Effectiveness of Pictoword in Enhancing Vocabulary Retention among Grade 8 Students

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ABSTRACT

This study examined the effectiveness of the Pictoword game in enhancing vocabulary retention among Grade 8 students in a public secondary school in Misamis Occidental during the school year 2024–2025. Using a one-group pretest-posttest design, the research involved students with low vocabulary retention. Before the intervention, most learners did not meet expectations. After using Pictoword, their performance improved remarkably, with many achieving outstanding results. Checklist ratings also showed progress from very poor to very good, and statistical analysis confirmed that the improvement was significant. The findings highlight Pictoword's effectiveness as an interactive, image-based tool for enhancing vocabulary learning and recommend its integration into English instruction.

Keywords: Pictoword, Vocabulary, Retention, Gamification, Instruction

INTRODUCTION

In recent years many activities have appeared to help learners understand what they are reading. One of these activities is through the use of pictoword activity that uses pictures or other visual images to represent words or symbols that we can integrate in improving their interpretation. study was to determine the effectiveness of pictoword activity in improving poem interpretation of grade 8 students. The use of the pictoword method is highly recommended to increase the performance of the students (Gomez, 2023). The implementations were Spelling Bee games as pre-test, "Two Pictures One Word" games from the Pictoword Game, and then proceed with two crossword puzzles as post-test. The researchers analysed mixed methods using the Triangulation of spelling document analysis, observation's checklist and Emoji survey. There had been an improvement in the participants' spelling performance in compound nouns after the intervention and gave positive opinions concerning the use of the game application (Fauzi& Aziz,2020). Vocabulary is the ability to understand and use a word effectively and appropriately to achieve comprehension, which suggests the close relationship between vocabulary acquisition and reading comprehension. Learners belong to beginner and intermediate levels and no one in the proficient level (Cardente, 2023).

Teaching and learning process in the 21st century has been embedded with technology. Learning English is a fundamental lesson for every level. there was the effectiveness of using the Pictoword game learning method on the vocabulary mastery of student's test indicate that the use of the game learning method using the Pictoword game (Rosiana, 2022) Using quantitative research design using a quasi-experimental experiment and a control group. students who were taught using the Pictoword Game was higher than students who were taught without using Pictoword Game. by using the Pictoword Game Application, they want to recommend it to use by others (Pratiwi,2023) Building critical thinking abilities has emerged as a key objective in the changing educational landscape to get students ready for the challenges of the twenty-first century. Students in grade 8, who are moving from foundational to advanced learning stages, need creative ways to improve these abilities. Learning through games has become a popular way to keep pupils interested and improve their cognitive skills. One such resource is the Pictoword game, which challenges children to think critically, make connections, and come up with original solutions to problems using visual puzzles.With an emphasis on the game's effects on reasoning, creativity, and problem-solving abilities, this study attempts to investigate how the Pictoword game might be a useful tool for improving critical thinking in eighth-grade students. To give teachers useful insights into creative

teaching methods for contemporary students by assessing its efficacy.

As a call tool to increase vocabulary, neural machine translation (NMT) has grown in favor among EFL students, and many students have attested to its value in vocabulary acquisition. Although there is some evidence that NMT can help learners write better on a lexical level, no study has looked at whether vocabulary growth achieved with NMT results in any vocabulary retention once the tool is discontinued (Lo, 2023). The use of digital games in language learning offers significant benefits; however, their effectiveness in the Bangladeshi EFL context has been largely neglected. Thus, this study aimed to assess the influence of digital game-based learning on the memory and retention of language among Bangladeshi EFL learners (Patra et. al., 2022).

The author investigates whether output-based activities enhance word retention more effectively than input-focused activities, which require students to understand questions containing target words but do not prompt them to use the words in communication (Kitajima, 2001). This study aimed to compare the effects of teaching using memory strategies on an experimental group versus a control group, where students learned the meanings of new vocabulary through synonyms and mini-contexts. Recent research suggests that simulation games can be effective tools for enhancing foreign language learning. The implemented strategy was grounded in Brain-Based Learning Principles, which aim to optimize learning by leveraging the brain's most effective learning conditions. Therefore, brain-based learning in the classroom represents an innovative approach that fosters a positive learning environment for school children (Kandasamy,2021). This analysis aimed to examine the impact of context levels, word occurrence rates, and their combination on the comprehension and retention of unfamiliar words (Zarfsaz & Yeganehpour, 2021).

The case study method was used to investigate the children's perspectives of their AR learning experiences (Yilmaz et al., 2022). Explores incidental vocabulary learning and retention by analyzing the effects of watching a full-length captioned episode of an English TV program. It also investigates whether learning and retention are influenced by learner-related factors, such as prior vocabulary knowledge, and item-related factors, including frequency of occurrence, contextual clues, lexicalization, word relevance, and visual imagery (Ahrabi Fakhret al., 2021). Vocabulary learning is one of the most challenging aspects of learning a foreign language, especially vocabulary retention at the beginner level. There are currently a number of lexical instruction strategies available, but their use in the Vietnamese EFL context is still limited (Nguyen,2021). Teaching vocabulary through asynchronous social media on EFL learners' vocabulary learning and retention (Rajayi & Maleki, 2023). Developing a robust vocabulary is essential for language acquisition, as it improves communication skills and enhances comprehension. This article examines effective strategies for learners to broaden their English vocabulary (Normurodovna, 2025).

Proposed Strategy

The study is to investigate the significance of using picto-word application. (Pratiwi, 2023). Teachers can incorporate the Pictoword game into their courses as a fun and cooperative exercise to help students develop their critical thinking abilities. To foster familiarity, start with easy puzzles and work your way up to harder ones that need higher-order thinking. In order to promote metacognition and problem-solving abilities, encourage students to express their ideas aloud as they work through puzzles. Encourage teamwork and peer learning through group projects, making sure every student contributes fully. Through the use of pictoword activity that uses pictures or other visual images to represent words or symbols that we can integrate in improving their interpretation (Gomez, 2023). The Pictoword exercise encourages students to creatively understand and analyze connections by using pictures and visual imagery to represent words or concepts. By pushing students to decipher visual cues, this method develops their critical thinking abilities and strengthens their reasoning and problem-solving abilities. Teachers can increase student engagement and enhance their capacity to efficiently interpret and process information by incorporating this practice into their sessions.

Action Research Questions

This action research aimed to enhance vocabulary retention among Grade 8 students through the use of Pictoword in the public school in Misamis Occidental during the S.Y. 2024-2025. Specifically, this study sought to answer the following questions:

1. What is the level of vocabulary retention of Grade 8 students before using the Pictoword based on rubric assessment?

2. What is the level of vocabulary retention of Grade 8 students after using the Pictoword based on rubric assessment?

3. What is the level of vocabulary retention of Grade 8 students before using the Pictoword based on assessment checklist?

4. What is the level of vocabulary retention of Grade 8 students before using the Pictoword based on assessment checklist?

5. Is there a significant difference before and after implementing the use of pictoword based on rubric assessment?

METHODS

Research Design. This study will be using a single group pretest design to enhance students' vocabulary retention particularly in using the pictoword game. Pictoword method proves to be effective in enhancing students' performance in poem interpretation, as reflected in their test scores. (Gomez,2023). The study was to determine the effectiveness of pictoword activity in improving poem interpretation of grade 8 students. The use of the pictoword method is highly recommended to increase the performance of the students. The study will employ a quasi-experimental design with a pre-test and post-test approach. (two intact classes, sampling procedure purposive)

Site. The study will be conducted at the junior high school level, specifically the Grade 8 students at a certain public secondary school in Misamis Occidental in school year 2024-2025. The school, aligned with the resolution mandated by the Department of Education (DepEd), is currently at the forefront of implementing the K to 12 basic education program, encompassing both junior and senior high school levels. In adherence to the DepEd directive, the Junior High School curriculum spans from grade 7 to grade 10, reflecting the institution's commitment to providing a comprehensive and modern educational experience for its students.

Participants. The respondents of the study will be 40 Grade 8 students from one section that the researcher was teaching. They were selected through purposive sampling. The selection of the participants was based on the following criteria: 1.) Students who were enrolled as Grade 7 students for the school year 2024–2025; 2.) Students who were observed to have low performance; 3.) and students who gave their full consent to serve as participants of the study. The researcher ensured that these criteria were met prior to conducting the research. However, the researcher did not include other sections of the same grade level in the study.

Research Instrument

The researcher will use the following research instruments as the data gathering tool:

A. Learners' Performance Rubric**.** The primary research instrument for this study is a researcher developed rubric assessed four key criteria: Word Recall, Contextual Usage, Spelling and Accuracy, and Understanding of Word Meaning. Each criterion was rated on a 5-point scale, with descriptors provided for each level of performance.

In the Word Recall criterion, a score of 5 (Outstanding) indicated that the student accurately recalled all or nearly all target vocabulary words. A score of 4 (Very Satisfactory) reflected minor omissions with most words recalled. A 3 (Satisfactory) showed partial recall with noticeable gaps, while a 2 (Fairly Satisfactory) indicated difficulty recalling more than a few words. A score of 1 (Did Not Meet Expectations) denoted very limited or no recall of vocabulary words. To established content validity, the instrument will be subjected to expert review by the research adviser, school head, principal, and cooperating teacher. A pilot testing will be conducted with students who are not part of the main study to determine the instrument's reliability. The researcher targets a Cronbach's

Alpha coefficient between 0.7 and 1.0 ensuring acceptable consistency. This rubric will be used as both a pre-test and post –test tool to evaluate the effectiveness of the Circular Response Learning Strategy in enhancing Grade 8 learners' performance in English

Score	Grade Equivalent	Remarks
17-20	90-100	Outstanding
16	85-89	Very Satisfactory
14-15	80-84	Satisfactory
12-13	75-79	Fairly Satisfactory
1-11	74 below	Did not meet expectat

Effectiveness of Pictoword of Students in Enhancing Vocabulary Retention Checklist. The instrument is a researcher made to assess students' vocabulary retention using a pictoword. To ensure the validity of the test, the researcher will have experts evaluate it, including the research adviser, school head, principal, and cooperating teacher. The researcher will conduct a pilot test with a separate group of participants not included in the study. The instrument will be used for both the pre-test and post-test.

In determining the test performance, the following scale will be used.

Responses	Continuum	Interpretation
5 – Strongly Agree (SA)	4.20-5.00	Very Effective (VE
4- Agree (A)	3.40-4.19	Effective (E)
3- Neutral (N)	2.60-3.39	Somewhat Effective (
2- Disagree (D)	1.80-2.59	Least Effective (LE
1-Strongly Disagree (SD)	1.00-1.79	Not Effective (NE

Lesson Plan in English.The researchers created a lesson plan that focused on improving students' vocabulary retention. Before putting it into practice, the lesson plan was carefully reviewed by the cooperating teacher and revised by the researchers. The implementation occurred at a certain public school in Ozamiz City, specifically with the Grade 8 students during the S.Y.2024-2025.

Pictoword strategy. The researcher utilized the pictoword game, a word puzzle game where players solve word combinations based on pictures, as a tool to enhance the vocabulary retention of Grade 8 students. This game challenges players to analyze, interpret, and connect images to form words or phrases, stimulating cognitive processes such as problem-solving, logical reasoning, and creativity.

Data Collection & Procedure

A. Pre-implementation Phase

The researcher will first seek permission from the dean of the College of Education, School Division Superintendent, the principal, the participating teacher and the parents of the students, and an assent form will be collected from the students themselves. After securing all the necessary permissions and forms, a pretest will be administered to assess the students' vocabulary retention through the use of pictoword. The researcher will also prepare the lesson plans and relevant materials based on the integration of pictoword into the teaching strategy. Assessments and activities will also be prepared at this phase based on the teacher's lesson plans and powerpoint presentations.

B. Implementation Phase

The researchers would present and discuss the lessons with the help of picto-word in the class. Detailed

instructions will also be given to the students regarding the function and use of the picto-word for the activities and assessments. After a month of implementing the intervention, an assessment will be administered to determine how much the students have enhanced their vocabulary retention.

C. Post- Implementation Phase

The post-implementation stage includes tallying the data, analyzing the tallied data, interpreting the data in order and report findings to draw a conclusion. Giving recommendations, proofreading, editing, and finalizing the research study will also be conducted after. It also involves the proper dissemination of the research results to a certain group of people.

Ethical Consideration

The subjects' informed consent was obtained by the study's ethical standards and acquired before the survey. As part of ethical practice, the researchers presented participants with a full briefing on the Data Privacy Act of 2012. This was done to demonstrate the commitment to protecting personal information and ensuring accountability when dealing with sensitive data.

Throughout the procedure, participants were fully informed about the study's objectives, the potential benefits to them, and the importance of their participation. The researchers also emphasized the confidentiality of the obtained data and assured participants that their anonymity would be preserved throughout the study.

Data Analysis

The researcher with the use of Jamovi software, the following statistical tools will be used:

Frequency and Percentage. This will be used in identifying the level of enhancement of students before and after the use of pictoword game.

Paired T-Test. This tool will be used to explore the significant difference in students' performance before and after the use of pictoword game.

RESULTS AND DISCUSSION

Table 1Learner's Performance Before The Use of Pictoword Based on Rubric Scores

Performance	Frequency	Percentage
Fairly Satisfactory	4	13.33
Did not meet expectations	26	86.67
Overall Performance	7.50 -Did not Meet Expectations	

Note: Performance Scale: 17-20 (Outstanding); 16 (Very satisfactory); 14-15 (Satisfactory); 12-13 (fairly Satisfactory); 1-11(Did not Meet Expectation)

Table 2 Learner's Performance After the Use of Pictoword Based on Rubric Scores

Performance	Frequency	Percentage
Outstanding	23	76.67
Very Satisfactory	4	13.33
Satisfactory	3	10.00
Overall Performance	18.43- Outstanding	

Note: Performance Scale: 17-20 (Outstanding); 16 (Very satisfactory); 14-15 (Satisfactory); 12-13 (fairly Satisfactory); 1-11(Did not Meet Expectation)

Table 3 Learner's Performance Before The Use of Pictoword Based on Assessment Checklist

Construct	M	SD	Remarks
Vocabulary Retention	1.42	0.28	Very Poor

Table 4 Learner's Performance AfterThe Use of Pictoword Based on Assessment Checklist

Variables	M	SD	Remarks
Vocabulary Retention	4.57	0.40	Very Good

Table 5 Difference Between Learner's Performance Before and After Using Pictoword Based on Rubric Score

Variables	M	SD	T value	P value
Before the use of Pictoword	7.50	2.60		
After the use of Pictoword	18.43	1.85	21.00	0.000

Table 6 Difference Between Learner's Performance Before and After Using Pictoword Based on Assessment Checklist

Variables	M	SD	T value	P value
Pre-Vocabulary Retention	1.42	0.28		
Post -Vocabulary Retention	4.57	0.40	33.05	0.000

Summary

This action research aimed to evaluate the effectiveness of Pictoword in enhancing vocabulary retention among Grade 8 students. A one-group pretest-posttest quantitative design was used to determine the difference in students' vocabulary retention before and after the intervention. Data were gathered from 30 students through teacher-made rubric and checklist assessments aligned with the English curriculum. The intervention involved the integration of Pictoword into selected vocabulary lessons.

Data were analyzed using Microsoft Excel, applying statistical measures such as mean, percentage, and paired sample t-test to determine the significance of the results. Ethical standards were maintained by securing parental consent and ensuring the confidentiality of student information. The findings revealed that before the intervention, the majority of students were at the "Did Not Meet Expectations" level based on the rubric, and "Very Poor" based on the checklist assessment. After the intervention, students' performance significantly improved, reaching the "Outstanding" level on the rubric and "Very Good" on the checklist.

These outcomes confirm that Pictoword effectively enhanced vocabulary retention among Grade 8 students. The study emphasizes the importance of incorporating visual and interactive strategies in vocabulary instruction to improve learning outcomes and bridge gaps in language retention

FINDINGS

1. Before using Pictoword, the majority of students (86.67%) did not meet expectations for vocabulary retention based on the rubric assessment, with an overall performance score of (7.50), categorized as "Did Not Meet Expectations." This indicates that students had limited vocabulary retention prior to the intervention.

2. After the use of Pictoword, however, the majority of students (76.67%) achieved an "Outstanding" level of performance, with an overall score of (18.43). This significant improvement indicates that Pictoword had a positive impact on students' vocabulary retention, helping them perform at higher levels after the intervention.

3. Before the use of Pictoword, the level of vocabulary retention, as measured by the assessment checklist, was rated as "Very Poor," with a mean score of (1.42) and a standard deviation of (0.28). This low score reflected poor retention of vocabulary prior to the intervention.

4. Following the use of Pictoword, students' performance significantly improved, with a mean score of (4.57) and a standard deviation of (0.40), indicating a notable increase in vocabulary retention.

5. The study showed significant improvements in vocabulary retention among Grade 8 students after using Pictoword. Before the intervention, (86.67%) of students scored below expectations on the rubric, with an average score of (7.50). After using Pictoword, (76.67%) achieved an "Outstanding" score, averaging (18.43).

6. vocabulary retention was rated as "Very Poor," with a mean score of (1.42) on the checklist, indicating that students exhibited limited ability to retain vocabulary. Following the intervention with Pictoword, there was a significant improvement, as the mean score increased to (4.57), demonstrating a notable enhancement in students' vocabulary retention.

CONCLUSIONS

Before using Pictoword based on rubric assessment, the majority of students (86.67%) did not meet expectations, with an average score of 7.50, categorized as "Did Not Meet Expectations." This indicated that students' vocabulary retention was low before the intervention.

After using Pictoword based on rubric assessment, 76.67% of students achieved an "Outstanding" performance level, with an average score of 18.43. This significant improvement highlights the positive impact of Pictoword on students' vocabulary retention.

Before using Pictoword based on the assessment checklist, vocabulary retention was rated as "Very Poor," with a mean score of 1.42. This reflected that students struggled with retaining vocabulary prior to the intervention.

After using Pictoword based on the assessment checklist, there was a significant improvement, with a mean score of 4.57. This indicates a notable enhancement in students' ability to retain vocabulary after using Pictoword.

There was a significant difference before and after implementing Pictoword based on rubric assessment. The mean score increased from 7.50 to 18.43 ($p = 0.000$), demonstrating a highly significant improvement in students' vocabulary retention.

There was a significant difference before and after implementing Pictoword based on the assessment checklist. The mean score rose from 1.42 to 4.57 ($p = 0.000$), indicating a highly significant increase in vocabulary retention after the intervention.

RECOMMENDATIONS

1. English teachers are encouraged to integrate Pictoword into their vocabulary instruction. The tool's proven effectiveness in boosting vocabulary retention suggests that it could help students learn and remember new words more efficiently, making it a valuable resource for both vocabulary-building and overall language development.

2. School principals should advocate for the use of Pictoword and similar tools in the classroom, providing resources and professional development opportunities to teachers. By supporting the integration of visual learning tools, principals can enhance teaching strategies and improve student outcomes in vocabulary retention.

3. Students should actively engage with vocabulary-building tools like Pictoword to improve their word retention. Regular practice with visual aids can reinforce vocabulary knowledge and support long-term retention, helping students enhance their language skills.

4. Future researchers are encouraged to investigate the long-term impact of Pictoword on vocabulary retention and its application across various subjects. Further studies could also explore the effectiveness of visual learning tools in diverse educational settings and among different student demographics to establish best practices for vocabulary instruction.

ACKNOWLEDGMENT

REFERENCES

1. Ahrabi Fakhr, M., Borzabadi Farahani, D., & Khomeijani Farahani, A. A. (2021). Incidental vocabulary learning and retention from audiovisual input and factors affecting them. English Teaching & Learning, 45(2), 167-188.
2. Alsaleh, Nada J.Turkish Online Journal of Educational Technology - TOJET, v19 n1 p21-39 Jan 2020.Cardente, K. F. (2023). Developing Communicative Vocabulary Games for Deaf Students. Psych Educ, 15(6), 550-560.
3. Fauzi, F. H., & Abd Aziz, A. (2020). Pictoword Game: Improve Compund Nouns Among ESL Students. International Journal of Academic Research in Progressive Eduacation and Development. Fitriani, Apriza; Zubaidah, Siti; Susilo, Herawati; Al Muhdhar, Mimien Henie Irawati
4. Gomez, G. (2023). Effectiveness of Pictoword in Improving Poem Interpretation. Psychology and Education: A Multidisciplinary Journal, 7(4), 261-264.
5. International Journal of Instruction, v13 n2 p89-106 Apr 2020 Kandas amy, K., Ibrahim, N. A., Jaafar, H., & Zaid, Y. H. (2021). Enhancing vocabulary acquisition and retention through the brain-based learning strategies. AJELP: Asian Journal of English Language and Pedagogy, 9(2), 26-42
6. Kitajima, R. (2001). The effect of instructional conditions on students' vocabulary retention. Foreign

Language Annals, 34(5), 470-482.

7. Lo, S. (2023). Neural machine translation in EFL classrooms: Learners' vocabulary improvement, immediate vocabulary retention and delayed vocabulary retention. Computer Assisted Language Learning, 1-20.

8. Nguyen, N. V. (2021, December). Using word games to improve vocabulary retention in middle school EFL classes. In Proceedings of the AsiaCALL International Conference (Vol. 621, pp. 97-108).

9. Patra, I., Shanmugam, N., Ismail, S. M., & Mandal, G. (2022). An Investigation of EFL Learners' Vocabulary Retention and Recall in a Technology-Based Instructional Environment: Focusing on Digital Games. Education Research International, 2022(1), 7435477.

10. Pratiwi, A. R., Ardini, S. N., & Wahyuni, S. (2023, July). THE EFFECTIVENESS OF PICTOWORD GAME TO IMPROVE STUDENTS'VOCABULARY MASTERY. In UNCLLE (Undergraduate Conference on Language, Literature, and Culture) (Vol. 3, No. 1, pp. 165-172).

11. Rajayi, S., & Maleki, R. (2023). On the Impact of Teaching Vocabulary through Asynchronous Social Media on EFL Learners' Vocabulary Learning and Retention. Anatolian Journal of Education, 8(2), 181-194.

12. Rosiana, A. (2022). THE EFFECTIVENESS OF PICTOWORD GAME ON STUDENTS'VOCABULARY MASTERY FOR EIGHTH GRADE IN SMP WAHID HASYIM MALANG. Jurnal Penelitian, Pendidikan, dan Pembelajaran, 17(26).

13. Warsah, I., Morganna, R., Uyun, M., Afandi, M., & Hamengkubuwono, H. (2021). The impact of collaborative learning on learners' critical thinking skills. International Journal of Instruction, 14(2), 443-460.

14. Yilmaz, R. M., Topu, F. B., & Takkaç Tulgar, A. (2022). An examination of vocabulary learning and retention levels of pre-school children using augmented reality technology in English language learning. Education and Information Technologies, 27(5), 6989-7017.

15. Zarfsaz, E., & Yeganehpour, P. (2021). The Impact of Different Context Levels on Vocabulary Learning and Retention. Shanlax International Journal of Education, 9(4), 24-34.