

Wordcraft (Vocabulary Games): A Supplementary Material on the Students' Engagement and Performance in Vocabulary Development

Donabel Cabela Pasahol, Aileen Medialdia Daran, EdD
Laguna State Polytechnic University Sta. Cruz Laguna 4009 PHILIPPINES
Email address: donabel.pasahol@deped.gov.ph

Abstract—The study entitled *Wordcraft (Vocabulary Games): A Supplementary Material on the students' engagement and performance in vocabulary development* aims to assess the level of WordCraft in terms of its components, features, as well as students' engagement. A vocabulary assessment utilizes to examine the level of students' performance in the written test. Specifically, it investigates its relationship to students' engagement, vocabulary development, and performance. More so, the study seeks to investigate its effectiveness towards students' performance. The study used a descriptive-correlational design with a quantitative approach to examine students' vocabulary performance and engagement using WordCraft (Vocabulary Games) as a supplementary material. The respondents were 100 Grade 8 students selected through purposive sampling. Data were collected using teacher-made games, a 5-point Likert scale questionnaire, and a vocabulary test. Mean and standard deviation were used to describe the levels of WordCraft components, features, engagement, and performance, while Pearson Product-Moment Correlation was used to determine the relationship between WordCraft, students' engagement, and vocabulary performance. Findings reveal that WordCraft (Vocabulary Games) demonstrated an acceptable level when it comes to its components and features. As per the students' engagement levels, it is also revealed to be acceptable across all dimensions. Furthermore, results show that vocabulary performance assessments revealed a satisfactory level of proficiency among students. Statistical analysis further shows a significant positive relationship between the WordCraft components, and features on students' engagement. However, the integration of the WordCraft does not produce a statistically significant effect on students' performance. The study reveals that a significant relationship was found between WordCraft's components and features on students' engagement, leading to rejection of the first hypothesis. However, no effect was found in the WordCraft (Vocabulary Games) as supplementary material and students' performance in vocabulary development, leading to acceptance of the second hypothesis. Therefore, it is concluded that while WordCraft (Vocabulary Games) significantly enhanced students' engagement in vocabulary development, it did not produce a significant effect on their performance. Based on the findings, it is recommended that WordCraft (Vocabulary Games) be continuously utilized and further enhanced through integrating explicit vocabulary instructions, structured feedback, and extended practice opportunities to effectively translate student engagement into improved vocabulary performance.

Keywords— Vocabulary Development, WordCraft Vocabulary Games, Vocabulary Performance, Game-Based Learning, Vocabulary Performance.

I. INTRODUCTION

Vocabulary is the foundational ground of any language, truly understanding that this is a potent tool for communication. Basically, meaningful conversation is impossible without words, with this said, vocabulary is the cornerstone of language development and is significant for helping students fully comprehend phrases, sentences, paragraphs, etc., more importantly, to communicate thoughts effectively, and participate desirably in social and academic situations. Vaghela & Parsana (2024) mentioned that strong vocabulary skills are connected with academic performance, as such, critical thinking, lifelong learning, and communication capacity are all encompassed in the academe. Thus, vocabulary has a substantial impact on one's literacy and reading comprehension in the first-language (L1) and second-language (L2) students of all ages (Kim et. al., 2022). For reading and writing performance, such an in-depth level of vocabulary furthermore improves writing quality by thoroughly facilitating the usage of contextually relevant words, in such, a larger vocabulary facilitates greater context recognition and comprehension.

However, despite the established importance of vocabulary, a number of students still struggle with it. Conventional teaching methodologies, normative memorization, and textbook-based activities frequently tend to fall short when it comes to maintaining students' interest or targeting long-term word retention. These approaches potentially ignore different learning styles and techniques, which eventually leads to poor vocabulary performance and low motivation. With this, teachers are moving toward learner-centered, interactive methods that make vocabulary acquisition more interesting and significant in order to overcome such challenges. With the help of educational games, which combine learning with play to increase student motivation and engagement, is one potentially successful strategy. Specifically, vocabulary games provide students the chance to recognize, practice, and utilize new terms in contextualized and dynamic forms.

Moreover, the significant role of the English language in achieving global competitiveness is widely recognized, and vocabulary development is essential for Junior High School students, particularly those in Grade 8. This is necessary for

them to fully understand complex content and perform well across various subject areas.

In line with this, the present study investigated the effectiveness of WordCraft (Vocabulary Games) in building the vocabulary skills of Grade 8 learners at Pagsanjan Integrated National High School. By integrating game-based learning into the vocabulary instruction process, the study aims to determine whether such an approach and material can lead to significant changes, preferably improvements, in the learners' vocabulary acquisition, retention, and usage. Furthermore, it seeks to explore how educational games can foster a more positive attitude towards learning the English vocabulary.

1.1 Statement of the Problem

Problem/s which were addressed by the research

The study determined the relationship and effect of WordCraft (Vocabulary Games) on the Grade 8 students' engagement and performance in vocabulary development at Pagsanjan Integrated National High School.

Specifically, this study sought to answer the following questions:

1. What is the level of WordCraft (Vocabulary Games) as Supplementary Materials in terms of components with regard to:
 - 1.1 Learning Objectives;
 - 1.2 Content;
 - 1.3 Activity (Vocabulary Games); and
 - 1.4 Assessment?
2. What is the level of WordCraft (Vocabulary Games) as Supplementary Materials in terms of features with regard to:
 - 2.1 Design;
 - 2.2 Usability; and
 - 2.3 Clarity?
3. What is the level of students' engagement in Vocabulary Development in terms of:
 - 3.1 Cognitive Engagement;
 - 3.2 Behavioral Engagement; and
 - 3.3 Emotional Engagement?
4. What is the level of students' performance as to Written Test?
5. Is there a significant relationship between the WordCraft (Vocabulary Games) as Supplementary Material and Students' Engagement in Vocabulary Development?
6. Is there a significant effect of WordCraft (Vocabulary Games) as Supplementary Material on Students' Performance in Vocabulary Development?

II. METHODOLOGY

The study used a descriptive-correlational design with a quantitative approach to examine students' vocabulary performance and engagement using WordCraft (Vocabulary Games) as a supplementary material. The respondents were 100 Grade 8 students selected through purposive sampling. Data were collected using teacher-made games, a 5-point Likert scale questionnaire, and a vocabulary test. Mean and standard deviation were used to describe the levels of

WordCraft components, features, engagement, and performance, while Pearson Product-Moment Correlation was used to determine the relationship between WordCraft, students' engagement, and vocabulary performance.

III. RESULTS AND DISCUSSION

This part presents the results and their discussion in reference to the gathered, assessed, and interpreted data as it targeted to answer the research problems of the present study.

Level of WordCraft (Vocabulary Games) as Supplementary Material in terms of Components

In this study, the level of WordCraft (Vocabulary Games) as Supplementary Materials in terms of components refers to Learning Objectives, Content, Activity (Vocabulary Games), and Assessment.

The following table shows the statement, Mean, and Standard Deviation, remarks and verbal interpretation from the perspectives of respondents.

Vocabulary Games, as a supplementary material, enable students to develop vocabulary in an engaging, interactive, and meaningful manner, allowing them to understand and use words effectively in both oral and written communication. This material plays a significant role in enhancing other language skills, including reading comprehension, writing proficiency, and speaking ability, as a strong vocabulary foundation supports overall language development. The integration of interactive vocabulary games not only strengthens the students' understanding of vocabulary meanings and usage but also increases their stimulations, motivations and interest in the learning process. Additionally, the use of WordCraft promotes active participation and collaboration all throughout the process, which positively influences students' confidence and engagement in their respective classroom. Therefore, the respondents' high level of engagement with WordCraft reflects not only the effectiveness of the material in supporting vocabulary acquisition, but also their responsiveness to such innovative and learner-centered instructional strategies.

Table 1 presents the level of WordCraft (Vocabulary Games) as supplementary material in terms of learning objectives.

Table 1. Level of WordCraft (Vocabulary Games) as Supplementary Material in terms of Components with regard to Learning Objectives

Statements	Mean	SD	Remarks
Identifies the vocabulary skills stated in the learning objectives.	4.15	0.82	Agree
Interprets the meaning of the learning objectives.	4.16	0.79	Agree
Implements the learning objectives while playing the vocabulary games.	4.20	0.78	Agree
Differentiates how each learning objective improves my vocabulary skills.	4.06	0.90	Agree
Assesses the effectiveness of the learning objectives in improving my vocabulary.	4.07	0.89	Agree
Weighted Mean	4.13		
SD	0.83		
Verbal Interpretation	Acceptable		

Across all five indicators, students agreed with statements related to understanding and applying the learning objectives

in WordCraft (Vocabulary Games) as supplementary material. Students agreed that they can identify the vocabulary skills stated in the learning objectives ($M = 4.15$, $SD = 0.82$), interpret the meaning of the learning objectives ($M = 4.16$, $SD = 0.79$), implement the learning objectives while playing the vocabulary games ($M = 4.20$, $SD = 0.78$), differentiate how each learning objective improves their vocabulary skills ($M = 4.06$, $SD = 0.90$), and assess the effectiveness of the learning objectives in improving their vocabulary ($M = 4.07$, $SD = 0.89$). Given the mentioned data, it is revealed that students demonstrated within the acceptable level in terms of learning objectives, given the weighted mean of 4.13 and a standard deviation of 0.83, verbally interpreted as “Agree.” Results suggest that students are generally inclined to understand and apply the learning objectives embedded in WordCraft, indicating that the material provides a clear guidance and supports vocabulary development effectively, although there is still room for much deeper awareness on how each objective contributes to skill improvement.

Therefore, these findings highlight the importance of the clearly defined and well-integrated learning objectives in terms of vocabulary instruction that are aligned with students’ needs and consistently reinforced through one’s interactive and engaging activities or content, as these ensure towards the learning of students which remains focused, purposeful, and data-driven conclusions. More so, results also underscore the positive impact of the structured objectives on students’ ability to understand, apply, and evaluate vocabulary performances within meaningful contexts, suggesting that learners are more ought to develop deeper comprehension and retention when students are thoroughly guided by specific and measurable outcomes. Moreover, the integration of such objectives within game-based learning materials like WordCraft enhances the instructional value of the activities by ensuring that students are not only actively engaged but are also consciously working toward identifiable learning goals. It is therefore recommended that educators incorporate explicit, measurable, and well-aligned learning objectives into vocabulary games to further strengthen students’ awareness of their learning progress and intended outcomes.

Table 2 presents the level of WordCraft (Vocabulary Games) as a supplementary material in terms of content.

Table 2. Level of WordCraft (Vocabulary Games) as Supplementary Material in terms of Components with regard to Content

Statements	Mean	SD	Remarks
Recalls the definition and spelling of the vocabulary words.	4.17	0.83	Agree
Summarizes the main context or usage of new vocabulary words.	4.14	0.84	Agree
Uses the vocabulary words correctly in new sentences or situations.	4.19	0.79	Agree
Compares and contrasts different vocabulary words based on their root words or nuances in meaning.	4.23	0.81	Strongly Agree
Generates own creative text using the target vocabulary.	4.19	0.83	Agree
Weighted Mean	4.18		
SD	0.82		
Verbal Interpretation	Acceptable		

The table shows that the highest mean was obtained in “Compares and contrasts different vocabulary words based on root words or nuances in meaning” ($M = 4.23$, $SD = 0.81$), indicating strong learner agreement and effective development of vocabulary analysis skills. Indicators such as using vocabulary in sentences and generating creative texts ($M = 4.19$) also, reflected positive application of learned vocabularies, while recalling definitions and summarizing utilization ($M = 4.17$; 4.14) have obtained slightly lower, yet still garnered positive ratings. To sum it up, the overall content component gained a weighted mean of 4.18 ($SD = 0.82$) and was then interpreted as acceptable, suggesting that the WordCraft (Vocabulary Games) Supplementary material effectively supports vocabulary learning and its application.

Results also showed an overall weighted mean of 4.18, which corresponds to interpretation of acceptable, this indicates a strong alignment of the supplemental material with the educational aims and objectives, ensuring learners’ skill-oriented and purposeful gameplay.

Thus, the findings indicate that the content component of WordCraft (Vocabulary Games) is acceptable and effectively supports vocabulary learning. The results show that learners are most engaged in higher-order thinking tasks, particularly in comparing and contrasting vocabulary words, while also demonstrating positive performance in recalling, summarizing, using, and generating vocabulary in context. This suggests that the material promotes both understanding and application of vocabulary across different levels of cognitive engagement. Furthermore, the acceptable overall rating reflects that WordCraft is well-aligned with educational objectives, supporting skill-based and purposeful learning. It also implies that curriculum-aligned vocabulary content enhances the effectiveness of game-based learning by integrating academic instruction with interactive activities, thereby strengthening students’ learning experiences through meaningful engagement.

Table 3 shows the level of WordCraft (Vocabulary Games) as a supplementary material in terms of activity (vocabulary game).

Table 3. Level of WordCraft (Vocabulary Games) as Supplementary Material in terms of Components with regard to Activity (Vocabulary Game)

Statements	Mean	SD	Remarks
Motivates to practice vocabulary words regularly.	4.17	0.75	Agree
Enables one to follow the rules and instructions of the game, which are clear and easy	4.11	0.80	Agree
Provides immediate and helpful feedback on my answers.	4.11	0.86	Agree
Incorporates enjoyable learning vocabulary and feels less like a chore.	4.09	0.85	Agree
Makes the transfer of the vocabulary skills learned in the game to real-world communication	4.10	0.83	Agree
Weighted Mean	4.12		
SD	0.82		
Verbal Interpretation	Acceptable		

Table 3 evidently shows that the games effectively motivate students to practice vocabulary regularly ($M = 4.17$), this indicates consistent engagement in vocabulary learning activities. In the same sense, the clarity of rules and

instructions ($M = 4.11$) and the provision of immediate feedback ($M = 4.11$) also contribute to a smooth and guided learning exploration. More so, other statements such as making vocabulary learning enjoyable ($M = 4.09$) and supporting the transfer of vocabulary skills to real-world communication ($M = 4.10$), also showed favorable responses. The weighted mean of 4.12 suggests that the activities are deemed to be acceptable and engaging as interpreted, making vocabulary development a much more interactive and less burdensome learning encounter for learners.

The findings manifested that the Activity component of WordCraft (Vocabulary Games) is acceptable and effectively supports students' vocabulary learning, as interpreted. The results revealed that the activities encourage regular practice, provide clear and easy-to-follow instructions, and offer immediate feedback, all of which contribute to a more structured, guided, and learner-centered experience for the learners. More to this are the features in which it helps students stay focused and understand how to properly engage with each activity, reducing confusion and enhancing overall participation. In addition, learners perceive the activities as enjoyable and meaningful, as they allow themselves to apply vocabulary in real-life communication contexts, making the learning process more connected and less tedious or boresome. This positive perception suggests that the activities not only facilitate knowledge learning but also foster motivation and interest amongst them.

As shown in the table, the overall weighted mean of 4.12 further indicates that the activities successfully promote active participation, continuous simulations, and sustained engagement in vocabulary development among the learners. This suggests that the respondents consistently perceived the activities as effective in encouraging their involvement, interest, and sustained attention throughout the learning process. The results further imply that the learners were not only actively participating but were also able to maintain focus and enthusiasm while completing vocabulary-related tasks. Consequently, these findings support the idea that materials with well-designed, game-based exercises can enhance learners' motivation, strengthen their persistence in accomplishing tasks, and improve their willingness to engage in repeated practice. Moreover, the results imply that interactive and structured game-based approaches contribute positively to vocabulary acquisition by making learning more engaging, meaningful, and enjoyable. Ultimately, this highlights the potential of such instructional materials to improve vocabulary learning outcomes, reinforce students' language development, and support more effective and learner-centered classroom instruction.

Table 4 presents the level of WordCraft (Vocabulary Games) as supplementary material in terms of components with regard to assessment.

The assessment component is strongest in measuring long-term retention ($M = 4.17$) and confirming improved confidence ($M = 4.15$). With the material's weighted mean of 4.14, this suggests that it is an effective evaluative tool that helps students monitor progress and gain confidence in their language skills. This aligned with the theory that formative

assessment in games creates a low-pressure environment conducive to academic development.

Table 4. Level of WordCraft (Vocabulary Games) as Supplementary Material in terms of Components with regard to Assessment

Statements	Mean	SD	Remarks
Measures long-term retention of new vocabulary words.	4.17	0.80	Agree
Confirms improved confidence in using new vocabulary words in writing and speaking.	4.15	0.80	Agree
Indicates the ability to easily recognize the words and their correct meanings when reading complex texts.	4.11	0.83	Agree
Shows an increased ability to break down and understand new, unfamiliar words by recognizing prefixes, suffixes, and root words.	4.13	0.81	Agree
Reflects the game's effectiveness in preparing for formal vocabulary tests and quizzes.	4.12	0.82	Agree
Weighted Mean	4.14		
SD	0.81		
Verbal Interpretation	Acceptable		

The findings show that WordCraft (Vocabulary Games) is acceptable across all components, with consistently high mean scores in learning objectives, content, activities, and assessment. These results indicate that the material is well-aligned with instructional goals, promotes meaningful vocabulary use, and encourages active student engagement. The activities also showed the chance for learners to become more motivating and well-structured, while the assessment effectively supports retention and builds learner self-esteem. This justifies the implications that integrating WordCraft as a supplementary material can truly enhance vocabulary instruction through the purposeful learning instruction and effective way of developing positively on students' vocabulary skills. Furthermore, it suggests that the game-based approaches like WordCraft can be reliably used by educators or even the institution's top management to support both instruction and assessment in vocabulary enhancement.

Level of WordCraft (Vocabulary Games) as Supplementary Material in terms of Features

In this study, the level of WordCraft (Vocabulary Games) as Supplementary Materials in terms of features refers to Design, Usability, and Clarity.

The subsequent tables present the statements alongside with their corresponding mean and standard deviation, also stated with the remarks and verbal interpretations accompanied with the responses of the respondents/participants. Statistical measures used are also provided with a clear and organized summary of how the respondents perceived each indicator, allowing for a more systematic analysis and tabulation of the data. Furthermore, the integration of both descriptive values and verbal interpretations helps towards the understanding of overall trends and levels reflected in each response, thereby offering a deep, comprehensive view of the respondents' perspectives towards the context of study.

Table 5 presents the level of WordCraft (Vocabulary Games) as supplementary material in terms of features with regard to design.

Table 5. Level of WordCraft (Vocabulary Games) as Supplementary Materials in terms of Features with regard to Design

Statements	Mean	SD	Remarks
Identifies the necessary elements in the workbook.	4.11	0.82	Agree
Interprets the intended hierarchy and importance of information through font size and placement of elements.	4.10	0.81	Agree
Is aesthetically pleasing, which motivates one to continue playing and learning.	4.15	0.78	Agree
Facilitates quick mental analysis of the task by minimizing visual distractions.	4.06	0.83	Agree
Supports the ability to evaluate my own progress through clear visual cues.	4.09	0.85	Agree
Weighted Mean	4.10		
SD	0.81		
Verbal Interpretation	Acceptable		

Table 5 demonstrates that the level of WordCraft (Vocabulary Games) as a supplementary material in terms of design is acceptable, shown with a weighted mean of 4.10 (SD = 0.81). This indicates that students generally identify the visual and structural elements as effective and supportive of their learning progress. All indicators were rated as “Agree,” suggesting that the design features contribute positively to the students’ engagement and comprehension. Notably, the highest mean was obtained from the statement “Is aesthetically pleasing, which motivates one to continue playing and learning” (M = 4.15, SD = 0.78), highlighting its importance when it comes to visual appeal in sustaining the learners’ interest and motivation. Overall, the findings suggest that the workbook’s design not only improves the aesthetic value, but it also promotes a focused and structured learning set-ups, allowing learners to fully engage effectively with vocabulary tasks and interventions.

Table 6 presents the level of WordCraft (Vocabulary Games) as supplementary material in terms of features with regard to usability.

Table 6. Level of WordCraft (Vocabulary Games) as Supplementary Material in terms of Features with regard to Usability

Statements	Mean	SD	Remarks
Enables me to efficiently apply the knowledge I gain without technical barriers.	4.04	0.79	Agree
Simplifies the learning process, allowing one to focus on the content rather than the mechanics.	4.06	0.81	Agree
Allows me to create complex responses without fear of losing my work.	3.99	0.82	Agree
Differentiates between correctly and incorrectly entered answers through immediate feedback.	4.03	0.82	Agree
Promotes a state of flow that encourages sustained engagement and practice.	4.02	0.82	Agree
Weighted Mean	4.03		
SD	0.81		
Verbal Interpretation	Acceptable		

Table 6 shows that Usability is characterized by simplifying the learning process (M = 4.06) and removing technical barriers (M = 4.04). Students also appreciate the immediate feedback on answers (M = 4.03). The weighted mean of 4.03 suggests that the material is user-friendly, allowing students to maintain a “state of flow” during practice sessions.

This is relevant as Usability in terms of games that are user-friendly, accessible to learners of all skill levels, and responsive to repeated usage render better vocabulary results.

Table 7 presents the level of WordCraft (Vocabulary Games) as supplementary material in terms of features with regard to clarity.

Table 7. Level of WordCraft (Vocabulary Games) as Supplementary Material in terms of features with regard to Clarity

Statements	Mean	SD	Remarks
Ensures easy recall of the rules of the game after reading them once.	4.02	0.82	Agree
Summarizes the learning objective of any game without confusion.	4.09	0.81	Agree
Analyzes the meaning of a vocabulary word by providing clear, context-specific example sentences.	4.05	0.82	Agree
Evaluates the correctness of my answers against clear criteria.	4.02	0.82	Agree
Applies the learned vocabulary correctly in the context of the game.	4.08	0.80	Agree
Weighted Mean	4.05		
SD	0.81		
Verbal Interpretation	Acceptable		

Data shows that Clarity is achieved through clear learning objectives (M = 4.09) and the application of vocabulary within the game context (M = 4.08), as well as Rules are generally easy to recall after a single reading (M = 4.02). A weighted mean of 4.05 confirms that the instructions and examples are explicitly enough to prevent confusion during the conduct of the study.

In addition, the findings reveal that the clarity of WordCraft significantly supports students’ understanding of both the game mechanics and the vocabulary concepts being taught. Appropriate standards such as having clear instructions, well-constructed objectives, and context-based cases help minimize the learners’ confusion, enabling students to apply learnt vocabulary accurately and confidently. This further suggests that clarity in instructional material is pivotal for promoting effective comprehension and independent lifelong learning.

The overall findings indicated the WordCraft (Vocabulary Games) is deemed acceptable in terms of its features, including design, usability, and clarity. These features altogether create a supportive learning environment and mechanism that promotes sustained engagement, effective practice, and accurate application of students’ vocabulary skills. This implies that the well-designed, accessible, and clearly presented game-based learning materials, significantly enhance the effectiveness of vocabulary learning. Integrating such mentioned features in instructional materials lead to more improved student participation, greater learning experiences, and even meaningful vocabulary development in the long run.

Level of Students’ Engagement in Vocabulary Development

The present study looked into the level of Students’ Engagement in Vocabulary Development, such as it comprises the Cognitive Engagement, Behavioral Engagement, and Emotional Engagement.

The tables that follow shows the statement, mean, and standard deviation, remarks, and verbal interpretation from the purview of the study's respondents. Data presented below provide a clear summary of how each statement was perceived, allowing for far more systematic analysis and interpretation of the results.

Table 8 presents the level of students' engagement in vocabulary development in terms of cognitive engagement.

Table 8. Level of Students' Engagement in Vocabulary Development in terms of Cognitive Engagement

Statements	Mean	SD	Remarks
Processes the vocabulary meaning, not just guessing or memorizing.	4.03	0.83	Agree
Encourages me to make connections between new words and the words I already know.	4.00	0.82	Agree
Solves problems related to word usage and context.	4.02	0.80	Agree
Strategizes about the most effective way to learn and retain the words.	4.02	0.83	Agree
Keeps me sufficiently challenged to prevent boredom, but not so much as to cause frustration.	4.05	0.83	Agree
Weighted Mean	4.02		
SD	0.82		
Verbal Interpretation	Engaged		

The data indicates that the supplementary material effectively keeps students sufficiently challenged to refrain from boredom without causing frustration, which received the highest mean in the said category. The mean ($M = 4.05$) suggests an engaged level of WordCraft (Vocabulary Games) as supplementary materials in terms of Cognitive Engagement, supported by a standard deviation SD of 0.82, thus referring to it as Acceptable interpretation.

The Cognitive Engagement component also received a high weighted mean score of 4.02, interpreted simply that the WordCraft (Vocabulary Games) effectively stimulates students' mental processes or procedures, encouraging active problem-solving and strategic learning rather than mere rote memorization.

Moreover, the findings indicate that WordCraft (Vocabulary Games) promotes cognitive engagement by encouraging meaningful vocabulary processing rather than rote memorization. The level of challenge supports critical thinking, problem-solving, and higher-order thinking skills, suggesting that game-based materials enhance deeper learning and understanding. Thus, integrating cognitively engaging activities in vocabulary instruction may improve students' vocabulary retention and learning outcomes by fostering active processing, analysis, and application of knowledge.

Table 9 presents the level of students' engagement in vocabulary development in terms of behavioral engagement.

The data entails that the supplementary material is most effective when it comes to helping students spend enough time practicing vocabulary outside of class, which earned the highest mean in this aspect. The mean ($M = 4.02$) suggests an engaged level of WordCraft (Vocabulary Games) as supplementary material in terms of Behavioral Engagement,

supported by a standard deviation SD of 0.82. The Behavioral Engagement component achieved a fair weighted mean score of 3.96, interpreted as Engaged, indicating that WordCraft games truly and effectively convert interest into active participation, enhancing the persistence and time management for independent practice outside the classroom settings.

Table 9. Level of Students' Engagement in Vocabulary Development in terms of Behavioral Engagement

Statements	Mean	SD	Remarks
Helps me spend enough time practicing vocabulary outside of class.	4.02	0.82	Agree
Attempts challenging games or levels, even after making mistakes.	3.99	0.82	Agree
Manages time effectively during the game sessions.	4.00	0.82	Agree
Seeks out resources (like definitions or usage examples) when encountering difficulty.	3.89	0.84	Agree
Encourages consistent participation (e.g., I play the games several times a week).	3.92	0.81	Agree
Weighted Mean	3.96		
SD	0.82		
Verbal Interpretation	Engaged		

The results show that WordCraft effectively promotes behavioral engagement through encouraging students to actively practice vocabulary. Proving that the learners are willing to invest time, manage their learning activities, and repeatedly engage with the games, displaying sustained participation in vocabulary acquisition. This means that game-based learning tools may successfully translate student interest into consistent learning behavior and independent practice.

Table 10 presents the level of students' engagement in vocabulary development in terms of emotional engagement.

Table 10. Level of Students' Engagement in Vocabulary Development in terms of Emotional Engagement

Statements	Mean	SD	Remarks
Makes me feel excited or happy about learning new vocabulary.	4.03	0.86	Agree
Provides a sense of satisfaction or achievement when I complete a level or challenge.	4.06	0.83	Agree
Reduces my anxiety or fear related to vocabulary tests or quizzes.	4.02	0.84	Agree
Fosters a positive attitude toward the subject of English or language arts.	3.96	0.82	Agree
Makes me feel valued, within the game environment, as a learner.	3.99	0.81	Agree
Weighted Mean	4.01		
SD	0.83		
Verbal Interpretation	Engaged		

The data show that the supplementary material is most effective in providing students with a sense of satisfaction or achievement when completing a level or challenge, which earned the highest mean in this category ($M = 4.06$, $SD = 0.83$). This suggests a high level of WordCraft (Vocabulary Games) as supplementary materials in terms of Emotional Engagement. Additionally, students indicated that the activities make them feel excited or happy about learning new vocabulary ($M = 4.03$, $SD = 0.86$) and help reduce anxiety or fear related to vocabulary tests or quizzes ($M = 4.02$, $SD = 0.84$). Overall, the weighted mean ($M = 4.01$, $SD = 0.83$)

indicates that WordCraft strongly supports students' emotional engagement in vocabulary development.

The results of the study on this regard shows that WordCraft (Vocabulary Games) significantly enhances the students' emotional engagement in vocabulary learning as well, yielding high mean scores that reflect excitement, satisfaction, and reduced anxiety totally. Additionally, it promotes positive attitudes toward English and makes the learners feel valued. With a weighted mean of 4.01 (SD = 0.83), the tool is confined to create a supportive and motivating environment, boosting the students' confidence and emotional investment in vocabulary development, too.

In addition to this, the findings connote that WordCraft effectively strengthens students' emotional engagement making vocabulary learning more stimulating and motivating. The sense of achievement, reduced anxiety, and positive learning experiences by learners suggest that the game-based approach creates a supportive and encouraging environment for them. This indicates also that emotionally engaging instructional materials can further help improve students' attitudes toward learning the English language and increase their willingness to actively participate in vocabulary activities.

Level of Students' Performance in Vocabulary Development

The study looked into the level of Students' Performance in Vocabulary Development, as it was measured by mean and standard deviation.

The following tables consequently show the statement, mean, and standard deviation, remarks, and verbal interpretation depicted from the perspectives of respondents. Table 11 presents the level of students' performance in vocabulary development in terms of editorial writing.

Table 11. Level of Students' Performance in Vocabulary Development in terms of Editorial Writing

Score	Editorial Writing		Descriptive Equivalent
	f	%	
9 - 10	12	12.00	Outstanding
7 - 8	39	39.00	Very Satisfactory
5 - 6	33	33.00	Satisfactory
3 - 4	6	6.00	Fairly Satisfactory
1 - 2	10	10.00	Did Not Meet Expectation
Total	100	100.00	
Weighted Mean	6.28		
SD	2.17		
Verbal Interpretation	Satisfactory		

Table 11 discloses that students' performance in aspects of vocabulary development as per editorial writing is generally satisfactory, justified by a weighted mean score of 6.28 and a standard deviation of 2.17. The distribution of scores shows that most of the students fall within the Very Satisfactory (39%) and Satisfactory (33%) categories, yet a smaller proportion achieved Outstanding performance (12%). Unfortunately, there are still students who have performed at lower levels, with 10% failing to meet necessary expectations and 6% rated as fairly satisfactory.

Moreover, the findings suggest that while a considerable number of students demonstrate acceptable to high levels of

vocabulary application in writing, there remains noticeable variability in performance across learners. This variation indicates that some students are able to effectively use vocabulary in context, while others still struggle to consistently apply appropriate word choices in their written outputs. It further implies that vocabulary instruction is moderately effective in supporting learners' writing development; however, it may not yet be sufficient to fully address individual differences in learning needs. As such, there is a need for continued instructional support and differentiated activities to assist lower-performing students in improving their vocabulary use. At the same time, enrichment opportunities should also be provided to help higher-performing students further develop their writing proficiency and expand their lexical range.

Overall, these findings highlight the importance of strengthening vocabulary instruction to ensure more consistent and improved writing performance across all learners.

Table 12 presents the level of students' performance in vocabulary development in terms of editorial cartoons as per the material's assessment.

Table 12. Level of Students' Performance in Vocabulary Development in terms of Editorial Cartoons

Score	Editorial Cartoons		Descriptive Equivalent
	f	%	
9 - 10	15	15.00	Outstanding
7 - 8	44	44.00	Very Satisfactory
5 - 6	20	20.00	Satisfactory
3 - 4	9	9.00	Fairly Satisfactory
1 - 2	12	12.00	Did Not Meet Expectation
Total	100	100.00	
Weighted Mean	6.33		
SD	2.40		
Verbal Interpretation	Satisfactory		

Table 12 exhibits that the learners' performance in vocabulary development through the topic of editorial cartoons is generally satisfactory, evident with a weighted mean score of 6.33 and a standard deviation of 2.40. The results revealed that the most number in distribution of students are under the Very Satisfactory level (44%), followed by Satisfactory (20%) level, while a smaller group have achieved Outstanding performance (15%). On the other hand, 12% of the learners unfortunately did not meet the expectations and 9% were fairly satisfactory in the aspect of the learner's assessment.

The findings indicate that although most of the students demonstrate moderate to high ability when it comes to applying the vocabulary skills, with regards to interpreting and creating editorial cartoons, there was still however the number of learners in the lower-level categories. This suggests that the variability in mastery levels, although shown that many students are performing well, there were some still requiring additional support for the improvement of their vocabulary-based visual interpretation and expression skills.

Table 13 presents the level of students' performance in vocabulary development in terms of editorial cartoons and tools.

Table 13. Level of Students' Performance in Vocabulary Development in terms of Editorial Cartoons & Tools

Score	Editorial Cartoons & Tools		Descriptive Equivalent
	f	%	
9 - 10	17	17.00	Outstanding
7 - 8	48	48.00	Very Satisfactory
5 - 6	21	21.00	Satisfactory
3 - 4	3	3.00	Fairly Satisfactory
1 - 2	11	11.00	Did Not Meet Expectation
Total	100	100.00	
Weighted Mean	6.63		
SD	2.25		
Verbal Interpretation	Satisfactory		

Table 13 shows that students' performance in vocabulary development using editorial cartoons and tools is generally satisfactory, with a weighted mean of 6.63 and a standard deviation of 2.25. The results indicate that most students performed at the Very Satisfactory level (48%), followed by Satisfactory (21%), while a smaller proportion achieved Outstanding performance (17%). Meanwhile, 11% of the students did not meet expectations and 3% were fairly satisfactory.

The results reveal that the learners depict a generally acceptable level of vocabulary application upon utilizing editorial cartoons and tools, with a majority evidently showing moderate to high proficiency levels. Nevertheless, the presence of learners in the lower performance levels are implied to have differences in skills mastery, indicating that while the instructional approach is effective for many students, some still require the need to have additional support to fully develop their vocabulary-related analytical and expressive abilities, for the betterment of one's proficiency.

Table 14 presents the level of students' performance in vocabulary development in terms of evaluating editorials for evidence and quality.

Table 14. Level of Students' Performance in Vocabulary Development in terms of Evaluating Editorials for Evidence and Quality

Score	Evaluating Editorials for Evidence & Quality		Descriptive Equivalent
	f	%	
9 - 10	14	14.00	Outstanding
7 - 8	43	43.00	Very Satisfactory
5 - 6	24	24.00	Satisfactory
3 - 4	9	9.00	Fairly Satisfactory
1 - 2	10	10.00	Did Not Meet Expectation
Total	100	100.00	
Weighted Mean	6.47		
SD	2.32		
Verbal Interpretation	Satisfactory		

Table 14 also depicts that students' performance in vocabulary development in terms of evaluating editorials for evidence and quality from the assessment is generally satisfactory, with a weighted mean of 6.47 and a standard deviation of 2.32. The results revealed that most students fall under the Very Satisfactory level (43%), followed by Satisfactory (24%), whilst a smaller portion achieved

Outstanding performance (14%). But, 10% of the students did not meet expectations and 9% were fairly satisfactory in this aspect.

With such findings, it was derived that students demonstrate a moderate ability to critically evaluate editorials using appropriate vocabulary and reasoning, based on the assessment tool from the material. However, the distribution of scores suggests variability when it comes to the learners' critical and analytical skills, implying that although there were many students that are developing competence in evaluating textual evidence and quality, there were also some who still require further reinforcement to achieve higher levels of performance in this regard.

Table 15 presents the level of students' performance in vocabulary development in terms of identifying textual evidence and assessing quality.

Table 15. Level of Students' Performance in Vocabulary Development in terms of Identifying Textual Evidence and Assessing Quality

Score	Identifying Textual Evidence and Assessing Quality		Descriptive Equivalent
	f	%	
9 - 10	13	13.00	Outstanding
7 - 8	40	40.00	Very Satisfactory
5 - 6	28	28.00	Satisfactory
3 - 4	6	6.00	Fairly Satisfactory
1 - 2	13	13.00	Did Not Meet Expectation
Total	100	100.00	
Weighted Mean	6.25		
SD	2.23		
Verbal Interpretation	Satisfactory		

Table 15 shows that students' performance in vocabulary development in terms of identifying textual evidence and assessing quality is generally satisfactory as well, evident with a weighted mean of 6.25 and a standard deviation of 2.23. The results justify this whereas the largest proportion of students fall under the Very Satisfactory level (40%), followed by Satisfactory level (28%), while a smaller group achieved Outstanding performance (13%) level. Meanwhile, 13% of the students regrettably did not meet expectations and 6% were fairly satisfactory.

Furthermore, the results suggest that learners demonstrate a moderate level of competence in such a field, whereas the spread of results implies variability in the students' analytical and critical reading capacities, this indicates that while many learners are progressing well, some learners still need further support.

Table 16 presents the level of students' performance in vocabulary development in terms of prewriting opinion editorial.

Table 16 demonstrates the students' performance in vocabulary development in terms of their prewriting opinion editorial content is generally satisfactory, with a weighted mean of 6.34 and a standard deviation of 2.35. The results reveal that most of the students fall under the Very Satisfactory level (38%), followed by the Satisfactory (29%) level, while a smaller portion achieved Outstanding performance (16%) level. Meanwhile, 13% of the students did

not meet expectations and 4% were fairly satisfied with the evaluation.

Table 16. Level of Students' Performance in Vocabulary Development in terms of Prewriting Opinion Editorial

Score	Prewriting Opinion Editorial		Descriptive Equivalent
	f	%	
9 - 10	16	16.00	Outstanding
7 - 8	38	38.00	Very Satisfactory
5 - 6	29	29.00	Satisfactory
3 - 4	4	4.00	Fairly Satisfactory
1 - 2	13	13.00	Did Not Meet Expectation
Total	100	100.00	
Weighted Mean	6.34		
SD	2.35		
Verbal Interpretation	Satisfactory		

Additionally, the findings indicate that the learners demonstrate an adequate capability towards organization and expression of ideas in prewriting activities using appropriate vocabulary or wordings. However, the variation in scores suggests the differences in learners' readiness and skills pertaining to planning written outputs, this implies that while many students are progressing fairly, there are others that still need further support in developing stronger prewriting and vocabulary application skills.

Generally, the findings across Tables 12 to 16 imply that learners demonstrate a generally Satisfactory level out of all performance levels in vocabulary development, particularly in the fields or tasks involving editorial cartoons, analytical reading, and prewriting activities. Given this, majority of learners consistently fall within the Very Satisfactory to Satisfactory range, signifying that they are capable of applying vocabulary skills in various academic and creative materials, texts or activities, although a smaller group still struggles and falls below expected levels of success.

Significant Relationship between the WordCraft (Vocabulary Games) as Supplementary Materials and Students' Engagement in Vocabulary Development

To test the significant relationship between the WordCraft (Vocabulary Games) as supplementary materials and Students' Engagement in Vocabulary Development in terms of Cognitive Engagement, Behavioral Engagement, and Emotional Engagement, they were treated statistically using Real Statistics Data Analysis Tools using the Pearson Product-Moment Correlation Coefficient. This statistical method was employed to determine the strength and direction of the relationship between the variables and to establish whether the observed associations were statistically significant. Through this process, the study was able to examine how the use of WordCraft is related to different dimensions of student engagement, providing a clearer and more objective interpretation of the data. Furthermore, the use of a standardized statistical tool ensured accuracy, reliability, and consistency in the analysis of results, thereby strengthening the validity of the findings.

Consequently, to determine the strength and direction of the relationship, the computed correlation coefficients were compared against the established level of significance. This comparison allowed the researchers to identify whether the relationships observed among the variables were statistically significant or occurred by chance. The analysis further provided clear evidence on the extent to which the use of WordCraft as a supplementary material is associated with variations in students' cognitive, behavioral, and emotional engagement. In addition, it helped establish whether increases or decreases in engagement levels correspond with the use of the vocabulary games across different dimensions. Through this process, the study was able to provide a more objective basis for interpreting the interaction between instructional materials and student engagement outcomes. Moreover, the results served as a basis for determining the effectiveness of WordCraft in promoting active participation and meaningful learning experiences among Grade 8 students.

Table 17 presents the significant relationship between the WordCraft (Vocabulary Games) as a supplementary material and the students' engagement in vocabulary development.

Table 17. Significant Relationship between the WordCraft (Vocabulary Games) as Supplementary Material and the Students' Engagement in Vocabulary Development

WordCraft (Vocabulary Games)		Cognitive Engagement	Behavioral Engagement	Emotional Engagement
Learning Objectives	Pearson Correlation	.906**	.785**	.757**
	Sig. (2-tailed)	.000	.000	.000
	N	100	100	100
Content	Pearson Correlation	.727**	.630**	.622*
	Sig. (2-tailed)	.000	.000	.000
	N	100	100	100
Activity (Vocabulary Games)	Pearson Correlation	.794*	.720**	.699*
	Sig. (2-tailed)	.000	.000	.000
	N	100	100	100
Assessment	Pearson Correlation	.737**	.643**	.641*
	Sig. (2-tailed)	.000	.000	.000
	N	100	100	100
Design	Pearson Correlation	.956**	.838**	.821**
	Sig. (2-tailed)	.000	.000	.000
	N	100	100	100
Usability	Pearson Correlation	.942	.871*	.839
	Sig. (2-tailed)	.000	.000	.000
	N	100	100	100
Clarity	Pearson Correlation	.906**	.820**	.817**
	Sig. (2-tailed)	.000	.000	.000
	N	100	100	100

p-value < 0.05

The Learning Objectives of the game show an exceptionally strong positive relationship with all forms of

engagement, most notably Cognitive Engagement ($r = .906$, $p = .001$). This evidently shows that when the learning goals are clearly defined, students are reflected to be significantly more mentally invested in the task handed to them. The correlations with Behavioral ($r = .785$) and Emotional ($r = .757$) engagement are also statistically significant ($p < .05$), suggesting that the well-articulated objectives help drive both the learners' active participation and positive feelings toward the tasks at hand.

The Content variable maintains also a high and statistically significant correlation across all engagement aspects. It has a strong link between Cognitive Engagement ($r = 0.727$, $p = 0.003$), Behavioral Engagement ($r = 0.630$, $p < .001$), and Emotional Engagement ($r = 0.622$, $p = 0.006$). Tabulated data suggests that the actual vocabulary and material within the game are properly suited to the learners' level and needs, effectively sustaining their attention and effort while fostering a moderately high level of emotional connection to the context of WordCraft (Vocabulary Games).

The Activity itself, encompassing the mechanics and gameplay of WordCraft, demonstrated a strong positive correlation with the Cognitive ($r = .794$) and Behavioral ($r = .720$) engagement, respectively. Interestingly enough, while the correlation with Emotional Engagement ($r = .699$) is also strong, its significance level ($p = .039$) is closer to the alpha boundary or limit than the others have shown. Overall, the data connotes that the game activities are highly effective at keeping the learners physically active and mentally focused, although the emotional impact is slightly less uniform across the group and categories.

The Assessment component also shows the significant positive correlations across the table shown, particularly with Cognitive Engagement ($r = .737$, $p = .024$) and Behavioral Engagement ($r = .643$, $p = .004$) aspects. The R-value of .641 for Emotional Engagement indicates that the students feel far more emotionally connected to the supplementary material when they receive feedback or comments. The data also suggest that the evaluation methods used in WordCraft (Vocabulary Games) are valid inhibitors for student effort and critical thinking skills.

The Design of the game, composed of visuals, layout, and structure, holds the strongest correlations in the entire table stated, specifically with the Cognitive Engagement ($r = .956$, $p < .001$). This near-perfect correlation suggests that the aesthetic and structural design of the material is paramount onto how much mental effort students exhibit. It also correlates very strongly with one's Behavioral ($r = .838$) and Emotional ($r = .821$) engagement, proving that a well-designed material is a primary stimulus for overall student immersion and engagement.

Usability factor results present a rather unique case, while the correlation coefficients are very high ($r = .942$ for Cognitive and $r = .871$ for Behavioral), the Significance (2-tailed) values for Cognitive ($p = .439$) and Emotional ($p = .355$) are greater than .05 value. This means that while there is a mathematical trend, the relationship is unfortunately not statistically significant for those two categories in the specific sample ($N = 99$) utilized. However, it is statistically significant

for Behavioral Engagement ($p = .046$), implying that the ease of use solely impacts how much the students actually "do" or interact with the supplementary material.

Similar to Usability factor, Clarity also shows high correlation values but lacks the statistical significance necessary in two areas. It is strongly and significantly tied to Behavioral Engagement ($r = .820$, $p = .025$), meaning that clear instructions directly lead to more active involvement. However, the relationships with Cognitive ($p = .221$) and Emotional ($p = .092$) engagement are not statistically significant at the standard .05 level. This indicates that all the while clarity is essential for students to know how to play, it may not be just the primary factor that drives their deep thinking or stimulating their emotional enjoyment.

A significant positive correlation was then observed between the components of WordCraft (Vocabulary Games) as supplementary materials and Students' Engagement in Vocabulary Development, indicating that components tended to have achieved higher scores ($r(99) p < .05$, $N = 100$). This means that increased components of the WordCraft (Vocabulary Games) as supplementary materials are interconnected with better Students' Engagement in Vocabulary Development.

Since learning through games can sometimes be perceived as repetitive tasks or chores, the initial augment in engagement brought about by clear intentions often fades over time as learners become more accustomed to the activity and its mechanics or systems. This decline in interest also suggests that sustained engagement cannot simply rely solely on entertainment value, but must rather instead be supported by the meaningful learning content and clear instructional purpose. Furthermore, it also highlights the importance of viewing digital games like WordCraft (Vocabulary Games) not merely as supplementary or optional tools, rather as integral components of the vocabulary learning process that directly contribute to one's development. In this way, the learner's educational value is emphasized alongside with their interactive features and content, ensuring that students remain to become more focused on learning outcomes rather than just a simple gameplay.

As a result, this perspective provides a clearer and more comprehensive understanding and analysis of the role of supplemental materials in the field of vocabulary learning, reinforcing the idea that their effectiveness depends truly on how well they are integrated into instructional goals and sustained learning encounters.

Significant Effect of WordCraft (Vocabulary Games) as Supplementary Material on the Students' Performance in Vocabulary Development

To determine the significant effect of WordCraft (Vocabulary Games) as a supplementary material on students' performance in vocabulary development, the collected data were statistically analyzed using Real Statistics Data Analysis Tools, specifically employing the Pearson Product-Moment Correlation Coefficient. This statistical technique was used to measure the strength and direction of the relationship between the variables involved, particularly between the use of

WordCraft and students' vocabulary performance outcomes. Through this method, the study was able to identify whether improvements in vocabulary performance were associated with the integration of the vocabulary games as a supplementary learning material. In addition, the use of this tool ensured that the analysis was conducted in a systematic, objective, and quantitative manner, minimizing bias in the interpretation of results. Ultimately, this approach provided a more accurate and reliable basis for evaluating the effectiveness of WordCraft in enhancing students' vocabulary development.

Table 18 presents the significant effect of WordCraft (Vocabulary Games) as supplementary material on the students' performance in vocabulary development.

Table 18. Significant Effect of WordCraft (Vocabulary Games) as Supplementary Material on the Students' Performance in Vocabulary Development

WordCraft Games	(Vocabulary Games)	EW	EC	ECT	Evaluating Editorials for Evidence & Quality	Identifying Textual Evidence & Assessing Quality
Learning Objectives	t-stats	1.043	-0.761	0.059	-0.650	-0.548
	Sig. (2-tailed)	0.299	0.449	0.953	0.517	0.585
	N	100	100	100	100	100
Content	t-stats	1.117	-0.058	0.324	0.182	-0.757
	Sig. (2-tailed)	0.267	0.954	0.746	0.856	0.451
	N	100	100	100	100	100
Activity (Vocabulary Games)	t-stats	0.947	-0.502	-0.094	-0.589	-1.378
	Sig. (2-tailed)	0.346	0.617	0.925	0.557	0.171
	N	100	100	100	100	100
Assessment	t-stats	0.576	-0.429	0.005	-0.580	-1.340
	Sig. (2-tailed)	0.566	0.669	0.996	0.563	0.183
	N	100	100	100	100	100
Design	t-stats	1.271	-0.577	0.256	-0.691	-0.334
	Sig. (2-tailed)	0.207	0.565	0.799	0.491	0.739
	N	100	100	100	100	100
Usability	t-stats	0.778	-0.852	0.554	-0.929	-0.308
	Sig. (2-tailed)	0.438	0.396	0.581	0.355	0.758
	N	100	100	100	100	100
Clarity	t-stats	0.711	-0.693	0.326	-0.605	-0.533
	Sig. (2-tailed)	0.479	0.490	0.745	0.547	0.595
	N	100	100	100	100	100

Constant=1.98

The Learning Objectives of WordCraft show a positive but statistically non-significant relationship with all forms of engagement, as reflected in the t-values for Cognitive Engagement ($t = 1.043, p = 0.299$), Behavioral Engagement ($t = -0.761, p = 0.449$), and Emotional Engagement ($t = 0.059, p = 0.953$). This denotes that while clearly defined learning objectives may actually contribute to students' mental

diligence, participation, and affective responses during learning, the relationships do not actually reach statistical significance, suggesting the variability on how learners respond to the instructional goals within the vocabulary learning environment.

In terms of the Content component, it likewise demonstrates positive but not significant relationships were shown across engagement domains, evaluated as Cognitive Engagement ($t = 1.117, p = 0.267$), Behavioral Engagement ($t = -0.058, p = 0.954$), and Emotional Engagement ($t = 0.324, p = 0.746$). These results evidently show that although the vocabulary content and learning materials are being perceived positively, their direct influence on their engagement is not statistically strong within the sample used, suggesting that other mediating factors may greatly shape how students interact with the content.

Similar to this, the Activity component of the material shows consistent but non-significant relationships with engagement as well, as shown with Cognitive Engagement ($t = 0.947, p = 0.346$), Behavioral Engagement ($t = -0.502, p = 0.617$), and Emotional Engagement ($t = -0.094, p = 0.925$). This also suggests that while the game mechanics and tasks may actually encourage participation and cognitive processing at a certain descriptive level, their statistical effect and relationship on engagement still remains limited, possibly due to differences in learner preferences or familiarity with vocabulary game-based learning.

As pertaining to Assessment component, it is also reflected as non-significant relationships across all engagement variables, as seen in the Cognitive Engagement ($t = 0.576, p = 0.566$), Behavioral Engagement ($t = -0.429, p = 0.669$), and Emotional Engagement ($t = 0.005, p = 0.996$). This carries that although feedback and evaluation features are actually present within the material being investigated, they do not significantly have a relationship or effect on students' engagement levels in a measurable way implied, suggesting that the need for more impactful or interactive assessment mechanisms within the material must be looked at further.

In terms of the material's Design, the results show also a positive but then again non-significant relationships with Cognitive Engagement ($t = 1.271, p = 0.207$), Behavioral Engagement ($t = -0.577, p = 0.565$), and Emotional Engagement ($t = 0.256, p = 0.799$). This entails that while visual appeal and structural organization may actually enhance user utilization, they do not significantly determine the level of student engagement statistically in this regard, despite their importance in facilitating usability and learning systems.

The Usability component of the material similarly presents a non-significant relationship across engagement domains, including Cognitive Engagement ($t = 0.778, p = 0.438$), Behavioral Engagement ($t = -0.852, p = 0.396$), and Emotional Engagement ($t = 0.554, p = 0.581$). Also, this suggests that although the ease of use is important for navigating the material, data showed that it does not significantly relate on how deeply students engage cognitively, behaviorally or emotionally with vocabulary tasks at hand.

Likewise, Clarity shows a weak and non-significant relationships numerical data with Cognitive Engagement ($t =$

0.711, $p = 0.479$), Behavioral Engagement ($t = -0.693$, $p = 0.490$), and Emotional Engagement ($t = 0.326$, $p = 0.745$) upon interpretation. Findings foretell that while clear instructions are essential for learners understanding vocabulary mechanics, they simply are not alone sufficient to be significantly driven in terms of engagement outcomes. In summary, the results of the tabulated data suggest that while all components of WordCraft (Vocabulary Games) exhibit the positive directional relationships with students' engagement in vocabulary development, not one of the variables' relationships are statistically significant, considering at the .05 level. This implies the engagement may be influenced by a number of factors beyond individual components mentioned in the study. Hence, findings emphasize that WordCraft should be viewed not only as an interactive tool but as a pedagogical intervention whose effectiveness depends on its integration into structured learning and the sustained instructional strategies that strikes a balance engagement with academic austerity.

IV. CONCLUSION AND RECOMMENDATIONS

The analysis revealed a significant relationship between WordCraft (Vocabulary Games) and students' engagement in vocabulary development. The results of the study indicated a strong positive correlation between the cognitive, behavioral, and emotional engagements relative to the components and features of the WordCraft (Vocabulary Games), particularly in the aspects of learning objectives, content, activities, and assessment. Therefore, the null hypothesis claiming that WordCraft has no significant relationship with students' engagement in vocabulary development is hereby rejected.

Consequently, findings of the same research indicate that WordCraft (Vocabulary Games) does not have a significant effect on the learners' cognitive, behavioral, and emotional engagements towards vocabulary development. Regardless of the well-designed and focused activities, it was shown that variations in student engagement were not significantly influenced by the supplementary material as it is. Therefore, the null hypothesis stating that WordCraft has no significant effect on students' engagement, is hereby accepted.

In light of the study's results and the conclusion reached, the following are suggested:

Students may participate in activities such as interactive word games, vocabulary challenges, and group word tasks.

Maintaining a portfolio of completed activities can help students monitor their progress. Extensive reading, contextual practice, and peer collaboration can further enhance their vocabulary mastery and application.

Schools may recommended to establish a structured system for feedback and monitoring to effectively track the implementation of WordCraft, students' progress, and the utilization of learning resources. This may include conducting regular classrooms observations, administering student surveys, and reviewing learner portfolios to gather meaningful data. Furthermore, investing in well-equipped learning environments and accessible digital resources can significantly strengthen the delivery and sustainability of supplementary vocabulary programs.

Teachers may use explicit and scaffolded vocabulary instruction such as modeled examples, guided practice, peer discussion, and timely feedback. Since WordCraft improved performance but not necessarily engagement, they should also integrate multimodal activities, mini-lessons, and targeted drills to strengthen understanding and participation. Continuous training and professional development in innovative vocabulary strategies are likewise recommended.

School Administrators may recommended to review policies and strengthen the support for the implementation of supplementary vocabulary programs. Curriculum guides, learning materials, and implementation protocols should be standardized, and monitoring and technical support should be provided to schools adopting programs like WordCraft.

Future researchers may further explore the use of WordCraft (Vocabulary Games) in different grade levels and learning contexts to validate its effectiveness in vocabulary development. In addition, future studies may examine other influencing factors, such as learner motivation, to better understand game-based learning outcomes.

REFERENCE

- [1]. Kim, M., Crossley, S. A., & Kim, B. K. (2022). Second language reading and writing in relation to first language, vocabulary knowledge, and learning backgrounds. *International Journal of Bilingual Education and Bilingualism*, 25(6), 1992-2005. <https://doi.org/10.1080/13670050.2020.1838434>
- [2]. Vaghela, V. S., & Parsana, F. (2024). Teaching and Learning: Fostering Student Engagement, Critical Thinking, and Lifelong Learning Skills. *Educational Administration: Theory and Practice*, 30(6 (S)), 66-73. [https://doi.org/10.53555/kuey.v30i6\(S\).5324](https://doi.org/10.53555/kuey.v30i6(S).5324)