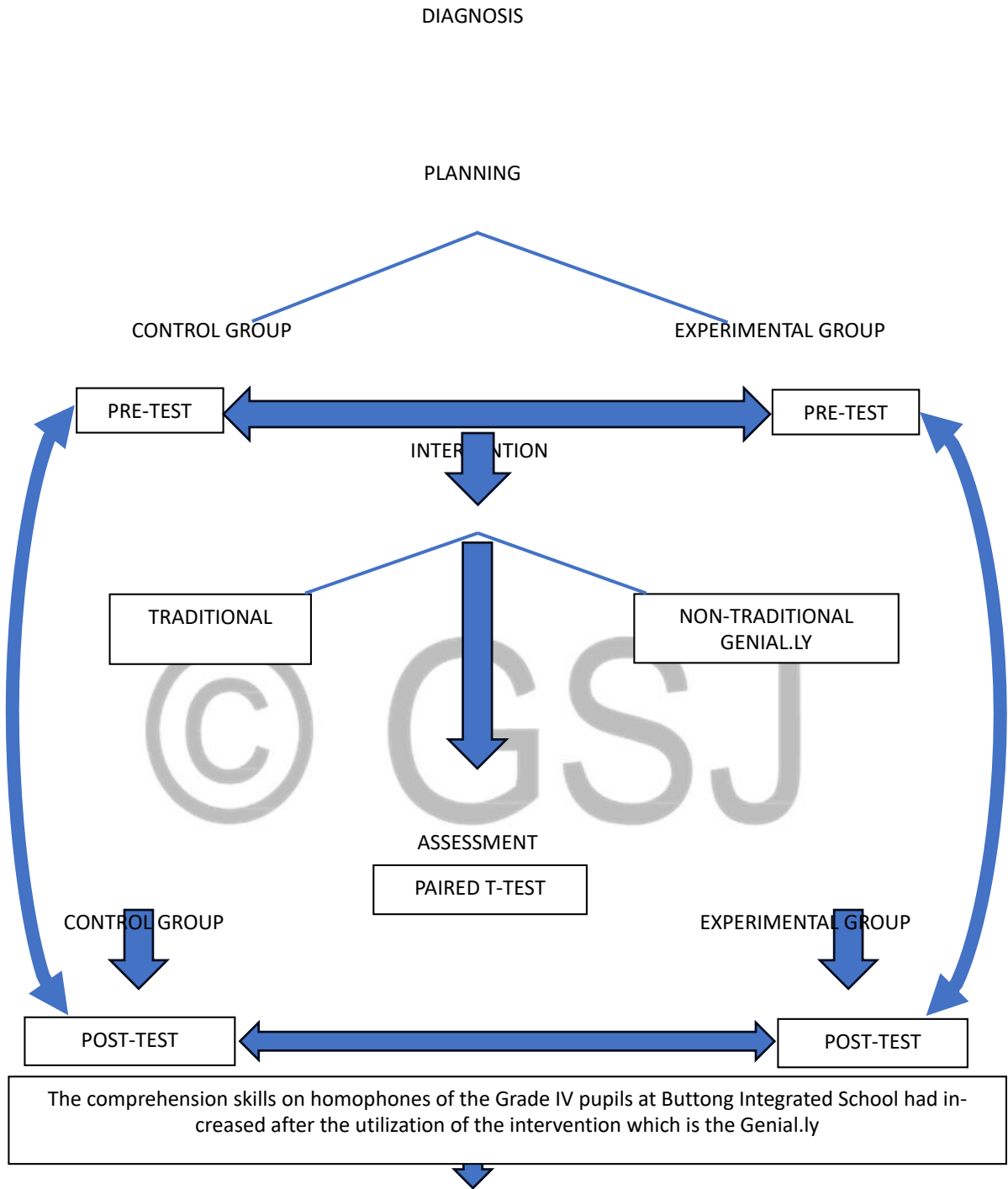


Figure 1. Research Paradigm

Statement of the Problem

This study aimed to determine the effectiveness of Genial.ly in increasing the level of comprehension skills on homophones of Grade IV pupils of Buttong Integrated School:

1. What is the pretest score of:
 - 1.1 the experimental group
 - 1.2 the control group?
2. What can be implemented to increase the comprehension skills of the learners on homophones?
3. Is there a difference between the pretest scores of the experimental and the control group?
4. Is there a difference between the pretest and post-test scores of:
 - 4.1 the experimental group
 - 4.2 the control group?
5. Is there a significant difference in the post-test scores of the two groups?
6. Is Genial.ly effective in increasing the comprehension skills of the learners on homophones?

Hypotheses

This study intends to prove the following hypotheses:

H0 There is no significant difference between the level of comprehension skills of the pupils before and after the utilization of the intervention.

H1 There exists a significant difference between the level of comprehension skills of the pupils before and after the utilization of the intervention.

Significance of the Study

The outcome of this research study will be beneficial to the following:

Teachers. This study is most beneficial to the teachers because it provides a foundation for them to improve their proficiency in teaching homophones while utilizing Genial.ly as a teaching strategy. Additionally, it can give them fresh ideas on how to coherently, imaginatively, and amusingly teach learners about homophones. Finally, to adjust their approach and strategies to push learners to reach new heights in terms of vocabulary, pronunciation, and other aspects of the teaching and learning process.

Learners. This study is also beneficial to the learners because it will serve as a guide for them to improve their comprehension skills specifically on the correct usage of homophones using Genial.ly. It will also enable the learners to understand that homophones are essential in developing effective communication skills, improving language proficiency, and enhancing overall literacy. In addition, this can provide them immersive experience as they adapt digitalization in their academic journey.

Administrators. This study also helps school administrators by providing them with a foundation for understanding the shortcomings and issues associated with teaching and learning homophones in a classroom context. In this situation, school administrators can think about several approaches to helping English instructors develop their pedagogical approaches by putting in place courses and seminars that will help them learn how to use homophones effectively and appropriately. Administrators are also encouraged to make learning materials available, particularly in the area of information and communications technology (ICT), since this is currently one of the useful tools for teaching and learning growth.

Future Researchers. This study will serve as a basis for future researchers conducting the same study focusing on the utilization of Genial.ly as an intervention or those who are undertaking studies with the same nature and respect.

Definition of Terms

To better understand the study, the researchers operationally defined the important terms:

Comprehension Skills. This pertains to the understanding and interpretation of the learners of the correct use of homophones.

Control Group. This refers to the pupils for whom the researchers used the traditional method as an intervention during the discussion of homophones.

Experimental Group. This refers to the pupils for whom the researchers used Genial.ly as an intervention during the discussion of homophones.

Genial.ly. This refers to the web-based tool the researchers used to create interactive and engaging visual content presentations and games.

Homophones. This refers to words that are pronounced the same but have different meanings and are usually spelled differently.

ICT-Based Integration. This refers to using web-based tools like Genial.ly as an intervention to increase learners' comprehension skills on homophones interactively and engagingly.

Increase. This pertains to the aim of the researchers to improve the comprehension skills of the pupils on homophones.

Pupils. This refers to the Grade IV pupils of Buttong Integrated School who are enrolled during the School Year 2023- 2024.

Utilizing. This refers to the procedure and application of Genial.ly as a learning aid to increase the pupils' comprehension skills on homophones.

CHAPTER II

INNOVATION/INTERVENTION/STRATEGY/IMPLEMENTATION

This chapter presents the intervention used to increase the comprehension skills of Grade IV pupils on homophones and how the intervention was implemented.

Introduction of the Intervention

Based on observation and early teaching experience of the researchers, they noticed that pupils needed to gain knowledge on how to distinguish the homophones to improve their vocabulary and spelling.

The researchers chose ICT-based integration particularly Genial.ly to increase the comprehension skills of Grade IV pupils on homophones. Interactive visual presentations and hands-on game activities were utilized.

Genial.ly is an online tool that can be used to create still, animated, or interactive visuals, such as posters, infographics, quizzes, and presentations. (Trust, T., 2022). It offers a user-friendly interface that enables educators to create engaging and interactive materials to help address the perceived difficulties in learning homophones. With Genial.ly, the researchers were able to create visually appealing and interactive materials incorporating multimedia elements such as images, videos, and animations to enhance learners' engagement and comprehension. Moreover, Genial.ly offers a range of customizable templates and design options that helped the researchers create materials that catered to diverse learners' needs and preferences. Through Genial.ly, the learners were able to enjoy playing games while increasing their comprehension skills on homophones.

Narration of Implementation

The research intervention was conducted through ICT-based integration particularly Genially as an all-in-one online tool for increasing the comprehension skills on homophones. As part of this research, the researchers conducted a pretest and post-test. The researchers observed that the Grade IV pupils needed to gain knowledge on how to distinguish the homophones to improve their vocabulary and spelling, and they were able to look for an appropriate intervention to increase the pupils' comprehension skills on homophones by utilizing Genial.ly as an intervention in the lesson.

On the first day, a pre-test was administered to both groups, Grade 4-A and Grade 4-B. This determined their comprehension level before utilizing the intervention. The pre-test was a pen and paper test consisting of a 20-item multiple choice and 20-item alternate test. After the pre-test, the researchers checked the test papers and recorded the scores. By doing so, they found out that 76.92% (20 out of 26) of the pupils in Grade 4-B failed the test as opposed to 66.67% (14 out of 21) in Grade 4-A. Therefore, the researchers decided to utilize Genial.ly in Grade 4-B while traditional in Grade 4-A. This was agreed upon so that the researchers could determine the effectiveness of Genial.ly by comparing the results of the post-tests of two groups after the 5-day special classes.

On the second day, the discussion started in Grade 4-A by using the traditional method. While in Grade 4-B, the researchers used Genial.ly for lesson presentation and the researchers let the pupils play "BINGO", a game feature of Genial.ly. The goal of this game was to complete three squares, but instead of numbers, homophones were replaced. This reflects on the study by Puspita and Losari (2016) which states that bingo game has a lot of advantages; it can help students remember some vocabulary that is difficult to memorize. In the learning process, it also invites the students to think quickly and it can improve their ability to cooperate. Besides that, it needs cooperation among the members of the group while the students are playing the game.

On the third day, the researchers introduced new homophone words by presenting a story and letting the pupils locate the homophones in it. The same story was presented to both groups but Genial.ly was still used in Grade 4-B while the traditional method was in Grade 4-A. The researchers let the Grade 4-B play the "TIC-TAC-TOE" game which is another game feature of Genial.ly. It was a group activity and before they took their turns, they had to answer a homophone question correctly. The goal was to mark a row (up, down, across, or diagonally). As stated by Shahrill and Latif (2016), TIC TOE TOE appears to be simple, but drawing from other studies, the use of tic-tac-toe for game-based learning could result in enhancement and an active learning environment in classrooms. For instance, Honarmand, Rostampour, and Abdorahimzadeh (2015) carried out research on game-based learning that involved the use of tictac-toe and flashcards. The focus of this study was on students' performance in vocabulary, their findings showed that game-based learning had increased the students' performances through challenges and motivation.

In the following session, the researchers discussed a new set of homophone words and let both groups play the GUESS THE PICTURE game as the motivation game and the FILL IN THE BLANKS game as an activity after the discussion. The only difference was that Genial.ly was utilized in the experimental group. Day five involved exploring how homophones are used in a sentence, and interactive games were incorporated to make the learning experience engaging and memorable. For the experimental group, another game feature of Genial.ly was used which was the BOARD GAME. It was another group activity that let the pupils strengthen their comprehension on homophones by using the words they learned that day in a sentence. The first group to reach the end won the game. This reflects on the experimental study of Kusriani (2012) which reveals the advantages of using board games as board games provide words on board to refer to, throughout the process, making the vocabulary easier to remember. Board games also provide pictures and words, which further increase the pupils' long-term memory.

The next session was dedicated to recalling homophone words that the pupils learned throughout the 4 sessions and strengthening the importance of understanding both the words and their meanings. It was a day filled with interactive games.

On the last day, the researchers conducted the post-test, and 30 minutes were given to the pupils to answer their worksheets and they asked the pupils to double-check their answers. After that, the researchers checked the pupils' papers, recorded their scores,

and compared their pre-test to their post-test. The researchers evaluated whether the intervention was effective or not and saw the progress and improvement of the learners throughout the implementation of the intervention.

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the methodological requirements and approaches needed to address the specific research problems. The topics discussed in this chapter include the sources of data, data gathering procedure, research instrument used, and statistical tools used.

Sources of Data

The Grade 4-A and Grade 4-B of Buttong Integrated School were chosen as respondents for this action research.

Table 1. Number of Respondents in Grade 4-A

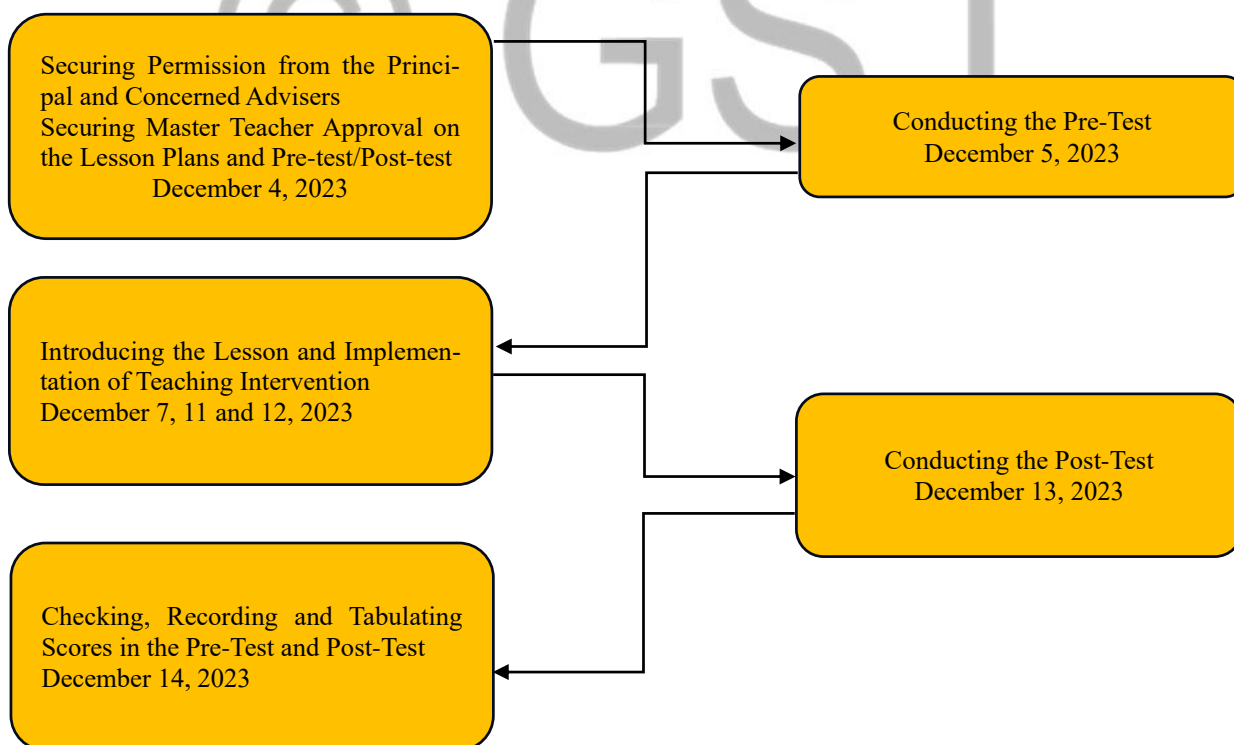
Grade Level	Boys	Girls	Total No. of Pupils
Grade 4-A	10	11	21

Table 1 shows the number of respondents in Grade 4-A, the control group. Based on the table, there are 21 pupil respondents involved in the study.

Table 2. Number of Respondents in Grade 4-B

Grade Level	Boys	Girls	Total No. of Pupils
Grade 4-B	12	14	26

Table 2 shows the number of respondents in Grade 4- B, the experimental group. Based on the table, there are 26 pupil respondents involved in the study.



Data Gathering Procedure

Securing Permission from School Principal and Concerned Advisers. Through a communication letter, the researchers asked the permission of the school Principal, Dr. Paulo Tunac, Mr. Jerry Arellano the adviser of Grade 4-A, and Ms. Decie-Mare Yoro, adviser of Grade 4-B to conduct the study at Buttong Integrated School for five (5) sessions. The approval of the concerned advisers served as consent from the participants of the study.

Securing Master Teacher Approval on the Lesson Plans and Pre-test/Post-Test. Before the researchers conducted a pre-test to en-

sure the validity and credibility of the tests and the lesson plans, the researchers sought approval from Mrs. Elena Arcelao, Master Teacher I.

Administering the Pre-Test. A pilot pen-and-paper pretest was administered to the participants before the application of the intervention. Pupils were given 25 minutes to answer the items.

Introducing the Lesson and Implementation of Teaching Intervention. The experimental group studied homophone lessons using Genial.ly as an intervention. While the traditional method was used for the control group.

Administering the Post-Test. After five (5) sessions, the researchers gave the learners the post-test which was the same as the pre-test, that determined whether the intervention was effective and to know if the comprehension skills of the pupils on homophones had increased.

Checking, Recording, and Tabulating Scores in Pre-Test and Post-Test. The pupils' tests were checked and their scores were recorded, tabulated, and interpreted by the researchers to determine whether there was a significant difference in the pretest and post-test.

Research Instrument

To gather the data needed in their study, the researchers conducted a pre-test and post-test using worksheets. The tests consisted of 40 items, 20 of which were multiple choice and the remaining 20 were alternate tests. The tests were reviewed and validated by the research adviser, a Master Teacher, and the respondents' advisers.

Statistical Tools Used

To interpret the data effectively, the researchers tallied the scores of the respondents in a table. The researchers used frequency, percentage, and means in the data analysis.

To get the Frequency, count the number of pupils who got the score based on the score range.

N represents the total number of pupils in one section.

To get the Percentage - the frequency is divided by the total number of learners per section, and then multiplied by 100.

Moreover, the formula used for calculating the percentage is as follows:

$$\% = (F/N)100$$

To get the Mean: sum up all the learners' scores, then divide by the overall number of pupils per section.

Pre-test and post-test means are calculated using the following formula:

Where $\sum X$ is the total score of learners per section and **N** is the total number of pupils.

To obtain the values indicating significance, the researchers used a statistical program called SPSS and performed two statistical functions. To compare the pre-tests and post-tests, the Independent Samples t-Test was used while accounting for the unequal variance of each group using Levene's Test for Equality of Variances. For the comparison of the pre-tests and post-tests within each group, the Paired Samples t-test was used.

CHAPTER IV INTERPRETATION AND ANALYSIS OF DATA

This chapter presents, analyzes, and interprets the data gathered in this study.

Table 3.1 What is the pre-test score of the experimental group?

Score Range	PRE-TEST	
	Frequency	Percentage
33-40	4	15.38%
25-32	6	23.08%
17-24	6	23.08%
9-16	10	38.46%
0-8	0	0%
TOTAL	26	100%
Total Score of the Pre-Test: 576		
Mean= 22.15		

Table 3.2 What is the pre-test score of the control group?

Score Range	PRE-TEST	
	Frequency	Percentage
33-40	5	23.81%
25-32	3	14.29%
17-24	6	28.57%
9-16	6	28.57%
0-8	1	5%
TOTAL	21	100%
Total Score of the Pre-Test: 467		
Mean= 22.24		

Table 4. Is there a difference between the pre-test scores of the experimental and control group?
 Comparing Pretests of the Control Group and Experimental Group using Independent Samples T-test

Group Statistics					
	Treatment_Pre	N	Mean	Std. Deviation	Std. Error Mean
Score_Pre	Trad	21	22.2381	10.65788	2.32574
	Nontrad	26	22.1538	8.81223	1.72822

Independent Samples Test										
		Levene's Test for Equality of Variances			t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
									Lower	Upper
Score_Pre	Equal variances assumed	1.595	.213	.030	45	.976	.08425	2.83891	-4.68350	4.85200
	Equal variances not assumed			.029	38.736	.977	.08425	2.89755	-4.79857	4.96707

The Table above shows that P=.977 which is greater than the .05 confidence value indicating that the results are insignificant. Thus, there is no significant difference between the pre-test results of the two groups.

Table 5. Is there a difference between the pre-test and post-test scores of the two groups?
Comparing the Pretest and Post-test of the Control Group and Experimental Group using Paired Samples T-test at 95% confidence

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	CG_Pre	22.2381	21	10.65788	2.32574
	CG_Post	25.6190	21	10.83271	2.36389
Pair 2	EG_Pre	22.1538	26	8.81223	1.72822
	EG_Post	33.0769	26	4.39930	.86277

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	CG_Pre & CG_Post	21	.412	.063
Pair 2	EG_Pre & EG_Post	26	.866	.000

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	CG_Pre - CG_Post	-3.38095	11.65108	2.54247	-8.68446	1.92255	-1.330	20	.199
Pair 2	EG_Pre - EG_Post	-10.92308	5.46204	1.07119	-13.12924	-8.71691	-10.197	25	.0000000002

The table above shows that there is no significant difference between the pre-test and post-test results of the control group because the significance value of the pre-test and post-test is P=.199 which is greater than the .05 confidence value.

On the other hand, there exists a significant difference between the pre-test and post-test results of the experimental group because the significance value is P=.0000000002 which is less than the .05 confidence value.

NOTE: SPSS displays 0.00 when the significance value is less than 0.01, the actual value is .0000000002159237.

This supports the idea pointed out by Castillo-Cuesta (2022), who examined the impact of digital game-based learning in facilitating writing skills and discovered the employment of digitalized games (Genially games), which have proven to be beneficial in improving reading and writing skills in English foreign language acquisition. Learners even had a favorable attitude about the utilization of digital game-based tasks.

Table 6. Is there a significant difference in the post-test scores of the two groups?
Comparing Post-tests of the Control Group and Experimental Group using Independent Samples T-test at 95% confidence

T-Test

Group Statistics					
	PostTest	N	Mean	Std. Deviation	Std. Error Mean
Exam Score	Trad	21	25.6190	10.83271	2.36389
	Nontrad	26	33.0769	4.39930	.86277

Independent Samples Test										
		Levene's Test for Equality of Variances				t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Exam Score	Equal variances assumed	34.594	.000	-3.205	45	.002	-7.45788	2.32702	-12.14474	-2.77101
	Equal variances not assumed			-2.964	25.324	.007	-7.45788	2.51642	-12.63718	-2.27857

The results a

that the re-
intervention.

This supports the indicated idea from a study conducted by Karamti (2016), which revealed that students who were taught reading comprehension by using technology consistently did better than those who were not. As for students' attitudes, ICTs increase moti-

vation (Mohammadian, Saed, & Shahi, 2018). The students feel highly motivated to learn a language as they displayed positive attitudes towards language learning as they integrate the use of computers and laptops, thus learning in a stress-free learning environment (Alfaleh 2015; Harris & Al-Bataineh, 2015; Karamti 2016; Harris & Al-Bataineh, 2016).

CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents the general findings derived from the data obtained, the conclusion grown from the data and evaluation undertaken, and the recommendations offered based on the findings and conclusion.

Findings

Based on the results of the study, the pre-test showed that both groups had difficulty in recognizing the correct use of homophones. The mean scores of the control and experimental groups are 22.24 and 22.15 respectively. In the post-test, the control group showed minimal improvement with a mean score of 25.62. On the other hand, the experimental group showed a remarkable improvement with a mean score of 33.08.

Conclusions

Based on the findings, the researchers, therefore, conclude that using Genial.ly as an ICT-Based integration is effective in increasing the comprehension skills on homophones of the Grade 4 pupils of Buttong Integrated School. Genial.ly helps increase the enjoyment of learners while they are learning. The visually appealing presentations and interactive game features of Genial.ly made the learners more interested in the lessons which resulted in an increased comprehension skills on homophones.

Recommendations

After conducting and succeeding in this action research to the Grade 4-A and Grade 4-B of Buttong Integrated School, and from the conclusions above, the researchers would like to offer some recommendations:

1. Teachers are encouraged to utilize Genially as an all-in-one online tool in improving the comprehension skills on homophones of the pupils.
2. Learners are invited to understand homophones which are essential in developing their effective communication skills, improving their language proficiency, and enhancing their overall literacy.
3. School administrators are enjoined to conduct seminars and training for teachers in the integration of ICT in their lessons particularly game activities like the games used in this research.
4. Future researchers are encouraged to conduct studies focusing on the utilization of Genial.ly as an intervention.

Acknowledgment

“The Lord is my strength and my shield. My heart trusts him. I was helped, my heart rejoiced, and I thank him with my song.”
~Psalm 28:7

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References

- [1] Alavi, Gholamreza & Pourhosein Gilakjani, Abbas. (2019). The Effectiveness of Games in Enhancing Vocabulary Learning among Iranian Third Grade High School Students. 16. 1. https://www.researchgate.net/publication/335842334_The_Effectiveness_of_Games_in_Enhancing_Vocabulary_Learning_among_Iranian_Third_Grade_High_School_Students
- [2] Alghonaim, A.S. (2020). Impact of Related Activities on Reading Comprehension of EFL Students. *English Language Teaching*, 13, 15-27. doi: 10.5539/elt.v13n4p15
- [3] Castillo-Cuesta, L. (2020). Using Digital Games for Enhancing EFL Grammar and Vocabulary in Higher Education. *International Journal of Emerging Technologies in Learning (IJET)*, 15(20), pp. 116-129. <https://doi.org/10.3991/ijet.v15i20.16159>
- [4] Chi, C. (2023). "Philippines still lags behind world in math, reading and science – PISA 2022" *PhilStar Global*, 6 December 2023. <https://www.philstar.com/headlines/2023/12/06/2316732/philippines-still-lags-behind-world-math-reading-and-science-pisa-2022>
- [5] Chiou, C.-C., Tien, L.-C., & Lee, L.-T. (2015). Effects on learning of multimedia animation combined with multidimensional concept maps. *Computers & Education*, 80, 211-223. <https://doi.org/10.1016/j.compedu.2014.09.002>
- [6] Department of Education. (2010). Guidelines on the Implementation of the DepEd Computerization Program (DCP). <https://www.deped.gov.ph/wp-content/uploads/2010/06/DO-No.-78-s.-2010.pdf>
- [7] González, M. (2019). Genially. Genial interactive books [TRANSLATION]. Instituto Nacional de Tecnologías Educativas y de Formación del Profesorado (INTEF). https://doi.org/10.4438/2695-4176_OTEpdf10_2019_847-19-134-3
- [8] Hogan, T. P., Bridges, M. S., Justice, L. M., & Cain, K. (2011). Increasing Higher Level Language Skills to Improve Reading Comprehension. *Focus on Exceptional Children*, 44(3). <https://doi.org/10.17161/foec.v44i3.6688>
- [9] Javed, N, Shakil E Robab M. (2021). The Influence of WhatsApp Texting on Spelling System of Students at Intermediate Level. *PAKISTAN LANGUAGES AND HUMANITIES REVIEW* 5(2),298-312, doi:10.47205/plhr.2021(5-II)1.24
- [10] Johnson, R.K. (1982). HOMOPHONES: An Approach to Teaching Spelling/Vocabulary. *Middle School Journal*, 13(2), 20-31. <http://www.jstor.org/stable/41431718>
- [11] Kara, S. (2021). "An investigation of Technological Pedagogical and Content Knowledge (TPACK) competencies of pre-service visual arts teachers." *International Journal of Technology in Education (IJTE)*, 2021, 4(3), 527-541. <https://doi.org/10.46328/ijte.184>
- [12] Karanti, C. (2016). Measuring the Impact of ICTs on Academic Performance: Evidence from Higher Education in Tunisia. *Journal of Research on Technology in Education*, 48, 322-337. <https://doi.org/10.1080/15391523.2016.1215176>
- [13] Kusri, E. (2012). TEACHING VOCABULARY FOR JUNIOR HIGH SCHOOL STUDENTS USING SNAKE AND LADDER GAME. <https://api.semanticscholar.org/CorpusID:62518252>
- [14] Mohammadian, A., Saed, A., & Shahi, Y. (2018). The Effect of Using Video Technology on Improving Reading Comprehension of Iranian Intermediate EFL Learners. *Advances in Language and Literary Studies*, 9, 17-23. <https://doi.org/10.7575/aiac.all.v.9n.2p.17>
- [15] Noordan, M. and Md. Yunus, M. (2022) The Integration of ICT in Improving Reading Comprehension Skills: A Systematic Literature Review. *Creative Education*, 13, 2051-2069 doi: 10.4236/ce.2022.136127.
- [16] Ottestad, Geir & Guðmundsdóttir, Gréta. (2018). Information and Communication Technology Policy in Primary and Secondary Education in Europe. 10.1007/978-3-319-53803-7_92-1.
- [17] Pear, Queenie. Tomaro, V. et.al. ICT Integration to educational System of the Philippines. *Journal of governance and Public policy*. Vol.5, Nov.03, 2018. <https://doi.org/10.18196/jgpp.5399>.
- [18] Pew Research Center. (2011). Teens, kindness and cruelty on social network sites. <https://www.pewinternet.org/2011/11/09/teens-kindness-and-cruelty-on-social-network-sites/>.
- [19] Puspita, N. and Losari, A. H. (2016). "The Influence of Using Bingo Game Towards Students' Vocabulary Mastery at the First Semester of the Seventh Grade of MTs N 2 Bandar Lampung in the Academic Year of 2016/2017." *English Education: Jurnal Tadris Bahasa Inggris IAIN Raden Intan*, vol. 9, no. 2, 2016, pp. 380-394, doi:10.24042/ee-jtbi.v9i2.386.
- [20] Shahrill, M., Latif, S.A (2021). "Exploring the Effects and Students' Views on the Use of a Tic-Tac-Toe Game to Teach Mathematics in Brunei Darussalam", January 2021 *The International Journal of Science, Mathematics and Technology Learning* 29(1):49-65, DOI:10.18848/2327-7971/CGP/v29i01/49-65
- [21] Sharples, Mike & Taylor, Josie & Vavoula, Giasemi. (2005). Towards a theory of mobile learning. *Proceedings of mLearn*. 1. https://www.researchgate.net/publication/228346088_Towards_a_theory_of_mobile_learning
- [22] Shiquen, R. (2023). "The Application of Schema Theory to the Teaching of Reading Comprehension: Theory and ESL Reading Pedagogy". *Journal of Education and Educational Research*. Vol. 2, No. 3, 2023, ISSN: 2957-9465. <https://drpress.org/ojs/index.php/jeer/article/view/7578>
- [23] Tomasi, R. & Case, J. M. (2019). Homophone discrimination and its relation to vocabulary knowledge and reading comprehension. *Journal of Psycholinguistic Research*, 48(2), 347-359. doi: 10.1007/s10936-018-9575-5
- [24] Trust, T. (2022). *Online Tools for Teaching and Learning*. EdTech Books. <https://edtechbooks.org/onlinetools>
- [25] Yi, C. M., and Kok, S. A. (2017). Using LCFCA Card Game To Enhance Learning Of Homophones Vocabulary. *Collection of Action Research Arti-*

- cles (TESL) 2017. <https://ipkent.edu.my/lib2/index.php/koleksi-digital-2017/500-using-lcfca-card-game-to-enhance-the-learning-of-homophonous-vocabulary>
- [26] Yue, C., Kim, J., Ogawa, R., Stark, E., & Kim, S. (2013). Applying the cognitive theory of multimedia learning: An analysis of medical animations. *Medical Education*, 47, 375-387. Retrieved from https://opentext.wsu.edu/theoreticalmodelsforteachingandresearch/chapter/multimedia-learning-theory/?fbclid=IwAR3Awq_HssuhdebQZDmXTEWdU2_Un7vHRbFYaFkc3gLD_j0OL9-2tbkTvTA
- [27] Zaranis, N. , Kalogiannakis, M. & Papadakis, S. (2013). Using Mobile Devices for Teaching Realistic Mathematics in Kindergarten Education. *Creative Education*, 4, 1-10. doi: 10.4236/ce.2013.47A1001.

