



#FINDINGDAHL: Proposed Game-Based Learning Material Using Roald Dahl's Books

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ABSTRACT

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Researchers are increasingly seeking innovative strategies for effective knowledge transmission through instructional materials, and one recommended approach is the gamification of lessons and activities that provide students with opportunities to be more active vocabulary builders. The gap being addressed through gamified materials is the deterioration in students' comprehension and vocabulary. The Likert Scale was used to evaluate the effectiveness of an advanced word search puzzle in enhancing students' comprehension and retention of story

elements, as well as improving their word recognition and vocabulary skills. The results show that the students agreed that the word search puzzle helped them remember significant aspects of the literary piece used, with the highest mean of 3.51, as well as expand and recognize their vocabulary, with calculated means



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ranging from 3.51 to 3.58. The findings affirm that gamified learning materials, such as advanced word search puzzles, are effective in supporting reading comprehension and promoting vocabulary development among learners.

INTRODUCTION

Education is crucial for developing the cognitive abilities needed to adapt to the gradual changes in society and international relations. However, in today's world, students often lack enthusiasm when they enter school, where different strategies are presented. Some of these strategies may not apply to students' study habits or learning methods, which, in turn, influence their academic performance. Interest is a factor in students' learning that greatly affects the learning process and the motivations applied in the teaching-learning process. Just as important as learning is the process itself, which must also be taken into account to ensure continuity in students' learning and development. English is one of the subjects commonly taught in schools, and it is an essential course as it develops students' communication skills and global awareness. To provide the most appropriate teaching and learning techniques, English teachers innovate their teaching. The rapid advancement of technology, as reflected in educational materials, is highly prominent nowadays, and teachers are required to use improved tools to enhance their teaching strategies and effectively deliver lessons to their students. Teachers have shifted from traditional materials to digital tools and instructional media to more easily capture students' attention in class and support English learning. This aids students in successfully acquiring the lesson. One of the difficulties in the teaching process is that students lack motivation to read and enthusiasm to learn and master the subject, leading to missed opportunities for students to display their best abilities to meet the competency standards required for their level (Darmayanti, 2021). Students find it worrisome to read such long narratives and analyze them afterward, especially when the language is unfamiliar.

According to Geronimo (2024), as cited by the Philippine Institute for Development Studies (PIDS), the Philippines ranked among the lowest in reading, math, and science. This is a clear gap in the study, which future outputs will help address by fostering students' interest in literature and modernizing instructional materials. Its average was quite disappointing, as it was expected to be gleaned as "educated" based on the expected results; instead, the results showed that English standards in the country are slowly degrading. Studies are compelled to innovate new strategies for the effective transmission of knowledge for instructional materials. According to Rasinski and Rupley (2019), an initiative recommended by institutions is the gamification of lessons, which gives students a chance to be

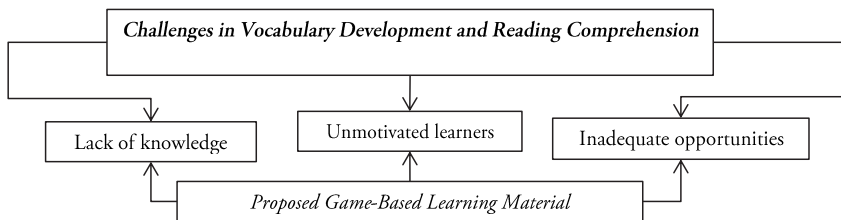
more active vocabulary builders and engage in learning. This sustains learners' interest, helping them develop a delight in participating in class. Several studies have demonstrated that games and puzzles are effective tools for teaching English, especially for improving vocabulary and reading comprehension. Word searches aligned with educational materials help students improve their vocabulary mastery, for both high- and low-interest students. The importance of considering such possibilities is that students will feel more at ease if they learn through an interactive teaching strategy rather than the passive method, where they only listen to the teacher speaking in front, without meaningful interaction between the learner and the teacher. Hence, what the students need is a foundation for developing their skills in English through a gamified learning resource.

Students generally lack development in English because it is not fully aligned with their interests, and some words are not part of their native vocabulary. In the study by Liswaniso and Pretorius (2025), the key to improving reading comprehension and vocabulary is to choose a literary work that captures the student's attention and is highly relevant to real-life situations. Meaning, the more words that a learner knows, the better their comprehension becomes. It may be difficult for most teachers to motivate students to participate in discussions; hence, there is a need to improve the instructional materials teachers use. The reason for using Dahl's books for the output is that Roald Dahl's works serve as a source of empowerment, according to Yu (2008), especially for young readers, who can be introduced to discoveries about the adult world and construct interpretations. The incorporation of humor mirrors the perspective of children, in which everything may seem funny to them while they are also learning. Some of the learning that children can gain from reading Dahl's works is that the stories help readers understand the proper application of English grammar rules and expand their vocabulary. As of today, the students' mastery of English still needs improvement in comprehension and understanding, especially in literature. Students have a hard time memorizing important terms and understanding the message of the literary work given by their teacher. Usually, students complain about words and terminology that are hard to understand, which makes the literary piece they are reading uninteresting or irrelevant to them. Hence, the study aims to produce an output that can stimulate analysis and critical thinking skills among learners by generating an advanced word search to enhance gamified learning resources that students can enjoy and learn from simultaneously.

FRAMEWORK

Figure 1

Conceptual Framework on Challenges in Vocabulary Development



The challenges in vocabulary development and reading comprehension stem from students’ lack of essential vocabulary knowledge, which makes the learning process static and dull. Moreover, the lesson is considered dull because the teaching methods are poorly implemented and fail to meet learners’ needs. Finally, it highlights inadequate learning opportunities for students due to outdated media content, which makes vocabulary learning boring (Amalia et al., 2023). The provided intervention in the paradigm for the first challenge is that games must be embedded in the teaching materials to create an effective environment that uses entertainment to foster a positive attitude, encouraging students to participate in a more amicable, more interesting classroom atmosphere while learning vocabulary. Hence, the lectures require students’ enjoyment and engagement, with the content being intelligible. To do that, the learning materials must be aligned with students’ needs and interests to reduce the tendency for learners to feel confined in a depressing environment.

OBJECTIVES OF THE STUDY

The study aims to (1) identify the reading challenges of students and whether they currently face struggles in reading. Afterward, the (2) evaluation of the impact of the advanced puzzle on their reading comprehension and vocabulary development will be done. In applying the results of the analysis, (3) a modernized tool will be provided through an advanced word search. The respondents are students from the Junior High School Department of the University of Batangas, with grade levels ranging from Grades 7 to 10 under the Science High School Curriculum. Adopting a quantitative, descriptive-evaluative approach, the study used an activity-based assessment in which respondents interacted with the proposed material’s interface. Subsequently, a survey on the tool’s effectiveness serves as the primary data source for the analysis and interpretation. As the study explored a new method for learning materials, the modernized tool shall feature

an advanced word search using Roald Dahl's books as the trial reference, targeting improvements in learners' reading comprehension and vocabulary.

METHODOLOGY

The study used a quasi-experimental design, an instrument used by researchers to gather data on a specific group. It provided a deeper comprehension of the subject matter. It created an avenue for the researchers to directly engage with and observe a particular group to obtain more accurate data, which can be presented later in the findings and conclusions.

The validity and reliability were ensured through a thorough expert analysis. The survey responses were reviewed and assessed to determine how well the items in each section of the questionnaire measure the concept of the material's effectiveness. The results were then interpreted and summarized.

The research site was the University of Batangas Junior High School Department, one of the university's branches in the province, on Hilltop Road in Batangas City.

The participants were Junior High School students selected through quota sampling, a nonprobability sampling method. The total population of the Grade 7 to Grade 10 Science Classes in the Junior High School Department was 413. Of the 413 students, the researcher selected 60 to serve as respondents. The students who represented a particular grade level were the 15 students per year level whose Lexile level in the pre-test ranged from 820L and above. This aided in determining the total number of respondents that represented the whole population.

The survey is constructed using Google Forms as the medium for students to complete the questionnaire. For the website, an open-source platform, Google Sites, was used to build the interface. The puzzle is constructed using an open resource called Word Search Labs.

The research instrument for the study was an online questionnaire. After the questionnaire was constructed, it was proofread and verified before being distributed and entered into the online forms. The content was occasionally revised in line with the experts' advice to fully address the study's purpose. Thus, upon approval of the instrument, it was applied and used to gather data for the study.

A letter of approval was sent to the Principal of the Junior High School Department to ask for authorization regarding the process of collecting data from their students about their experiences with word search activities used as

instructional material. Upon the approval of the Principal and the instruction of the research adviser, the researcher distributed the link for the online questionnaire containing the letter of approval from the Principal, the background and purpose of the study, and the cover letter to conduct the survey. After collecting all the responses, the data gathered was evaluated and analyzed using statistical treatments to interpret the responses and produce a concluding idea for the overall result of the survey. The answers of the respondents were kept with utmost confidentiality and stored digitally through Google Forms. As soon as the study was validated and approved, the data gathered was disposed of digitally as well, wherein access for respondents was removed and all data gathered was deleted from all systems on Google Forms.

In compliance with the Data Privacy Act of 2012 (Republic Act 10173), respondents were required to answer honestly and represent the study population. Informed consent was obtained at the start of the online survey, with participants indicating their agreement to participate. Respondents were expected to provide truthful answers using sound judgment to ensure accurate data. Students who felt uncomfortable due to conflicts of interest could withdraw. The researcher ensured fair subject selection and prioritized informed consent before distributing the survey. Confidentiality was maintained, and responses were used solely for the study’s completion.

To ensure valid and accurate interpretation of the data, the researcher utilized the following statistical treatments. (1) Frequency Distribution to measure which response received the most answers from the data collected. This helped the researcher narrow the responses down to correctly interpret the results. Next is the (2) Ranking, using the Likert Scale. The numerical values 1 to 4 were indicated, along with their verbal interpretations. The ranking was done after the weighted mean of each item was computed. Third is the (3) Weighted Mean was used to display the average of a set of data regarding the effectiveness of an advanced word search as an instructional material. This is the set of data gathered, divided by the total number of data. It indicates students’ general responses to each statement in the table of questions. Lastly, the (4) Composite Mean is used to determine the general response of students to a set of questions.

Options	Values	Verbal Interpretation
4	3.50 - 4.00	Strongly Agree (SA)
3	2.50 - 3.49	Agree (A)
2	1.50 - 2.49	Disagree (D)
1	1.00 - 1.49	Strongly Disagree (SD)

RESULTS AND DISCUSSION

Table 1

Reading Challenges experienced by the students

Statements	Mean	SD	Interpretation
1. The presentation in the reading material affects my interest in reading.	2.80	0.89	A
2. The presentation of reading materials affects my motivation.	2.64	0.83	A
3. The reading materials contain little to no graphics.	2.24	0.80	D
4. The reading materials contain symbolism that are hard to understand.	2.22	0.95	D
5. The reading materials in discussions affect my speed in reading.	2.49	1.08	D
6. The reading materials in discussions are not that interactive.	2.04	0.82	D
7. The reading materials in discussions do not have game-based integration.	2.38	0.83	D
8. The reading materials in discussions do not have the incorporation of technology.	1.96	0.77	D
9. The reading materials make me lose focus in reading.	1.89	0.86	D
10. The words in some reading materials are hard to understand.	2.24	0.91	D
Reading Challenges	2.29	0.62	Disagree

Each statement corresponds to an item in the given questionnaire, and thorough analysis of the responses found that most students have faced reading challenges, including issues with the presentation of the reading materials and the presentation itself. With a total mean of 2.29 and 0.62 as the standard deviation, the overall interpretation for the first part of the survey is “Disagree”, meaning that the students have faced little to no challenges when it comes to reading. The majority of students disagreed with the statements, and two ranked highest. The statement regarding how the presentation in the reading materials affects students’ interest garnered a mean of 2.80 and a standard deviation of 0.89, indicating “Agree,” making it the highest-ranked item in the first section of the survey. “Presentation” in this statement refers to the content of the materials. This indicates that the students are more concerned with the content and mode of distribution of the reading materials, as it affects their interest and motivation

in reading, because regardless of the number of visuals that the material contains, the content is deemed as the focal point of the learning aid for students to acquire the knowledge they need for classroom discussions successfully.

Certain studies have shown that such factors affect students' interest in reading. For example, Filgona et al. (2020) emphasized that teachers should create an active learning environment that enhances students' sense of autonomy and competence, providing opportunities for self-directed learning. Supporting this view, several studies have shown that visual-based materials significantly boost students' reading interest and motivation. The technology-driven nature of modern education makes many materials accessible on online platforms where most learners spend considerable time. Teachers can leverage these opportunities to improve students' academic skills by understanding their preferences and incorporating this insight into their instructional strategies and classroom discussions. Supporting this, Sam (2024) emphasizes that motivation also affects students' performance in language learning, particularly when specific strategies are used consistently, as repeated exposure to topics can enhance their interest in the subject matter. To improve how reading materials are presented, Subhash and Cudney (2018) explain that interactive and play-based learning activities capture learners' attention and promote deeper understanding, as students are more motivated to complete their academic tasks when the learning materials are engaging and encouraging. This approach fosters greater student engagement and positively influences their learning abilities and competencies. Furthermore, Subhash and Cudney (2018) highlighted that gamification supports the achievement of specific learning objectives by incorporating puzzles within an educational framework, a method known as game-based learning, which has been shown to enhance student participation. Therefore, the way materials are presented is just as important as the content they contain.

On the other hand, the majority of students responded "Disagree" to items 3 through 10, with means ranging from 1.80 to 2.49 and standard deviations ranging from 0.77 to 1.08. This indicates that most respondents do not encounter significant difficulties when reading, suggesting that the essential components of effective reading materials are adequately present in the study aids they use during discussions and lessons. Based on the student's feedback, the current learning materials incorporate elements of game-based learning and technology, making the lessons more engaging and interactive. These features likely help maintain the student's attention and focus throughout the discussions. Additionally, the vocabulary used in these materials is accessible and easy to understand, further reducing any potential barriers to comprehension. Overall, this combination of well-designed content and interactive tools effectively supports students' reading

experience, enabling them to grasp concepts without unnecessary struggle.

Nowadays, with the advent of technology in learning, many students find it easy and enjoyable to learn something new through reading, even though it was deemed dull in earlier years of education. This is possible because earlier theorists considered technology a valuable tool for enhancing learning outcomes. When technology was neither as widespread nor as advanced as it is now, American psychologist Jerome Bruner envisioned using technological resources like documentaries for modeling and film loops with technicolor cartridge projectors to improve students' comprehension (Diallo, 2023). In other words, if the cycle continues in which students interact with materials that contain the basic elements of reading that pique their interest and motivation, the improvement in students' reading skills will be more pronounced in later stages of education.

Table 2

Effectiveness of the material on students' Reading Comprehension

Statements		Mean	SD	Interpretation
<i>The word search material...</i>				
1.	can increase student participation.	3.42	0.66	A
2.	helps in recalling previous knowledge.	3.33	0.64	A
3.	piques my reading and analytical skills.	3.40	0.65	A
4.	promotes contextual reading.	3.42	0.58	A
5.	promotes active and interactive reading.	3.47	0.66	A
6.	helps readers remember important details about the story.	3.51	0.63	SA
7.	improves my skills in scanning quickly for certain words.	3.40	0.58	A
8.	fosters better concentration in reading long texts.	3.42	0.62	A
9.	is a good method for capturing the interest of students.	3.38	0.65	A
10.	is instrumental to improve reading comprehension.	3.40	0.65	A
Reading Comprehension		3.42	0.53	Moderately Effective

Unlike the responses in the first table, the respondents in Table 2 agreed with every statement in the questionnaire. Notably, the highest mean score was 3.51 with a standard deviation of 0.63, and "Strongly Agree" for its verbal interpretation, which is the item that states how the learning material helps readers remember important details about the stories featured on the interactive

website. This suggests that the students find the game-based learning materials effective in enhancing their comprehension and retention of story elements. The positive feedback indicates that these materials not only support understanding but also engage students, making the learning process more enjoyable and meaningful, suggesting that incorporating game-based learning tools into classroom discussions can be highly beneficial. Such materials encourage active participation and foster interactive reading experiences, which are crucial for developing critical thinking and deeper engagement with the content. By making reading more dynamic and hands-on, these resources help students connect with the stories on a personal level, improving both their motivation and overall learning outcomes. Therefore, educators might consider integrating similar game-based approaches to enrich their teaching strategies and promote a more student-centered learning environment.

The item with the highest mean indicates that the word-search material on the interactive website helps readers remember important details in a story. Thus, the proposed learning material makes the learning process more engaging by fostering memory retention and promoting focus by highlighting the key elements of the texts. According to the fourth principle of Bruner's Discovery Learning Theory-Information Analysis and Interpretation (as cited by Pappas, 2021), game-based learning materials encourage learners to build upon their prior experiences and knowledge, engage their intuition and creativity, seek out new information, and uncover facts. It is important to note that the statement with the second-highest mean score of 3.47 and standard deviation of 0.66, resulting in a verbal interpretation of "Agree", aligns with Bruner's assertion that learning is not merely about absorbing information; rather, learners must actively search for answers to specific questions and construct their solutions. This highlights that incorporating games into learning materials effectively stimulates learners' interest in reading. To add, Chen and Hsu (2020) noted that mobile game-based learning offers students a unique and innovative experience, boosting their interest in the learning process and enhancing their participation and immersion. This demonstrates that game-based learning is an effective strategy for promoting a learner-centered approach to education. Furthermore, it emphasizes constructivist principles, where students actively engage in learning through game-based methods, thereby developing their interpretations of newly acquired knowledge. Following this active involvement, students reflect on the outcomes of these activities to assess what they have learned and achieved.

The lowest-ranking item, with a mean of 3.33, a standard deviation of 0.64, and a verbal interpretation of "Agree", states that the material helps recall previous knowledge. This refers to the ability to recall knowledge in general, particularly

known as “prior knowledge”. The result stems from the understanding that students have diverse reading preferences, meaning their familiarity with books varies by interest. This explains why the lowest-ranking item, also showed a high degree of variability in responses. The differences in students’ experiences make it challenging for some to relate the material to what they have previously learned, which can make it feel less relevant or harder to reference.

Reading is widely recognized as a versatile tool, especially when applied to reader-friendly, easy-to-understand stories. According to Tanto (2020), Roald Dahl incorporates humorous remarks in his works, making the reading experience highly enjoyable for his audience. As the story unfolds, the meanings and explanations of novel or unfamiliar words are provided in context, closely related to where they appear. Therefore, even though this strategy ranked lowest among others, students still find it valuable for helping them recall previously learned knowledge. Moreover, if the text base is not effectively organized and aligned with the content, the reader will have difficulty connecting the information in the book with what they already know (Smith et al., 2021). A text-base that lacks coherence results in weaker comprehension; for example, failing to distinguish between characters or to remember details indicates poor understanding, caused by an incoherent text-base. Overall, with a mean of 3.42 and a standard deviation of 0.53, the results indicate that the word search material is “Moderately Effective” in improving students’ reading comprehension.

Table 3
Effectiveness of the material on students' Vocabulary Development

Statements		Mean	SD	Verbal Interpretation
<i>The word search material...</i>				
1)	boosts cognitive skills.	3.47	0.66	Agree
2)	boosts vocabulary expansion.	3.53	0.59	Strongly Agree
3)	can be a tool for classroom discussions.	3.47	0.59	Agree
4)	encourages critical-thinking skills.	3.44	0.62	Agree
5)	helps improve the recognition of words.	3.58	0.62	Strongly Agree
6)	increases my current skills in vocabulary.	3.58	0.66	Strongly Agree
7)	is beneficial for vocabulary development.	3.51	0.73	Strongly Agree
8)	encourages readers to know words by its meaning.	3.44	0.55	Agree
9)	helps me recognize important words in the story.	3.53	0.66	Strongly Agree
10)	enhances motivation towards vocabulary development.	3.56	0.66	Strongly Agree
Vocabulary Development		3.51	0.52	Highly Effective

Each statement corresponds to an item in the given questionnaire, but with a different factor in the study: the effectiveness of the material on students' vocabulary development. The respondents agreed with every statement in the questionnaire; however, Table 3 shows more "Strongly Agree" responses. Statements 5 and 6, with the highest calculated means of 3.58 and 0.62, and 0.66, respectively, indicate that the word search material is "Highly Effective," as it helps them improve their word recognition and vocabulary skills. This result suggests that the game-based learning material is particularly effective in supporting students' vocabulary development. The positive feedback indicates that engaging with the word search not only reinforces word recognition but also broadens students' understanding of new words. Overall, these findings demonstrate that incorporating interactive, game-based tools can significantly enhance students' language skills, making learning both enjoyable and memorable.

The aforementioned methods in the learning process make it memorable and instrumental in capturing students' attention, thereby affecting their interest and motivation, both essential for effective language acquisition. With the gathered data, educators can, through games and interactive activities, create more conducive learning environments that reinforce vocabulary, comprehension, and

critical thinking by helping students connect what they observe to the books they read. According to Azim et al. (2020), students' retention of words significantly improves when they are learned in specific contexts, which also positively impacts their vocabulary development. Therefore, presenting words in varied contexts is crucial, as it helps embed them into learners' long-term memory (LTM), making reading an effective tool for enhancing students' vocabulary. The statement with the second-highest recorded mean of 3.56 indicates that the word-search material enhances students' motivation for vocabulary development. This aligns with the study by Amalia et al. (2023), which highlights the use of games in vocabulary learning materials. Their research indicates that games like Scrabble and word search puzzles help learners improve their vocabulary. As a teaching method, word searches encourage students to become more active participants in their learning. Therefore, games serve as valuable tools in the educational process, acting as a motivating factor to maintain students' interest in school.

On the other hand, the 4th and 8th statements gained a mean of 3.44 and standard deviation of 0.62 and 0.55, respectively are the statements that ranked the lowest in Table 3 with the verbal interpretation of "Agree", which indicates how the word search material encourages critical-thinking skills and how it encourages readers to know the words by their meaning. The lower scores indicate that students might not perceive the word search as a tool that challenges them to think critically or to engage with words beyond simply finding them. Therefore, although the material supports specific language skills, there may be room to improve the design of activities that also enhance comprehension and critical engagement with vocabulary.

Enhancing these aspects can help learners recognize words and understand meanings by using them carefully in different contexts. This approach supports well-rounded vocabulary development among learners by highlighting both surface-level knowledge and higher-order thinking skills. Despite being ranked the lowest, the learning material still shows that it is effective. This suggests that while the word search activity is helpful in other areas, such as word recognition and vocabulary building, it may be less effective at fostering deeper analytical thinking or helping students grasp the meanings behind the words. The study by Nagodavithana and Premarathne (2021) emphasizes the need to enhance students' language proficiency and their ability to understand stories through the use of context clues, a crucial skill for many language learners, which underscores the importance of vocabulary development in the learning process. Their research found that students utilized mobile devices to access multilingual dictionaries to better understand unfamiliar terms. Additionally, other studies have shown that words looked up in dictionaries during reading tend to be retained longer.

Nevertheless, the ranking does not affect the results, as the word search material is still deemed “Highly Effective” for students’ vocabulary development, with a total mean of 3.51 and a standard deviation of 0.52.

CONCLUSIONS

The findings and data gathered indicate that students face little to no challenges in reading; however, they have encountered particular challenges, namely the content and presentation of the reading materials, which affect their interest and motivation. In addition to the challenges, the results also led to the conclusion that the proposed material is effective in improving students’ reading comprehension and vocabulary. The findings highlight improvements in students’ reading comprehension and vocabulary development. The results suggest that integrating game-based learning into students’ class discussion materials can serve as a foundation for future implementation of game-based learning resources in education.

The students’ reading difficulties during the teaching and learning process mainly focus on the content included in the materials and the way it is delivered in class. The findings suggest that students place greater importance on both the material’s content and its presentation, which influences their motivation and interest in reading. Even with many visuals, it remains crucial to consider the presentation method to capture students’ attention and encourage them to engage with the resources independently. This approach helps students develop the ability to navigate self-paced reading and effectively gather the information needed for classroom discussions.

Regarding students’ reading comprehension, the proposed learning material helps recall specific details from the presented stories on the interactive website, which includes an advanced word search. The responses indicate that the tool was an effective medium for improving students’ understanding and memory of story components. Based on the fourth principle of Bruner’s Discovery Learning Theory, Information Analysis, and Interpretation, game-based learning resources motivate learners to expand on their existing knowledge and experiences, stimulate their intuition and creativity, actively search for new information, and discover new facts. This suggests that integrating game-based learning activities into classroom discussions can offer significant advantages.

On the other hand, the material was also instrumental for the students’ vocabulary development, as the context clues in the stories, as well as the advanced word search, helped them recognize important words and new meanings as they interacted with the stories and learning material. This was measured using the

questions in Tables 2 and 3, which assess the material's effectiveness based on students' experience browsing the website's interface. The use of technology to enhance students' cognitive abilities is prominent nowadays, as respondents are technologically driven. The population being less than a hundred, and the intellectual capacity of the respondents, must also be taken into consideration to accurately measure their competency and skills.

The study closely aligns with Bruner's principle by promoting active information analysis and interpretation, leading to deeper learning and critical thinking rather than passive memorization. With that said, the word search material can be incorporated into class discussions, and, through further analysis of students' field study observations, the gamified material is slowly being incorporated as a tool to motivate students to actively engage in reading. Observations showed students demonstrating enthusiasm during reading sessions by offering their own interpretations during recitations. The learning materials can also be customized to align with the lesson objectives, make reading more interesting and engaging for students, and promote active reading and critical thinking.

TRANSLATIONAL RESEARCH

The advanced word-search learning material can be used as an alternative to Scholastic Literacy Pro and as additional assessment material for the UB Learning Management System, which students are currently using to measure their academic growth in English subjects. Based on the results, the material is an effective means of enhancing students' academic engagement and improving their cognitive abilities, addressing gaps they have or may have. Furthermore, future researchers may identify additional challenges students encounter while reading and use the study's findings to further analyze the effectiveness of other learning materials and resources to improve learners' reading comprehension and vocabulary. Moreover, the interactive website can serve as a foundation for future researchers to develop new game-based learning approaches for students. Thus, future researchers must further explore these areas using other types of puzzles and examples from literary works as reference materials. Today, technology is evident; therefore, its use in learning materials should be expanded to other platforms beyond Kahoot and Quizziz. This will provide more avenues for students to interact with educational tools that cater to their interests and pique their curiosity. Thus, in addition to quiz-type applications and sites, game-based learning materials integrating word searches and puzzles must be considered as well.

Additionally, students can also use specific applications, not just to test their skills and prior knowledge, but also to create personalized study tools that cater to their individual learning styles or study habits. This will encourage learners to engage with different applications, giving them the independence to customize the material's elements so they can learn better and apply that knowledge to their school-related tasks, providing more avenues for self-learning and promoting learners' responsibility in discovering which learning method works best for them.

LITERATURE CITED

- Amalia, R., Latief, H., & Natsir, R. Y. (2023). Teachers' Challenges in Implementing Vocabulary Games in English Class for the Tenth Grade of. *Journal of Language Testing and Assessment*, 3(1), 51–57. <https://doi.org/10.56983/jlta.v3i1.312>
- Azim, M. U., Hussain, Z., Bhatti, A. M., & Iqbal, M. (2020). Recycling of vocabulary in English Language Teaching: From theory to practice. *Epistemology*, 7(1), 88-102. <https://www.journal.epistemology.pk/index.php/epistemology/article/view/119>
- Chen, Y., & Hsu, C. (2020). Self-regulated mobile game-based English learning in a virtual reality environment. *Computers & Education*, 154, 103910. <https://doi.org/10.1016/j.compedu.2020.103910>
- Darmayanti, N. P. E. (2021). The Effect of Visualized Reading Content on Students' Reading Motivation. *The Art of Teaching English as a Foreign Language (TATEFL)*, 2(2), 78-83. <https://doi.org/10.36663/tatefl.v2i2.120>
- Diallo, M. (2023). The Role and Impact of Technology on Students' Reading. *Online Submission*. <https://files.eric.ed.gov/fulltext/ED629176.pdf>
- Filgona, J., Sakiyo, J., Gwany, D. M., & Okoronka, A. U. (2020). Motivation in learning. *Asian Journal of Education and Social Studies*, 16–37. <https://doi.org/10.9734/ajess/2020/v10i430273>
- Geronimo, J. (2024). *PISA results mirror PH education's lost days, "grave crisis."* (2024, June 25). [Www.pids.gov.ph](https://www.pids.gov.ph). <https://www.pids.gov.ph/details/news/in-the-news/pisa-results-mirror-ph-education-s-lost-days-grave-crisis>

- Liswaniso, B. L., & Pretorius, E. (2025). Words matter – but how? A study of high school learners' vocabulary and reading comprehension. *Reading & Writing, 16*(1). <https://doi.org/10.4102/rw.v16i1.529>
- Nagodavithana, S., & Premarathne, K. (2021). A Study of Vocabulary Learning Strategies and their Effect on Vocabulary Development. *Journal of English Language Teaching and Applied Linguistics, 3*(2), 68–77. <https://doi.org/10.32996/jeltal.2021.3.2.7>
- Pappas, C. (2021). Instructional Design Models and Theories: The Discovery Learning Model. *eLearning Industry*. <https://elearningindustry.com/discovery-learning-model>
- Rasinski, T., & Rupley, W. (Eds.). (2019). *Vocabulary development*. MDPI. https://books.google.com.ph/books?hl=en&lr=&id=PvGSDwAAQBAJ&oi=fnd&pg=PR7&dq=vocabulary+development+theory&ots=EZMOy0rJSo&sig=o3us3luSa92lqEpLq0xXFCn3K1o&redir_esc=y
- Sam, R. (2024). Factors causes students low English language learning: A case study in the National University of Laos. *Available at SSRN 4850858*. <https://doi.org/10.2139/ssrn.4850858>
- Smith, R., Snow, P., Serry, T., & Hammond, L. (2021). The role of background knowledge in reading comprehension: A critical review. *Reading Psychology, 42*(3), 214-240. <https://doi.org/10.1080/02702711.2021.1888348>
- Subhash, S., & Cudney, E. A. (2018). Gamified learning in higher education: A systematic review of the literature. *Computers in human behavior, 87*, 192-206. <https://doi.org/10.1016/j.chb.2018.05.028>
- Tanto, T. (2020). Roald Dahl's ingenious language play in the use of figurative language. *International Journal of Humanity Studies (IJHS), 3*(2), 201-210. <https://e-journal.usd.ac.id/index.php/IJHS/article/view/2156>
- Yu, C. W. (2008). Power and its Mechanics in Children's Fiction: The Case of Roald Dahl. *International Research in Children's Literature, 1*(2), 155-167. <https://doi.org/10.3366/ircl.2008.0004>