

Wayground And Research Vocabulary Skills Among Shs Students In San Isidro Inhs

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Abstract

This study aimed to determine the effectiveness of Wayground in improving the research vocabulary skills of Senior High School (SHS) students, particularly in terms of performance tasks, class participation, post-assessment results, writing, and reading comprehension.

Many SHS students struggle with research vocabulary, which affects their ability to understand academic texts and produce well-written research outputs. This challenge became evident among learners at San Isidro Integrated National High School, Lipa City.

The study utilized a descriptive quantitative research design involving 40 randomly selected SHS students during the second semester of the school year 2025–2026. Data were collected using a teacher-made 30-item pre-test and post-test, along with a researcher-made questionnaire. Statistical tools such as frequency, percentage, ranking, and weighted mean were used to analyze the data.

Findings revealed that students initially demonstrated low proficiency in research vocabulary, with most falling under fairly satisfactory (40%) and did not meet expectations (25%) in the pre-test. After the intervention, a significant improvement was observed, with 57.50% achieving outstanding and 25% very satisfactory performance.

The use of Wayground was found to be effective in enhancing performance tasks, class participation, and post-assessment outcomes. It also contributed to improvements in writing and reading comprehension, while challenges encountered by students remained minimal.



The findings suggested that Wayground is an effective and engaging tool in improving students' research vocabulary skills. Its integration in instruction can enhance learners' academic performance, confidence, and participation, making it a valuable strategy in addressing vocabulary-related learning gaps.

Keywords: *research vocabulary skills, performance tasks, class participation, post-assessment results*

I. Introduction

Background and Rationale

Language serves as the primary tool for intellectual discourse and the dissemination of new knowledge. In the contemporary educational set-up, the mastery of academic vocabulary is vital for navigating the demands of higher-order learning. The ability to conceptualize a study, synthesize extensive literature, and construct evidence-based arguments relies implicitly on the breadth and depth of a student's lexical repository.

A sudden linguistic learning curve arises with the shift from basic education to the specialized tracks of the Senior High School (SHS) curriculum which numerous students find it difficult to manage. SHS students are expected to write research papers that are technically correct and well-structured, as schools globally focus on teaching skills that are useful in the 21st century. This transition envisions students to decode and utilize research-specific jargon ranging from methodological paradigms to statistical variables.

However, an evident discrepancy frequently exists between the students' baseline vocabulary and the sophisticated language anticipated in subject like Research in Daily Life formerly known as Practical Research. This linguistic barrier creates a cascading effect of academic challenges, making the introduction of an effective and engaging vocabulary intervention an absolute necessity to foster a genuine culture of inquiry and academic excellence.

Lexical proficiency is important in the Philippine educational system, and still seen as a big problem in putting this skill into practice which requires localized teaching methods. In view of this, the educational sector has recognized significant learning deficits especially in reading comprehension and literacy which are fundamentally attributed to inadequate vocabulary acquisition at the national level. The government implemented the National Learning Recovery Program (NLRP) through DepEd Order No. 013, s. 2023 to address the pressing educational crisis. Across all grade levels, the National Reading Program (NRP) is framed to serve as a targeted initiative to improve basic literacy and to resolve learning deficits. The order essentially acknowledges that students are struggling to process advanced academic texts. This reading gap

hinders the student's ability to evaluate arguments and effectively communicate the nuances of their own findings.

DepEd Memorandum No. 001, s. 2024, was released as government's response to the literacy problem, mandating the implementation of "Catch-up Fridays" across all basic education institutions. This memorandum recognizes that without appropriate interventions that dedicate specific instructional time, like the "Drop Everything and Read" (DEAR) activity, learners will continue to struggle with poor reading proficiency and lack of academic vocabulary.

The lack of core academic language skills is not just a minor instructional barrier. It is a systemic crisis that hinders critical thinking and analytical reasoning. The urgency to address this issue is therefore tied not only to improving immediate academic grades but to complying with national educational mandates aimed at recovering students' academic confidence and ensuring they are fully prepared for tertiary education.

Among the Senior High School students of San Isidro Integrated National High School (INHS) in Lipa City, this pervasive macro-level issue is evident on a micro level and prompting the immediate need for contextualized action. Based on the researcher's evaluations of preliminary academic outputs and direct classroom observations, a significant portion of the SHS student body exhibits immense difficulty in grasping basic research terminologies. Student participation is noticeably minimal during class discussions, driven by apparent hesitation and inability to communicate using the appropriate academic register. Moreover, the lack of academic tone, coherence, and lexical precision are frequently evident on their performance-based tasks and initial writing drafts. An innovative pedagogical tool that aligns with DepEd's recovery initiatives while bridging this vocabulary gap in a highly engaging manner is undeniable need for this localized academic stagnation.

Interactive and modern instructional strategies are imperative to integrate to effectively lessen the said challenges and stimulate meaningful academic growth into the research curriculum. Contextualized and active learning environments are necessary because traditional vocabulary lists and dictionary drills have failed to engage the modern learners. Recent literature asserts that integrating gamified or highly interactive platforms into vocabulary instruction

significantly enhances both student motivation and the long-term cognitive retention of complex words (Hao et al., 2022).

Consequently, the utilization of Wayground, formerly known as Quizizz, an innovative instructional tool designed to immerse students in active and engaging vocabulary-building environment presents a highly promising solution. The urgency of implementing Wayground lies in its potential to transform passive learners into engaged researchers, mitigating the high frustration levels currently observed in San Isidro INHS and preventing further deterioration of the students' academic performance.

This action research is fundamentally grounded in the critical necessity to evaluate and enhance the vocabulary skills of SHS students at San Isidro INHS through the use of Wayground in relevance of these pressing educational realities and recent national mandates. Aligning with the goals of the National Reading Program, the rationale of this study stems from the urgent need to address the multifaceted challenges learners face in research writing and reading comprehension. This study aims to determine the effectiveness of Wayground in elevating performance-based tasks and classroom participation through systematically determining the students' performance levels before and after the intervention. The findings will serve as foundational baseline in proposing intervention activities to ensure that the students are equipped with the academic vocabulary necessary to excel in research and beyond.

Review of related literature

Mastering academic vocabulary in the contemporary educational landscape is a fundamental prerequisite for students to engage effectively in research and reading comprehension. Historically, vocabulary instruction relied on traditional memorization, which often left learners disengaged and find it hard to apply complex terminologies in their academic writing. However, recent literature highlights a significant paradigm shift toward the use of gamification and interactive digital tools such as Wayground to modernize language learning. Current research is primarily focused on how digital game-based learning environments boost student motivation, how interactive mechanics enhance long-term vocabulary retention, and how

this improved lexical capacity directly elevates a student's performance in research-based tasks and active classroom participation.

In the Philippine Senior High School (SHS) curriculum, vocabulary building is an essential competency because it facilitates the development of macro skills needed for academic research. An adequate vocabulary serves as a necessary tool that helps learners meet the rigorous academic demands since most SHS subjects which are implemented by the Department of Education (DepEd) require intensive reading and comprehension. Consequently, to bridge the gap between basic language proficiency and the complex lexical requirements of research writing, understanding the vocabulary learning strategies of students is crucial for educators (Villena, 2024).

Furthermore, Morales (2024) emphasized on the study, the efficacy of digital tools for students' vocabulary expansion, noting that traditional memorization methods often leave students disengaged and struggling to retain scholarly terms. The study reveals a significant improvement in students' vocabulary skills which is visible in both pre-test and post-test assessments when digital platforms are integrated into language instruction. This suggests that utilizing technology-based interventions provides a dynamic and inclusive environment and transforms vocabulary instruction that supports students' research and communication capabilities.

Similarly, Coronado (2024) used interactive digital applications as an intervention to address spelling and vocabulary deficits. The study revealed that interactive tools forced learners to engage actively with new words, leading to better reading comprehension. However, the research also documented specific challenges, such as the students' initial learning curve in using the application and the adjustment period required for the new teaching format.

Moreover, Leyaley et al. (2024) found that integrating technology improves the vocabulary skills and reading comprehension of Grade 12 students. The study demonstrated that digital interventions provide engaging experiences that cater to modern learning styles. By utilizing gamified or interactive vocabulary builders, students exhibited notable improvements in their writing proficiency, critical thinking, and confidence in navigating complex academic texts.

Furthermore, Pratiwi et al. (2024) found that technology-enhanced vocabulary instruction significantly boosts reading comprehension by helping students create mental associations with words in a digital context. As students expand their academic lexicon through Wayground, their writing skills also mature, allowing for a more precise and coherent articulation of research arguments.

Meanwhile, Nurhayati (2024) conducted a systematic review on gamification in school education, concluding that gamified elements such as points, progress tracking, and real-time feedback profoundly influence student motivation and academic outcomes. The research indicates that integrating gamification into the curriculum supports deeper cognitive engagement and autonomy among learners. The study suggests that educators strategically align these digital tools with pedagogical goals to enhance students' literacy and research proficiencies.

Besides, Aprizal and Wachyudi (2024) argued that digitalization brings transformative changes to language acquisition by making vocabulary retention more effective and enjoyable. Their findings demonstrated that interactive digital tools allow for repetitive exposure and immediate feedback, that are essential for transferring new words into long-term memory. This enhanced retention that equips students with the extensive lexical repository.

In addition, Kazu and Kuvvetli (2023) highlighted that technology-driven interventions offer a highly effective alternative to traditional, tiresome vocabulary memorization. The researchers observed that digital gamification provides students with interactive and stress-free environment that significantly boosts their motivation, engagement, and self-directed learning. By integrating game mechanics into vocabulary instruction, educators can facilitate extra practice and help students acquire the complex terminology.

Similarly, Vnucko and Klimova (2023) found that digital games efficiently develop primary language abilities, particularly vocabulary and grammatical competence. The researchers asserted that interactive applications encourage learners to practice their language skills in engaging settings. This suggests that gamified interventions not only build word knowledge but also train the cognitive skills.

However, in a local action research conducted at Barretto Senior High School, Macalinao (2023) utilized context clues as a primary intervention to improve the reading vocabulary of Grade 11 students. While the pre-test and post-test results showed improvement, the researcher noted that students still found complex academic words difficult to retain without active, hands-on engagement.

Moreover, Santiago (2023) focused on the impact of game-based learning strategies, the results showed that integrating game mechanics into vocabulary lessons significantly increased student participation and post-assessment scores compared to standard lectures. Learners displayed more enthusiasm and less frustration when the vocabulary drills were interactive.

Similarly, Que (2023) concluded that targeted, daily exposure to new vocabulary directly translates to better performance in reading comprehension and writing exercises. The intervention required students to interact with specific words consistently through structured, short activities.

In addition, Caraig and Quimbo (2022) reported that vocabulary deficits and weak comprehension severely limit students' overall academic growth. To help learners develop the foundational literacy abilities, providing engaging, well-resourced reading, and vocabulary interventions are highly recommended for critical thinking and successful research completion of the students.

Additionally, Lee and Perret (2022) found that Wayground leverages gamification elements such as point systems, immediate feedback, and interactive flashcards to foster active learning. This demonstrated that interactive digital tools yield statistically significant improvements in post-assessment vocabulary scores compared to traditional paper-based methods. Furthermore, the competitive yet collaborative nature of gamified platforms enhances class participation and improves outcomes in performance-based tasks, as students are more intrinsically motivated to engage with the platform repeatedly.

Furthermore, Ma'youf and Aburezeq (2022) established that an extensive vocabulary is positively associated with high levels of reading comprehension. The study emphasized that students with a wide vocabulary can easily perceive, identify, and absorb complex information

from various reading materials, which is a fundamental requirement in research methodology. Therefore, expanding learners' vocabulary through innovative, context-based activities directly empowers them to critically analyze texts and construct well-founded academic arguments.

In addition, Urbano et al. (2021) identified restricted vocabulary as one of the primary obstacles that hinder students' performance in research-related tasks. The researchers noted that inadequate content mastery and a lack of precise terminology prevent learners from clearly articulating their arguments and analyzing data effectively. Therefore, educational institutions must implement targeted vocabulary interventions that move beyond traditional and passive learning methods to improve students' overall academic performance and self-efficacy in writing.

Based on the literatures and studies reviewed, having a strong grasp of academic vocabulary is essential for Senior High School (SHS) students. It acts as a basic mental building block that allows them to tackle research methods, read critically, and write effective academic papers.

The inadequacy of the traditional and passive vocabulary presents as a recurring theme across the studies. Researchers emphasize that vocabulary deficits act as primary hinders to students' academic growth, leaving it difficult for them to decode complex texts and construct evidence-based arguments. Furthermore, the lack of vocabulary directly delays a learner's reading comprehension, which is heavily demanded by the demanding SHS curriculum. Educational institutions must implement targeted interventions that move beyond traditional memorization methods.

Contemporary research strongly advocates for a shift toward interactive and technology-driven interventions to bridge this educational gap. Studies demonstrate that digital platforms and gamification elements like immediate feedback and progress tracking significantly boost student motivation and engagement. These interactive tools provide a stress-free environment that is essential for transferring complex terminology into long-term memory. By making vocabulary acquisition an enjoyable and dynamic process, gamified platforms effectively counter the disengagement often associated with conventional language learning.

Beyond basic word retention, the literature proves that gamified digital tools directly uplift the higher-order cognitive skills necessary for academic research. The utilization of digital game-based learning environments enhances reading comprehension, writing proficiency, critical thinking, and decision-making capabilities essential for evaluating research data. Students immersed with these modern learning styles show notable improvements in their confidence and capacity to navigate complex scholarly texts.

These findings form a strong foundation for the current action research. Because traditional methods leave students disengaged and underprepared for scholarly writing, there is a critical need for modern, interactive interventions localized to specific student populations. Therefore, this study suggests that integrating Wayground, a gamified digital tool into the classroom will replicate the successes highlighted in recent literature. By addressing the identified gaps in vocabulary acquisition, this intervention aims to transform the research skills, and overall academic performance of SHS students at San Isidro Integrated National High School, Lipa City.

Statement of the problem

The study sought to find out the vocabulary skills in research through the use of Wayground among the SHS students with the aim of helping students improve their academic performance.

Specifically, it sought to answer the following questions:

1. What is the performance level of the SHS students in research vocabulary skills before using Wayground?
2. How effective is Wayground in enhancing students' research vocabulary skills as measured by:
 - 2.1 performance tasks;
 - 2.2 class participation; and
 - 2.3 post assessment?

3. To what extent does Wayground improve students' vocabulary in:
 - 3.1 writing tasks; and
 - 3.2 reading comprehension?
4. What challenges do students encounter in using Wayground to enhance their research vocabulary skills?
5. Based on the findings, what intervention activities may be proposed?

II. Materials and Methods

This part presented the research design, participants of the study, data gathering instruments, data gathering procedures, and data analysis plan that had been used to analyze and interpret the data.

Research Design

This study aimed to evaluate the vocabulary skills in research through the use of Wayground among Senior High School (SHS) students in San Isidro INHS, Lipa City, with the goal of proposing intervention activities to help improve their academic performance.

To achieve the purpose of the study, the researcher employed a descriptive quantitative research design. To gather data about the level of the students' performance regarding their vocabulary skills before and after the use of Wayground, the researcher utilized a teacher-made test to determine the effectiveness of the intervention on their performance tasks, class participation, post-assessment results and the challenges experienced by the respondents regarding the difficulties they encountered and to understand how the platform manifested on their writing and reading comprehension.

In the context of evaluating digital interventions like Wayground, a descriptive approach is highly effective for establishing baseline metrics. Zhao et al. (2021) noted that describing pre-existing conditions such as the students' baseline vocabulary skills in research is a necessary prerequisite before any meaningful evaluation of an educational tool can occur. By utilizing a

descriptive-evaluative framework, researchers can objectively measure performance-based tasks, class participation, and post-assessment scores. This design allowed the researcher to document the extent of Wayground's manifestation on writing, reading comprehension, and critical thinking based on actual, observed student outputs rather than theoretical projections (Falaminiano & Orge, 2023).

Participants of the Study

The participants of this action research will be forty (40) Senior High School (SHS) students enrolled at San Isidro Integrated National High School (INHS), Lipa City, during the second semester of the school year 2025-2026. These students were specifically selected as they were currently engaged in research-related coursework where advanced vocabulary skills were critical for their comprehension, writing performance, and overall academic success.

To select the actual participants, the researcher employed a simple random sampling technique. In this probability sampling method, every eligible SHS student within the target population was given equal and independent chance of being selected to be part of the 40-student sample. This technique was utilized to eliminate selection bias and ensure that the chosen participants accurately represent the broader population of SHS students in the institution. Consequently, this provided reliable and objective data regarding the effectiveness of Wayground as an intervention and the genuine challenges students encountered while using it.

Data Gathering Instruments

To gather the necessary data for this study, the researcher utilized a teacher-made vocabulary tests and a researcher-made questionnaire. The development and utilization of these instruments followed a systematic process:

Construction. The teacher-made vocabulary tests and the researcher-made questionnaire were developed based on the statement of the problem, the researcher's personal observations, and concepts found after reviewing related literature on vocabulary acquisition and the use of Wayground. The test was composed of a 30-item pre-test and 30-item post-test designed to evaluate students' performance in research vocabulary. Meanwhile, the questionnaire contained specific indicators describing the extent to which Wayground manifests in the students' writing

skills, reading comprehension, and challenges encountered in using Wayground. The first drafts of the instruments were prepared and presented to the research evaluator for initial corrections and modifications.

Validation. The copies of the improved draft were distributed to a panel of experts for further examination. It was presented to the English teachers and experts in the field for content validation. Their comments and suggestions were taken into consideration to improve the relevance of the items. After complying with the suggestions, the instrument was presented to the research evaluator for suggestions.

Administration. The researcher sent a letter of request to the principal of San Isidro INHS and the consent of the parents of the participants for the administration of the test. The teacher-made test was administered twice: as a pre-test before the intervention and as a post-test after the utilization of Wayground in the research classes. The questionnaire was administered a few days after the end of the intervention period. Both instruments were conducted online using Google Forms, distributed to the intended participants via group chats and personal messages on their Messenger accounts. For students without internet access or capable devices, printed copies were provided, or arrangements will be made for them to borrow devices to ensure their 100% participation.

Retrieval of Researcher-Made Test. Retrieval of the responses was done immediately after the allotted time for all participants to complete the test and questionnaire. The digital responses from Google Forms were exported, while the physical copies were manually encoded. All collected data were added up, tabulated, examined, and interpreted by a statistician. To portray the data comprehensively, the researcher organized the results into tables for statistical analysis.

Scoring of Responses. The items in the survey questionnaire were scored based on the Likert Scale, with 4 as the highest score and 1 as the lowest score. Equivalent verbal descriptions were also provided.

To determine the performance of the students, 30 items pre- and post-tests were made by the researcher. The tests scoring guide aligned with the DepEd grading system (DO 8, s. 2015).

Score Range	Percentage Equivalent	Verbal Interpretation
27-30	90%-100%	Outstanding (O)
24-26	85%-95%	Very Satisfactory (VS)
21-23	80%-84%	Satisfactory (S)
15-20	75%-79%	Fairly Satisfactory (FS)
0-14	Below 75%	Did not meet any expectations (DNME)

For the questionnaire, the items were scored based on a 4-point Likert Scale, with 4 as the highest score and 1 as the lowest. Equivalent verbal descriptions were provided to interpret the extent of Wayground's manifestation on the students' skills:

Option	Scale Range	Verbal Interpretation
4	3.50 – 4.00	Strongly Agree
3	2.50 – 3.49	Agree
2	1.50 – 2.49	Disagree
1	1.00 – 1.49	Strongly Disagree

Data Gathering Procedure

To commence the data gathering process, the researcher first wrote a formal letter of request addressed to the School Principal of San Isidro Integrated National High School (INHS), Lipa City, to seek official permission to conduct the study. The actual administration of the pre-test, the integration of the intervention into the lessons, and the subsequent data collection begun strictly upon the approval of the principal.

Following the approval from the school administration, the researcher proceeded to seek the informed consent of the 40 randomly selected Senior High School student-participants. Because the participants were students, a formal consent and assent form or waiver were distributed to them and their parents or guardians. This document clearly explained the purpose of the action research, the nature of their involvement with the Wayground platform, and the schedule for answering the tests and questionnaires. The researcher explicitly emphasized to the students that their participation was strictly voluntary, and they could retain the right to withdraw from the study at any time without any negative consequences to their academic grades or standing in the class.

Throughout the conduct of the study, strict ethical considerations and data privacy protocols were observed in compliance with Republic Act No. 10173, otherwise known as the Data Privacy Act of 2012. The researcher guaranteed that all personal information, test scores, and questionnaire responses gathered from the participants will be treated with the utmost confidentiality. All collected data, whether stored digitally or physically, were secured by the researcher and will be strictly utilized for academic purposes only.

Data Analysis Plan

The data gathered in this study were subjected to appropriate statistical treatment to ensure accurate interpretation and to address the specific research questions.

To effectively present the descriptive data and overall findings, the researcher utilized the following statistical tools:

Frequency. This will show the number of participants who are Outstanding, Very Satisfactory, Satisfactory, Fairly Satisfactory, and Did not meet any expectations based on their scores in the standardized test. It also indicated the total number of students who answered the tests.

Percentage. This will be used to determine the percentage of students who were Outstanding, Very Satisfactory, Satisfactory, Fairly Satisfactory, and Did not meet any expectations in the standardized in research vocabulary tests.

Ranking. This will be used to determine the rank of the participant's responses on the survey.

Weighted Mean. This will be used to determine the weight in terms of mean response of the students in the use of Wayground in terms of learning content, learning activities and assessment tasks.

III. Results

This section presents the results of the data gathered in the study entitled "Wayground and Research Vocabulary Skills among SHS Students in San Isidro INHS." The findings are organized according to the research questions formulated in this study to provide a clear and systematic discussion of the results.

1. Performance level of the SHS students in research vocabulary skills before using Wayground.

Table 1
SHS Students' Research Vocabulary Skills Before
the Use of Wayground

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I understand common research terms even before using Wayground.	2.60	Agree	1
2. I feel confident when I encounter unfamiliar research vocabulary.	1.80	Disagree	5
3. I can explain research-related words in my own simple way.	2.58	Agree	2
4. I can correctly use research terms when answering class activities.	2.42	Disagree	3
5. I find it easy to understand research instructions that contain academic vocabulary.	2.25	Disagree	4
Composite Mean	2.33	Disagree	

Table 2

**Pre-Test Result in Research Vocabulary Skills
Before Using Wayground**

Score range	F	P	R
Outstanding (27-30)	0	0	5
Very Satisfactory (24-26)	8	20%	3
Satisfactory (21-23)	6	15%	4
Fairly Satisfactory (15-20)	16	40%	1
Did Not Meet Expectations (0-14)	10	25%	2
Total	40	100%	

Legend: *F- Frequency* *P-Percentage* *R-Rank*

2. Effectiveness of Wayground in enhancing students' research vocabulary skills based on the following measures.

Table 3

Effectiveness of Wayground in Enhancing Students' Research Vocabulary Skills as Reflected in Performance Tasks

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I perform better in research-related tasks when I use Wayground.	3.28	Agree	4
2. I can apply new research vocabulary in my outputs after using Wayground.	3.50	Strongly Agree	1
3. I feel more prepared to complete performance-based tasks because of Wayground activities.	3.33	Agree	3
4. I can organize my ideas more clearly in tasks after using Wayground.	3.43	Agree	2
5. I am more confident in completing research activities after using Wayground.	3.13	Agree	5
Composite Mean	3.33	Agree	

Table 4

Effectiveness of Wayground in Enhancing Students' Research Vocabulary Skills as Reflected in Class Participation

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I participate more actively in class discussions when Wayground is used.	3.50	Strongly Agree	3
2. I feel encouraged to share my ideas during research lessons with Wayground.	3.40	Agree	4
3. I ask more questions about research topics when I use Wayground.	3.03	Agree	5
4. I feel more engaged during research class because of Wayground activities.	3.58	Strongly Agree	1
5. I collaborate better with my classmates when Wayground is part of the lesson.	3.53	Strongly Agree	2
Composite Mean	3.41	Agree	

Table 5

Effectiveness of Wayground in Enhancing Students' Research Vocabulary Skills as Reflected in Post Assessment

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I perform better in post-assessments after using Wayground.	3.30	Agree	4
2. I understand research vocabulary better during quizzes and tests after using Wayground.	3.50	Strongly Agree	3
3. I can recall research terms more easily in assessments because of Wayground.	3.20	Agree	5
4. I feel more confident answering vocabulary-related test questions after using Wayground.	3.55	Strongly Agree	2
5. I notice an improvement in my test scores after using Wayground.	3.58	Strongly Agree	1
Composite Mean	3.43	Agree	

Table 6
Post-Test Result in Research Vocabulary Skills
After Using Wayground

Score range	F	P	R
Outstanding (27-30)	23	57.50%	1
Very Satisfactory (24-26)	10	25%	2
Satisfactory (21-23)	5	12.50%	3
Fairly Satisfactory (15-20)	2	5%	4
Did Not Meet Expectations (0-14)	0	0	5
Total	40	100%	

Legend: *F- Frequency* *P-Percentage* *R-Rank*

3. Extent to which Wayground improves students' research vocabulary skills

Table 7
Extent to Which Wayground Improves Students' Research Vocabulary Skills
Through Writing Tasks

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I use appropriate research vocabulary when writing my research outputs.	3.28	Agree	3
2. I express my ideas more clearly in writing after using Wayground.	3.08	Agree	5
3. I feel more confident writing research papers because I understand the terms better.	3.53	Strongly Agree	2
4. I can construct better research sentences using the vocabulary I learned from Wayground.	3.15	Agree	4
5. I make fewer mistakes in using research terms in my written work.	3.73	Strongly Agree	1
Composite Mean	3.35	Agree	

Table 8

Extent to Which Wayground Improves Students' Research Vocabulary Skills Through Reading Comprehension

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I understand research texts better after using Wayground.	3.10	Agree	5
2. I can identify the meaning of research terms while reading.	3.48	Agree	1
3. I find it easier to follow research articles and examples after learning vocabulary through Wayground.	3.30	Agree	3
4. I can answer reading comprehension questions more accurately after using Wayground.	3.35	Agree	2
5. I feel less confused when reading research-related materials.	3.23	Agree	4
Composite Mean	3.29	Agree	

4. Challenges students encountered in using Wayground to enhance their research vocabulary skills

Table 9

Challenges Students Encountered in Using Wayground

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. I experience difficulty navigating Wayground during research activities.	2.15	Disagree	4
2. I sometimes struggle to understand instructions given in Wayground.	2.18	Disagree	3
3. I feel distracted when using Wayground for research lessons.	2.23	Disagree	2

4. I encounter technical problems while using Wayground.	1.88	Disagree	5
5. I need more guidance when using Wayground to improve my research vocabulary.	2.28	Disagree	1
Composite Mean	2.14	Disagree	

IV. Discussion

This section presents the analysis and interpretation of data gathered in the study entitled “Wayground and Research Vocabulary Skills: An Action Research among SHS Students in San Isidro INHS.” The findings are organized according to the research questions formulated in this study to provide a clear and systematic discussion of the results.

1. Performance level of the SHS students in research vocabulary skills before using Wayground.

In table 1, SHS students’ research vocabulary skills before the use of Wayground, based on the tabulated results, Senior High School students generally demonstrated low research vocabulary skills before the use of Wayground, as reflected by the composite mean of 2.33 interpreted as disagree. Although students moderately agree that they understood common research terms with a weighted mean of 2.60, and can explain research-related words in their own way with the weighted mean of 2.58, their confidence and application skills remained limited. The lowest mean of 1.80 shows that students lack confidence when encountering unfamiliar research vocabulary. In addition, their ability to correctly use research terms with the weighted mean of 2.42 and understand academic instructions with the weighted mean of 2.25 also fall under the disagree level. This implies that while students possess basic familiarity with some research terms, they still struggle with deeper comprehension, correct usage, and confidence, the skills that are essential in academic research.

This result is consistent with recent studies emphasizing the importance of interactive and technology-supported learning tools such as Wayground. Research showed that gamified platforms improve students' engagement and vocabulary development by providing immediate feedback and active participation opportunities (Wibisono & Sari, 2021).

In table 2, pre-test result in research vocabulary skills before using Wayground, the data present the performance level of the Senior High School (SHS) students in research vocabulary skills based on a 30-item pre-test administered prior to the use of Wayground. The results show that the majority of the students fall under the fairly satisfactory level, comprising 40% (16 students), followed by those who did not meet expectations at 25% (10 students). Only 20% (8 students) reached the very satisfactory level, while 15% (6 students) were categorized as satisfactory, and no student achieved an outstanding rating. These findings indicate that most students have limited proficiency in research vocabulary prior to the intervention.

The findings are supported by recent studies emphasizing that students commonly encounter difficulties in vocabulary acquisition, which directly affects their academic performance. For instance, Putri et al. (2024) found that many students struggle with vocabulary due to challenges in understanding word meanings, pronunciation, and usage, resulting in lower test performance and limited comprehension skills.

Similarly, Harselina et al. (2024) reported that students' vocabulary mastery remains a significant concern, as many learners perform only at average or below-average levels in vocabulary assessments, indicating gaps in their linguistic competence. These studies support the present findings, where a large proportion of students demonstrated only fairly satisfactory or below-expected performance in the pre-test, confirming that vocabulary deficiency is a common issue among learners.

2. Effectiveness of Wayground in enhancing students' research vocabulary skills based on the following measures.

In table 3, effectiveness of Wayground in enhancing students' research vocabulary skills as reflected in performance tasks, the results indicate that Wayground is effective in enhancing students' research vocabulary skills in performance tasks, as shown by the composite mean of 3.33. Students strongly agree that they can apply new research vocabulary in their outputs with the weighted mean of 3.50, rank 1 and can organize their ideas more clearly gaining a weighted mean of 3.43. However, confidence in completing research activities, while improved, obtained the lowest rank 3.13, suggesting that confidence may still need further development.

This finding supported studies that highlight the effectiveness of gamified learning tools in improving vocabulary application and academic performance (Wibisono & Sari, 2021; Basuki & Hidayati, 2022). These studies emphasize that interactive platforms help students actively use new vocabulary in meaningful tasks, leading to better retention and understanding. Thus, the positive results suggest that Wayground plays a significant role in enhancing students' research vocabulary skills, particularly in performance-based outputs.

In table 4, effectiveness of Wayground in enhancing students' research vocabulary skills as reflected in class participation, based on the tabulated results, the use of Wayground is generally effective in enhancing students' research vocabulary skills as reflected in their class participation, with a composite mean of 3.41, verbally interpreted as agree. Among the indicators, SHS students reported the highest level of agreement in feeling more engaged during research class because of Wayground activities having the weighted mean of 3.58, which ranked first. This was followed by improved collaboration with classmates with 3.53 weighted mean and increased active participation in class discussions with 3.50 weighted mean, both interpreted as strongly agree. Meanwhile, students also agreed that Wayground encourages them to share ideas with a weighted mean of 3.40 and ask more questions about research topics with 3.03 weighted mean, although these indicators ranked lower.

The findings suggested that Wayground is effective in enhancing students' research vocabulary skills as reflected in class participation. Students reported feeling more engaged, actively participating in discussions, and collaborating better with classmates when Wayground activities were integrated into the lessons. This aligns with research showing that gamified learning platforms significantly increase student engagement and participation in classroom activities (Yu, 2023).

In table 5, effectiveness of Wayground in enhancing students' research vocabulary skills as reflected in post assessment, the results indicated that the use of Wayground positively influenced students' performance in post-assessments, with a composite mean of 3.43, verbally interpreted as agree. The highest agreement is the improvement in the test scores after using Wayground having a weighted mean of 3.58, followed closely by feeling more confident in answering vocabulary-related questions having a weighted mean of 3.55. Understanding research vocabulary better during quizzes and tests gain 3.50 weighted mean also ranked high, while performing better in assessments have 3.30 weighted mean and recalling research terms more easily have 3.20 weighted mean were still rated positively.

These findings suggest that Wayground not only enhances students' vocabulary retention but also builds confidence and improves test performance, which is consistent with studies showing that gamified learning tools can significantly improve students' academic performance and mastery of subject-specific vocabulary (Liu, 2024).

In table 6, post-test results in research vocabulary skills after using Wayground show that most students performed at a high level. Specifically, 23 students (57.50%) achieved an outstanding score (27–30), followed by 10 students (25%) at very satisfactory (24–26). Only a small number of students scored satisfactory (12.50%) or Fairly Satisfactory (5%), and no student fell into the did not meet expectations category, indicating that Wayground contributed positively to students' mastery of research vocabulary.

These findings are supported by the study indicating that gamified learning tools, like Wayground, enhance students' vocabulary retention, understanding, and overall academic performance. Gamification provides interactive and engaging learning experiences, which increases motivation and improves assessment outcomes in language and vocabulary learning (Liu, 2024).

3. Extent to which Wayground improves students' research vocabulary skills

In table 7, extent to which Wayground improves students' research vocabulary skills through writing tasks, the table presents the extent to which Wayground improves students' research vocabulary skills through writing tasks. The composite mean of 3.35, interpreted as agree, indicates that students generally perceive Wayground as effective in enhancing their research vocabulary in writing. Among the indicators, "I make fewer mistakes in using research terms in my written work" ranked first with the highest weighted mean of 3.73, interpreted as strongly agree, suggesting that the tool significantly helps students reduce errors in terminology usage. This is followed by students' increased confidence in writing research papers with the weighted mean of 3.53, strongly agree, showing that understanding vocabulary contributes to self-assurance in academic writing.

Meanwhile, the ability to use appropriate vocabulary with the weighted mean of 3.28 and construct better research sentences with the weighted mean of 3.15) were both rated agree, indicating consistent but slightly moderate improvements. The lowest-ranked indicator, "I express my ideas more clearly in writing after using Wayground" having 3.08 weighted mean, still falls under agree, implying that while improvement is evident, clarity in idea expression may require further development.

This finding is supported by the study of Nation and Macalister (2020), who emphasized that vocabulary development plays a crucial role in improving learners' writing performance, especially in academic contexts. Their research highlighted that when students are exposed to structured vocabulary learning tools and activities, they become more capable of using appropriate terms, minimizing errors, and expressing ideas more effectively in writing. This aligns with the present study, where students reported fewer mistakes and increased confidence

after using Wayground, indicating that targeted vocabulary instruction enhances both technical accuracy and overall writing competence.

In table 8, extent to which Wayground improves students' research vocabulary skills through reading comprehension, shows the extent to which Wayground improves students' research vocabulary skills through reading comprehension. The composite mean of 3.29, interpreted as agree, indicates that students generally perceive Wayground as helpful in enhancing their understanding of research texts. Among the indicators, "I can identify the meaning of research terms while reading" ranked first with a weighted mean of 3.48, suggesting that vocabulary development through Wayground enables students to better recognize and interpret unfamiliar terms. This is followed by improved accuracy in answering reading comprehension questions with the weighted mean of 3.35 and the ability to follow research articles more easily with the weighted mean of 3.30, both reflecting strengthened comprehension skills. Students also reported feeling less confused when reading research materials with the weighted mean of 3.23, indicating reduced difficulty in processing academic texts. The lowest-ranked indicator, "I understand research texts better after using Wayground with the weighted mean of 3.10, still falls under agree, which means that although improvement is evident, deeper comprehension may still require continued practice.

This finding is supported by the study of Grabe and Stoller (2020), who emphasized that vocabulary knowledge is a key factor in reading comprehension, particularly in academic texts. They explained that learners with a stronger grasp of vocabulary are better able to infer meanings, follow complex ideas, and answer comprehension questions accurately. This aligns with the present study, where students demonstrated improved ability to identify research terms and comprehend reading materials after using Wayground, highlighting the importance of vocabulary instruction in developing effective reading skills.

4. Challenges students encountered in using Wayground to enhance their research vocabulary skills

In table 9, challenges students encountered in using Wayground, the tabulated results indicate that SHS students generally did not heavily struggle with using Wayground for their research activities, as all challenge indicators received mean scores that fall in the disagree range. Among the listed items, the greatest challenge reported was the need for more guidance to improve research vocabulary, although students still disagreed that it was a major issue, suggesting they felt relatively confident using the platform with minimal help. The composite mean of 2.14 reflects low perceived difficulty and implies that students find the platform relatively easy to navigate and use despite minor distractions.

Research on student experiences with digital learning environments shows that while learners often face technical challenges and require instructor support, these issues tend to be moderate rather than overwhelming when platforms are well-designed and integrated into instruction (Barrot et al., 2021). This suggested that platforms like Wayground, when supported by clear instruction and structured tasks, can minimize frustration and enable effective engagement without excessive technology-related barriers.

V. Conclusion

The researcher has drawn the following conclusions based on the findings of the research:

1. The findings revealed that Senior High School students initially demonstrated low proficiency in research vocabulary skills, as evidenced by the pre-test results where the majority of learners were categorized under fairly satisfactory and did not meet expectations. This indicates that students had limited mastery, low confidence, and difficulty in applying research terminology prior to the intervention.
2. The use of Wayground significantly improved SHS students' research vocabulary skills, as reflected in the post-test results where the majority of students achieved outstanding and very satisfactory performance levels. This confirms that the integration of interactive and gamified learning tools can effectively enhance vocabulary acquisition.

3. Wayground was found to be effective in improving SHS students' performance in research-related tasks, class participation, and post-assessment outcomes. SHS Students were able to apply vocabulary more accurately and demonstrate increased engagement during classroom activities.
4. The platform also contributed positively to students' writing and reading comprehension skills. Learners showed improvement in using appropriate research vocabulary, reducing errors in writing, and better understanding research texts, although some aspects such as clarity of expression and deeper comprehension still require further enhancement.
5. The challenges encountered by students in using Wayground were minimal, indicating that the tool is generally user-friendly and accessible. However, a small number of learners expressed the need for additional guidance, suggesting that teacher support remains an important factor in maximizing the effectiveness of the intervention.

Recommendation

Based on the results and findings of the study, the following recommendations are hereby presented:

1. Teachers may continuously integrate Wayground into research and language instruction as a supplementary tool to reinforce students' vocabulary skills.
2. Schools may consider providing training or workshops for teachers on the effective use of gamified learning platforms like Wayground to maximize their instructional potential and ensure consistent implementation across subjects.
3. Additional support and remediation programs may be designed for students who remain at the satisfactory and fairly satisfactory levels, focusing on guided vocabulary practice and contextual application.
4. Students may be encouraged to engage in independent learning strategies, such as maintaining vocabulary notebooks and participating in regular Wayground activities, to further strengthen retention and application of research terms.



5. Future researchers are encouraged to expand this study by involving a larger sample size, longer duration, or different subject areas to further validate the effectiveness of Wayground and explore its impact on other aspects of academic performance.

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