

## Evaluating an educational device for vocabulary training in schools at Negros Occidental, Philippines

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**Abstract:** Vocabulary is vital to everyone, especially students. Vocabulary training serves as an avenue to help improve students' learning experiences. The paper aimed to design and evaluate an educational device to enhance learners' vocabulary. The study employed a descriptive-evaluative research design utilizing user engagement, educational effectiveness, user interface, motivational factors, and overall satisfaction. The device was introduced to different schools, including public and private schools, and State Universities and Colleges (SUCs) with four hundred thirty-nine (439) respondents. Data analysis involved mean and standard deviation, employing respondents' feedback on the acceptability of the device. The framework used input, process, output, and outcome (IPOO). The findings revealed that using the device, overall ratings ranged from "Very Good" to "Excellent," with State Universities and Public Schools consistently yielding the highest scores across all dimensions and variables. The device also rated "Very Engaging," "Very Effective," and "Very User-Friendly" in most contexts, and students' vocabulary improved. The educational device proves to be a valuable tool for vocabulary development, adaptable across educational stages from elementary to university. These results support its broader implementation and encourage teachers, especially in integrating gamified learning into regular instruction. Thus, students learned many unfamiliar words.

**Keywords:** Educational device, Instructional material, Vocabulary training, Vocabulary.

### 1. Introduction

With the effects of the pandemic (COVID-19) a few years ago on students' learning, the education sector captured the dilemma of how students learn, and it cannot be avoided or prevented and has gone a long way. Many students and teachers alike suffered from the catastrophe that hit the world. Teachers discovered that students find it hard to cope with many assignments posted online and in virtual classes, and there was a missing link between teachers' participation and availability in the formation and development of every learner. Thus, students were in dire need of face-to-face classes to keep them going.

COVID-19 affected the world, specifically in the education sector. Pinem and Rahmawan [1] found a strong desire for teachers to look into the most suitable method during the pandemic. This situation has become the central part of different studies and research. The schools provided mentoring opportunities in an asynchronous online class equipped with different instructional frameworks/platforms. Institutions and even schools supported them to combat the problems faced during the pandemic. It provided more interesting activities for students to self-study while staying in the safety of their homes. Moreover, their study looked at games, songs, and movies used as media to enhance students' achievement in English vocabulary.

English, dubbed as the universal language of science, established opportunities and challenges, especially for non-speakers of English [2]. Words may vary depending on their usage, origin, or beginnings. Each word has its beginning, definition, and spelling. Many words in different dictionaries, such as Oxford, American, Merriam Webster, and sources, are valuable and ready to be learned by any

learner. Students missed many activities, which led to their having difficulty in writing and pronouncing the words correctly. The teachers concerned were noticing this.

It is not easy to plan a creative learning environment, as Mee, et al. [3] mentioned. Teachers prefer to teach traditionally, like the chalk-and-talk approach during language teaching. However, it will not fit learners of the 21st Century as they enjoy game-like activities rather than pen-and-paper work. Curiosity with an enthusiasm to learn became an avenue to learn more; hence, introducing gamification in classroom activities resulted in learners' desire to enjoy and adapt to new ways of learning. Becoming responsible in their learning and gamification thus prepares them to participate more in class. Moreover, enjoyable games embedded in the lessons is considered an effective strategy to achieving positive learning outcomes, as learners are motivated to engage more actively—often without realizing that they are already acquiring new knowledge. Thus, revising learning materials or teaching techniques to suit the needs of the students [4].

In the recent findings of Del Rocío Fernández-Velásquez, et al. [5] in 2025, they affirmed that gamified educational tools, especially in student-centered approaches like flipped classrooms, can effectively boost learner satisfaction and academic performance. These results underscore the potential of gamification not only as a motivational strategy and a pedagogical innovation that promotes deeper learning and greater learner independence. The results indicate that the integration of gamification into educational environments—particularly within flipped classroom models—significantly enhances motivation, learner autonomy, and content retention.

The National Education Policy (NEP) [6] in 2020 supported the recent introduction of joyful learning, which created great interest among students; thus, the most suitable learning method predicted for learners in the 21st century. Additionally, game-based learning enhances education, making all educational games increasingly and becoming popular. Educational games enhance learning efficiency [7]. Noticeably, gamification has been put into practice in online teaching and learning. Gamification has become effective in students' education in the way they learn. Learning and teaching a new language are difficult and takes a long process. Thus, it gave priority to learners' motivation. Al-Dosakee and Ozdamli [8] revealed that gamification benefits teaching and learning languages, increasing learners' motivation with enjoyable learning experiences.

It is further posted in another study by Mee, et al. [9] that in the 21st-century generation of learners, teachers prioritize the students' fun and creative learning experiences. Gamification provides an avenue for fun and creativity inside the classroom. Fun games embedded in the lessons produce an outcome favorable to learners. It prepares them to become active and take responsibility as far as learning is concerned. Moreover, the results revealed that respondents had prior knowledge of the word gamification. The respondents agreed that their previous teachers implemented various games during gamified lessons. Students preferred to learn using gamified learning activities that helped them learn more.

Similarly, Mohamed, et al. [10] mentioned game-based learning, or GBL, as it potentially improves students' learning motivation. Likewise, students' Game-based learning, or GBL, is associated with higher mathematics performance, and GBL's strong relationship with CT may have an even larger effect. Moreover, game-based learning approaches are becoming known everywhere while facing this 21st-century generation. A developed variety of technologies existed. Aside from the education sector, popular games are innovated and introduced using media platforms, whether in training or online activities. Students were engaged using game-based activities to motivate them and become productive. Not just to play games per se but to establish learning activities that will lead them to achieve the goals needed to direct them to the lesson they need to learn. Additionally, the study of Ismaizam, et al. [11] revealed that most studies done by 21 researchers have remarkable results in a game-based learning approach. Students could absorb and apply or reflect on the knowledge they gained in a real-life situation.

Thus, in a 3-minute game done frequently, students' vocabulary will be enhanced based on the law of exercise. The more a person or student practices anything, the better he or she can retain that

knowledge. Further, it stated the most often repeated things are best remembered based on drill and practice. As mentioned in the laws of learning, the law of exercise emphasizes that repetition is essential to developing effective responses; the more frequently something is practiced, the more easily it is remembered. Studies proved that students learn best and retain information longer if they have repetitive and meaningful practices using the laws of learning and why games work [12, 13]. They joined and improved their skills in a fast-paced game. Thus, this educational device helped motivate students; their mental capacity was enhanced, and their interest in learning advanced through interacting with good material. Hence, the device was validated, evaluated, and utilized for students' learning to enhance their vocabulary.

If there is a silver lining that can help students turn the not-so-good experience during COVID into something better, this is what this research is all about. Something good was found in the dire situation that happened. Students learned, improved and developed their vocabulary. This device is an avenue to learning vocabulary with a heart.

Hence, the primary purpose of this study was to design, develop and evaluate an educational device for vocabulary training. Specifically, this study aimed to design and develop the educational device for vocabulary training; validate and evaluate the acceptability of the educational device in terms of user engagement, educational effectiveness, user interface, motivated factors, and overall satisfaction. Consequently, the researcher developed a user manual of the educational device for vocabulary training.

## 2. Literature Review

### 2.1. Vocabulary Learning (Game-Based)

Understanding English is much influenced by vocabulary, and this statement was mentioned in the study of Akdogan [14]. In general, vocabulary teaching and learning is a continuous challenge and a difficult task for teachers and students since the focus has been explicitly limited to vocabulary teaching in ESL classes. Institutions now aware that using games helps students learn and engage in the lesson. The students' interpersonal skills were enhanced and developed through vocabulary learning. They have the opportunity to speak in their language with confidence while doing the activity with their peers. The students' vocabulary was developed while enjoying the games, activities, and materials used, thus proving to be beneficial for teachers.

Specifically, Akdogan [14] designed to discover how to develop game materials with a question like, "How can we easily memorize vocabulary items, and how can we promote effective ways to learn English vocabulary in a relaxed manner?" The results revealed that the occurrence of memorization is improved with games included in the lesson, and may be an efficient way to encourage language acquisition. Moreover, games are fun activities that promote interaction, thinking, learning, and problem-solving strategies. These are effective avenues for students' learning and offer an environment where they can think and develop their ways of learning and even make decisions on their own. These combined thoughts and actions are behaviors with a purpose to accomplish a goal. Allowing the students to play games would help them to strategize, consider alternatives, and think flexibly.

Further, it is stipulated in the study of Akdogan [14] that games have a tremendous educational value and are helpful in the classroom to make learners refrain from thinking about different formulas rather than using the language. Games encouraged learners to interact, become participative, and creatively use the language in the best way possible and meaningful to the learners. Every learner desired to participate in every activity, especially to play games, and teachers could attest that many students wanted to be involved. However, they needed to appreciate and communicate the target language to understand each other, be understood, and practice language skills. Thus, games must be chosen well and provide the best design for learners' needs.

Teaching vocabulary is one of the vital parts of the English language class. Second language learners will be able to understand and express themselves. Aside from knowing and learning new words and knowing other words, it helped them improve their vocabulary acquisition, it motivated them, and they enjoyed learning. Likewise, the benefits of using games while learning vocabulary are

embedded in the lesson. Games are learner-centered and involve friendly competition. Nguyen [15] discovered that games reinforce the students' vocabulary development and are preferred over traditional ways of learning. Further, Hamadneh, et al. [16] offered valuable insights into the dynamic relationship between university students and gamified technology, highlighting its role in shaping positive student perceptions and fostering meaningful learning. Additionally, the research underscores the importance of gamification in literacy education and emphasizes the need for pedagogically sound game design to boost student engagement effectively.

Similarly, Klimova and Kacet [17] explored the efficacy of computer games on language learning and provided benefits and limitations for learning a foreign language. The study conducted a literature search of Scopus, Web Science, Springer and ScienceDirect databases to evaluate the findings of the pertinent studies. Findings revealed that computer games, specifically related to education, as posted in their study, use computer games inside the classroom, which has other benefits or positive effects, such as exposure to the target language, increased engagement, and enhanced communication involvement. Thus, Morozova [18] described the use of gamification elements to motivate students to learn a foreign language, specifically the German language, and that made it possible to organize a process and have interactive online classes, tests, and a scoring system to track the students' progress individually. English influences it as the first language.

## 2.2. Reading Proficiency

Bondaug [19] addressed the deteriorating reading proficiency of learners in the country and stated that Department of Education (DepEd) [20] yearned to strengthen the reading programs in schools, and teachers were encouraged to create materials to aid this kind of advocacy. Hence, her study developed an instructional material for specific learners' needs to enhance their reading comprehension. She developed a research-based instructional material integrating the principles of game-based learning. The materials focused on the teacher and learner-users. The material was effective based on the results, which showed an increasing level of comprehension among the learners. There was positive feedback from both teachers and learner-users. The material increased the learners' interest and made them participative and engaged in their reading classes.

In like manner, learning new words is the basis with the help of the teachers who happened to have their learning experiences during face-to-face classes. Students developed low study skills, they lacked interest in studying, their coping skills were unhealthy, and their social awareness was not processed well. The study of Rahiem [21] as cited in the study of Jereb, et al. [22] supported that the transition of working and studying from home, which took place quickly, caused numerous issues for the education sector, including higher education, with university students dealing with significant obstacles to their learning process. Thus, if the students are engaged in the learning dynamics and actively participate in the activities given, as observed by the teachers, activities become more attached, they become aware of their experiences, and learning will occur with the feeling that they belong. They are part of the learning process. Students were excited to learn while joining in the activities inside the classroom.

Studies revealed that there are activities that teaching and learning could help develop the vocabulary skills of the students. One good example is through games that would tickle the learner's minds of the learners and keep them alive. It stimulates and enhances their vocabulary skills enjoyably. Jassim and Dzakiria [23] affirmed that using games inside the classroom can foster vocabulary learning. Although there are some challenges and struggles in implementing games, they still have benefits that children gain and help educators use digital games for a purpose, especially in enhancing the English vocabulary. Game-based learning uses games to engage learners and help them gain new learnings with skills. It comprises elements like the rules to follow, challenges to dare, rewards to receive, and feedback to have interactive and memorable learning experiences.

Likewise, Bakhsh [24] noted that using games to teach vocabulary to young learners appears to be very helpful and challenging for teachers in teaching vocabulary inside the classroom. Students usually

get bored if the teacher uses the old traditional method and technique. Thus, this educational device for vocabulary training is beneficial to learners.

Another study indicate that gamification can have a positive impact on student motivation and engagement. However, the effectiveness of specific gamification elements may differ depending on the learning context and individual learner characteristics [25]. This result is further supported in the study of Derakhshan and Khatir [26] which stated that vocabulary acquisition is one of the most challenging segments for English language students of all ages. Educational games have been working well for teaching vocabulary. The study revealed that games, like vocabulary learning, enhance students' ability to memorize words, encourage interaction, improve communicative skills, and motivate students. Games can help the teachers create contexts in which the language and vocabulary are valuable and meaningful. Their study aimed and suggested game-based learning activities and techniques inside the classroom. The designed educational games attract enough attention from the learners and applied to classrooms through teaching and learning new vocabulary more effectively.

### *2.3. Vocabulary and Grammar*

The connection between vocabulary and grammar is interchangeable. To align with the agenda for sustainable development goals (SDGs) [27] every individual's main challenge and struggle, the Industrial Revolution 4.0, high-tech inventions were affluent. They paved the way in the educational sector, an allegiance to ensure that everyone can access quality education and lifelong learning opportunities. Notwithstanding the 21st-century protection, Asian learners are still lagging in ESL (English as a Second Language).

Grammar could hardly be triumphed over due to its complex nature. Thus, Hashim, et al. [28] investigated the effectiveness of online language games in improving ESL learners' grammar. Results revealed that learners' scores on the grammar post-test showed a significant increase.

In the same vein, national assessments show that the Philippines' quality of education is declining, as evidenced in the assessment results. The Philippines is falling behind international performance, as stated in OECD [29-32] the country's poor performance in the most recent Programme for International Student Assessment (PISA). PISA [33] scores by country in 2022 show that the Philippines' result is number 76 in reading.

Since face-to-face classes were now at their peak, better opportunities were coming. To combat the missed learning experiences of the students, the researcher desired to address the need of the students to learn more, especially in enhancing their vocabulary, in a fun and enjoyable way. Using the model provided, an educational device like forming words or a known word game ensures that learners eat, think, and imagine the words in just a few minutes. Students can have more fun and be more absorbed with increased excitement, yet it is easier to learn.

Research has proven that gamification or game-based learning activities help students learn. Few agreed that using Scrabble, Boggle, word enhancers, and other materials help augment students' learning. These were the prior arts that the researcher used to describe all of the information currently available that is more akin to the pristine patent's claims. It led and gave light to the researcher to enhance, update, and make the device more interesting to tickle the minds and hearts of the learners.

### *2.4. Conceptual Framework*

The study's conceptual framework served as a comprehensive guide that directed the development of an educational device for students' vocabulary training. It outlined the systematic process through which this research endeavor aimed to achieve its objective to initially develop a device and pave the way to utilize the same device to enhance students' interest and capability to expand their horizons, and extract possible new words, and utilize the model with a heart-shaped design to uplift the students' desire to learn with a heart. By providing a structured approach, this framework ensured a successful implementation of the study, offered a clear roadmap for forming words, and ensured that learners eat

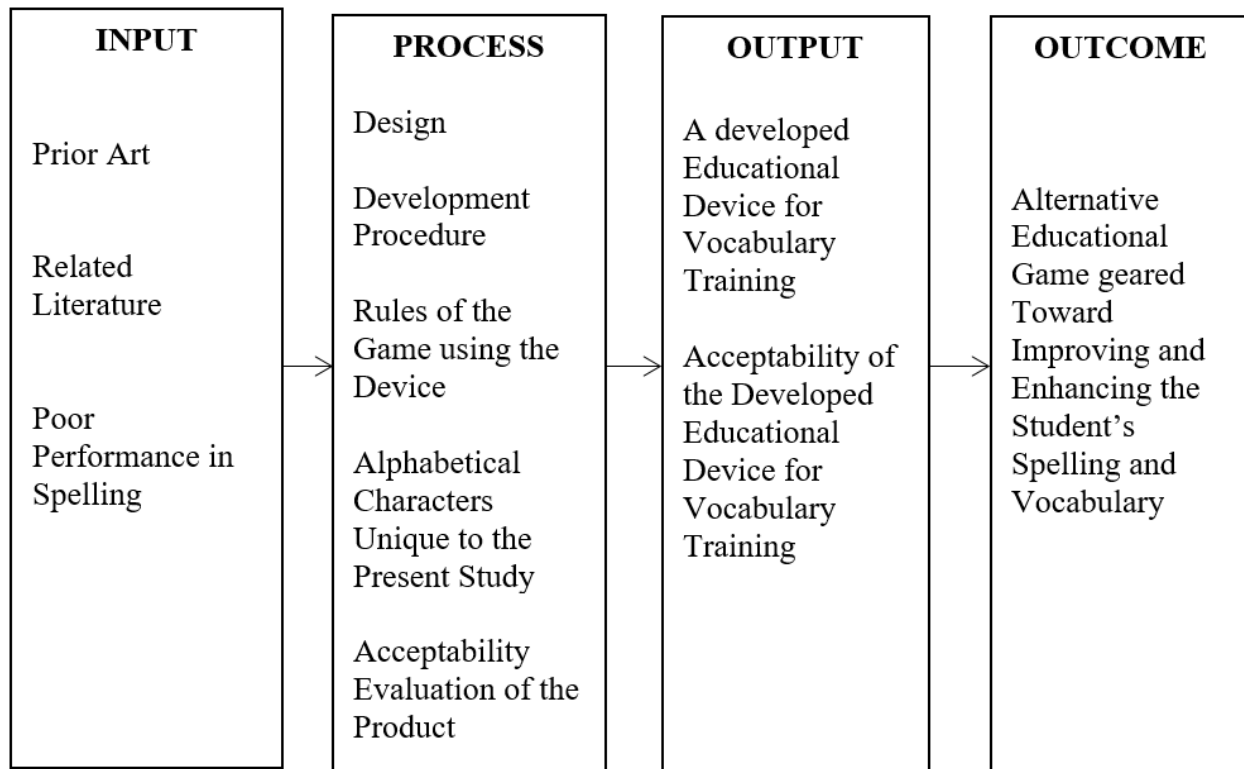
words, think words, and imagine the words in just a few minutes. Ensuring more fun and exciting yet easier learning with classmates or friends willing to join and improve their skills in a fast-paced game.

The INPUT in this framework comprises the prior arts, the related literature needed to upheave and support the study, and the poor performance in spelling as PISA[33] scores posted in 2018-2022. In the input, prior arts, including Scrabble, Boggle, Word Factory and Word Enhancer, gave light to the researcher to enhance these prior arts mentioned. Related literature supported the study, as mentioned in the several pieces of research conducted, that using games inside the classroom can foster vocabulary learning. Educational games are desired to attract enough learner's attention be applied to classrooms through teaching and learning new vocabulary more effectively.

The PROCESS involves a meticulously structured design created by the researcher with the help of the expert in designing the model. The procedure encompasses multiple rigorous steps to make the design appealing with quality and potential impact. Furthermore, a meticulous development procedure and a step-by-step process were followed to ensure the accuracy and quality of the model. The researcher provided the rules of the game for using the device in order to guide the students. Compared to the aforementioned prior art, the present device has a tweak with unique characters not included in any of the prior art mentioned. It differs in the alphabetical characters that are unique, the known consonant blends, to wit: bl, br, cl, cr, dr, fl, fr, gl, gr, pl, pr, sl, sp, st, str, tr, thr, and tw together with the letters from A-Z. It makes the device more interesting and allows the players or students to find more words using the device. Aside from the consonant blends, the researcher added "blest" which refers to a blank chip and any letter the learners desired to use to form a word. It also included the evaluation of the product's acceptability.

The OUTPUT of the study encompasses a comprehensive development of the educational device for vocabulary training. The research aimed to provide acceptability of the developed educational device for vocabulary training of the learners. Overall, the guide is a valuable source for learners in using the device to enhance the students' interest in learning more words and training their minds for better vocabulary.

Throughout the study, the IPOO model guides the research process, emphasizing the significance of the INPUT in the development stages, ultimately leading to the desired OUTCOME. The study's meticulous consideration of input from the prior arts and related studies resulted in developing the educational device for vocabulary training and its acceptability. It is an alternative educational game to improve and enhance the students' spelling and vocabulary. This guide offers detailed instructions for developing of the educational device for vocabulary training as far as students are concerned, which serves as a valuable resource for their quest to enhance their vocabulary.



**Figure 1.**  
Schematic Diagram illustrating the Framework of the Study.

The figure above represents the study's conceptual framework, following the Input-Process-Output-Outcomes (IPOO) model. This framework outlines the systematic approach to developing the educational device for vocabulary training.

### 3. Methods

There were three (3) phases involved. Phase 1 focused on the validity and reliability of the research instrument; Phase 2 concentrated on evaluating the educational device; while Phase 3 determined the users' feedback after utilizing the device.

#### 3.1. Research Design

The present study used a descriptive-evaluative research design. Descriptive research design is an influential tool scientists and researchers use to gather information about a particular group or phenomenon. McCombes [34] stated that this type of research accurately and systematically describes a population, situation, or phenomenon. Further, it mentions that it can answer what, where, when, and how questions.

However, evaluative research is a method used to evaluate a product or concept and collect data to help improve the solution. The study used a descriptive-evaluative research design that combined descriptive research methods with an evaluative approach. It seeks to describe a phenomenon or any situation while evaluating its impact used as an intervention to students' learning conceptualized by Hubbard [35] and mentioned in the study of Cliff [36].

### 3.2. Respondents of the Study

The respondents of the study were the students coming from DepEd (Elementary, Junior High School, and Senior High School), students from private schools as well as the College of Education students in one of the universities in Negros Occidental for academic year 2024-2025. Respondents came from different clusters or groups, and convenient sampling was used since each group of learners had a different frequency.

For students coming from elementary schools, there were 169 respondents or 38.5% of the total population. There were 147 respondents from Junior High Schools, comprising 48 students or 33.4%. In contrast, Senior High School students comprised 48 or 10.9%, and students from State Universities and Colleges (SUCs) comprised 75 or 17.1% of the total population. Overall, 439 respondents were in the study.

### 3.3. The Development of the Device

During the COVID-19 pandemic, while the world suffered from the catastrophe that hit the world, the researcher and some friends played Boggle to perk up the monotonous and boring life experiences. That was the start of the thought process of the researcher and creatively thinking about any enhancement to help students learn new words while enjoying it at the same time. The researcher searched for someone to help process the imagined device. Many attempts were being made, however. The first attempt was quite challenging and was not what the researcher expected since there was no cover presented. There was another attempt after one year of searching; someone who could do 3D printing helped the researcher develop the device. At first, the device was too big to carry. Then she asked the 3D printing provider for a smaller one, 50% smaller than the first. The lozenge chips were square in size with letters at first; then, they were modified. The letters were also enlarged and bigger than the first. The placement of the chips in the holes was relatively high, and the chips were not secured. Another suggestion prompted the chips to be made and appropriately placed. Then, a fully developed device is ready to take off and be shared with the students around the place, specifically to the DepEd schools, some private institutions, and the students in a state university. Here is a sample of the prototype model.

### 3.4. The Development of the Research Instrument

The research instrument was quite challenging since it caters to the usability and acceptability of the device. The researcher prepared a self-made instrument to suit the device's acceptability. Somehow, opportunities and avenues found their way. Hence, it was the concept of the researcher during COVID-19. The instrument was then introduced to the validators.

### 3.5. Validity and Reliability of the Research Instrument

To validate the instrument for Phase 1, the researcher secured eight (8) qualified experts. Lawshe's content validity ratio used this method for the IM (Instructional Material) instrument. These experts validated the self-made instrument used with a content validity index of 0.91, and the results revealed that the instrument is valid. Few revisions were implemented based on the input provided by the experts.

Likewise, the instrument's reliability was determined using Cronbach's Alpha to measure internal consistency. Then, the researcher presented the educational device to students not included in the study for reliability testing. Thus, it obtained a value of 0.832, interpreted as essential and reliable.

### 3.6. Procedures and Scope of the Study

After obtaining the result for validation and reliability testing, the researcher introduced the device to the Department of Education (DepEd), private schools, and the state university. It includes DepEd and Private Schools in Elementary, Junior High School, and Senior High School students to evaluate if



the device was helpful and could really help them learn. University students were also included in evaluating the device. There were 12 schools involved.

This study focused on developing the educational device's design, validation, evaluation and acceptability for vocabulary training. The evaluation tool utilized the self-made instrument validated by experts, which the respondents then evaluated after using the device.

### *3.7. Presentation and Evaluation of the Educational Device*

In this phase, an evaluation tool was provided to identify the usability, ease of use, and the device's quality. The researcher provided a letter to the superintendent of schools, then presented it to the different heads or principals for the presentation of the device to the students through the help of their teachers. The researcher then explained how to play the game using the device with the letters and consonant blends and provided the "blest" chip to pique their desire to join and enjoy the game-based learning. This "blest" is a chip without any letter but can be used and desired by the player to form a word. Further, this is a 3-minute game, and everyone in the class joins a small group of 5-7 members. The researcher was dependent on the students who were present during the presentation. The researcher guided the students on how to play the game, and after five rounds they settled in. The researcher gave the questionnaire for the evaluation of the device. She explained this well with the teacher's help and translated it into the Hiligaynon language for better understanding. Thus, the instrument was evaluated by the respondents, who were learners from DepEd, private schools and a state university.

### *3.8. Users' Feedback on Utilization*

The focus was on the utilization of the educational device for vocabulary training. There were 12 schools: six (6) elementary schools and four (3) high schools (Junior and Senior High School) coming from DepEd, two (2) private institutions and one (1) from State Universities and Colleges (SUCs). Feedback from the users was gathered and presented with themes such as enjoyment, mixed emotions, excitement, intense satisfaction, confusion/difficulty, and other comments.

## **4. Results and Discussion**

### *4.1. Evaluation of the Educational Device for Vocabulary Training in Elementary Schools*

Regarding user engagement, public and private elementary schools manifested as very engaging and engaging respectively with a mean of 4.60 and 4.45, respectively. In terms of educational effectiveness, results revealed that public elementary schools were very effective and private elementary schools were effective with a mean of 4.69 and 4.49, respectively. Meanwhile, regarding user interface, public elementary schools evidently showed very user-friendly while private elementary schools showed user-friendly with a mean of 4.56 and 4.42, respectively. Moreover, in terms of motivated factors, public elementary schools resulted in very motivating while private elementary schools showed motivating with a mean of 4.73 and 4.40 respectively. In overall satisfaction, both public and private elementary schools were very satisfied with a mean of 4.75 and 4.55, respectively. Overall, results revealed that public elementary schools were excellent and private elementary schools were very good with a mean of 4.67 and 4.46, respectively. In contrast, the study of Jr, et al. [29] stated that there is a significant difference between public and private school graduates in terms of academic performance. Students learn better with a different teacher-student ratio that tends to be more favorable in private institutions.

**Table 1.**

Evaluation of the Educational Device for Vocabulary Training in Elementary Schools (N=439).

Variable	Public			Private		
	M	SD	Interpretation	M	SD	Interpretation
I. User Engagement	4.60	0.31	Very Engaging	4.45	0.47	Engaging
II. Educational Effectiveness	4.69	0.66	Very Effective	4.49	0.33	Effective
III. User Interface	4.56	0.35	Very user-friendly	4.42	0.32	User-friendly
IV. Motivated Factors	4.73	0.30	Very Motivating	4.40	0.48	Motivating
V. Overall Satisfaction	4.75	0.28	Very satisfied	4.55	0.52	Very satisfied
Overall	4.67	0.25	Excellent	4.46	0.36	Very Good

#### 4.2. Evaluation of the Educational Device for Vocabulary Training in Junior High Schools

Respondents from high schools, whether public or private, also differ based on the results. Regarding user engagement, respondents from public junior high schools manifested the overall engaging result, while private junior high schools showed very engaging (4.47 and 4.56). Regarding educational effectiveness, public junior high school respondents got the overall result of very effective, while private junior high schools got effective (4.52 and 4.41). Further, in terms of user interface, both public and private junior high schools manifested the same results as user-friendly (4.44 and 4.43). In terms of motivated factors, public junior high schools evidently showed very motivating and private junior high schools showed motivating based on the results (4.62 and 4.31). Lastly, in overall satisfaction, public junior high schools' results were very satisfied while private junior high schools were satisfied (4.57 and 4.46). It has an overall result of excellent from public junior high schools and very good from private junior high schools (4.52 and 4.43).

The results align with Bakhsh [24] who noted that using games to teach vocabulary to young learners appears to be very helpful and challenging for teachers teaching vocabulary using games inside the classroom. Students usually get bored if the teacher uses the old traditional method and technique. Thus, this educational device for vocabulary training is beneficial to learners, which is further supported in the study of Derakhshan and Khatir [26] which proved that the vocabulary acquisition is one of the difficult segments of learning for English language students of all ages. Educational games have been working well for teaching vocabulary. The study likewise revealed that games are beneficial in many ways, like vocabulary learning, since they enhance students' ability to memorize words, improve communicative skills, encourage students' interaction, and the game enhances students' motivation. Likewise, games can help the teachers create contexts in which the language and vocabulary are valuable and meaningful.

**Table 2.**

Evaluation of the Educational Device for Vocabulary Training in Junior High Schools.

Variable	Public			Private		
	M	SD	Interpretation	M	SD	Interpretation
I. User Engagement	4.47	0.37	Engaging	4.56	0.39	Very Engaging
II. Educational Effectiveness	4.52	0.39	Very Effective	4.41	0.37	Effective
III. User Interface	4.44	0.38	User-friendly	4.43	0.34	User-friendly
IV. Motivated Factors	4.62	0.36	Very Motivating	4.31	0.44	Motivating
V. Overall Satisfaction	4.57	0.35	Very satisfied	4.46	0.39	Satisfied
Overall	4.52	0.30	Excellent	4.43	0.31	Very Good

#### 4.3. Evaluation of the Educational Device for Vocabulary Training in Senior High Schools.

Senior high school students were also among the respondents. Results disclosed that in terms of user engagement, senior high school respondents got the overall result of engaging (4.50). In terms of educational effectiveness, results revealed that it's effective for senior high school students (4.23). Moreover, regarding user interface, the results revealed that it is user friendly (4.38). In terms of

motivated factors, it was motivating as shown in the results (3.63), while in the overall satisfaction level it was satisfied (3.83). Thus, the overall results revealed that it was very good (4.11).

Along with the study of Murphy [12] of why games work with the established laws of learning [37] and further stated that those things that are most often repeated are best remembered based on drill and practice. The study proved that students learn best and retain information longer if they have repetitive and meaningful practices.

**Table 3.**

Evaluation of the Educational Device for Vocabulary Training in Senior High Schools.

Variable	M	SD	Interpretation
I. User Engagement	4.50	0.52	Engaging
II. Educational Effectiveness	4.23	0.60	Effective
III. User Interface	4.38	0.56	User-friendly
IV. Motivated Factors	3.63	0.48	Motivating
V. Overall Satisfaction	3.83	0.38	Satisfied
Overall	4.11	0.43	Very Good

#### 4.4. Evaluation of the Educational Device for Vocabulary Training in a State University

Students coming from a state university also differ based on the results. In terms of user engagement, results revealed that it is engaging (4.81). In terms of educational effectiveness, it was very effective (4.73), while in terms of user interface it was very user- friendly (4.89). In terms of motivated factors, it revealed that it is very motivating while overall satisfaction is very satisfied based on the results (4.68). The overall result was excellent (4.77).

As mentioned in the study of Sundaram and Ramesh [7] educational games can enhance learning efficiency. Noticeably, gamification put into practice in online teaching and learning is achievable. It has further become effective in students' education in how they learn. Learning and teaching a new language are not easy, and it takes a long process. Thus, learners' motivation should be given priority. Al-Dosakee and Ozdamli [8] also revealed that gamification is beneficial for teaching and learning languages, increasing learners' motivation with enjoyable learning experiences.

**Table 4.**

Evaluation of the Educational Device for Vocabulary Training in a State University.

Variable	M	SD	Interpretation
I. User Engagement	4.81	0.22	Very Engaging
II. Educational Effectiveness	4.73	0.26	Very Effective
III. User Interface	4.89	1.62	Very user-friendly
IV. Motivated Factors	4.73	0.39	Very Motivating
V. Overall Satisfaction	4.68	0.37	Very satisfied
Overall	4.77	0.38	Excellent

#### 4.5. Overall Results of the Evaluation of the Educational Device for Vocabulary Training

The overall results were that in terms of user engagement criteria, public elementary schools, private junior high schools and a state university were very engaging with mean scores of 4.60, 4.56 and 4.81, respectively. In contrast, while private elementary schools, public junior high schools, and senior high schools got engaging with the mean scores of 4.45, 4.47, and 4.50, respectively.

In the educational effectiveness criteria, public elementary schools, public junior high schools, and state university were very effective with mean scores of 4.69, 4.52, and 4.73. In contrast, private elementary schools and junior high schools, with senior high schools were effective with mean scores of 4.49, 4.41, and 4.23, respectively.

Meanwhile, in user interface criteria, public elementary schools and a state university were very user-friendly with mean scores of 4.56 and 4.89. In contrast, the rest of the schools such as private

elementary schools, public and private junior high schools with senior high schools, got user-friendly with the mean scores of 4.42, 4.44, 4.43, and 4.38, respectively.

Moreover, in the motivated factors criteria, public elementary and junior high schools and a state university got very motivating with mean scores of 4.73, 4.62 and 4.73. In contrast, private elementary schools, junior high schools and senior high schools got motivating with mean scores of 4.40, 4.31, and 3.63, respectively.

Further, in overall satisfaction, public and private elementary schools, public high schools and the state university were very satisfied with the means of 4.75, 4.56, 4.57, and 4.68, respectively. In contrast, in private junior high schools and senior high schools were satisfied with a mean of 4.46 and 3.83, respectively.

Overall, public elementary schools, junior high schools and a state university were excellent with a mean of 4.67, 4.52, and 4.77, respectively. In contrast, private elementary schools, junior and senior high schools were very good, with a mean of 4.46, 4.43, and 4.11, respectively.

The result is congruent with the study of Hashim, et al. [28] which investigated the effectiveness of using online language games in improving ESL learners' grammar. Results revealed that learners' scores on the grammar post-test significantly increased. Moreover, most studies done by 21 researchers revealed remarkable results in a game-based learning approach. Students could absorb, apply or reflect on the knowledge they gained in a real-life situation [11]. Thus, this educational device could be of great help to students to improve their vocabulary. Further, Wang, et al. [38] explore gamification, which involves applying game design elements to non-game settings and can significantly boost student motivation, engagement, and understanding. Educators and researchers increasingly turn to gamification as a promising strategy to revitalize reading instruction in response to ongoing educational challenges

**Table 5.**  
Overall Results of the Evaluation of the Educational Device for Vocabulary Training.

Schools	User Engagement			Educational Effectiveness			User Interface			Motivated Factors			Overall Satisfaction			Overall Result		
	M	SD	Interpretation	M	SD	Interpretation	M	SD	Interpretation	M	SD	Interpretation	M	SD	Interpretation	M	SD	Interpretation
Elementary																		
Public	4.50	0.31	Very Engaging	4.69	0.66	Very Effective	4.56	0.35	Very User-friendly	4.73	0.30	Very Motivating	4.75	0.28	Very Satisfied	4.67	0.25	Excellent
Private	4.45	0.47	Engaging	4.49	0.33	Effective	4.42	0.32	User-friendly	4.40	0.48	Motivating	4.55	0.52	Very Satisfied	4.46	0.36	Very Good
High School																		
Public	4.47	0.37	Engaging	4.52	0.39	Very Effective	4.44	0.38	User-friendly	4.62	0.36	Very Motivating	4.57	0.35	Very Satisfied	4.52	0.30	Excellent
Private	4.58	0.39	Very Engaging	4.41	0.37	Effective	4.43	0.34	User-friendly	4.31	0.44	Motivating	4.46	0.39	Satisfied	4.43	0.31	Very Good
Senior High School	4.50	0.52	Engaging	4.23	0.60	Effective	4.38	0.56	User-friendly	3.93	0.48	Motivating	3.83	0.38	Satisfied	4.11	0.43	Very Good
State University	4.81	0.22	Very Engaging	4.73	0.26	Very Effective	4.89	1.62	Very User-friendly	4.73	0.39	Very Motivating	4.68	0.37	Very Satisfied	4.77	0.38	Excellent

#### 4.6. User's Feedback on Utilization

##### 4.6.1. Students' Feedback on the Acceptability of the Educational Device for Vocabulary Training

This portion shows the feedback and comments of the students. There were 77 who said they enjoyed and had fun while learning and looking for the words, four (4) said they would recommend the device, 34 said that they smiled a lot, and 14 said they were entertained and learned something. There were mixed emotions; she enjoyed it but struggled to find the words. Five (5) stated they felt happy while doing the activity with classmates and would surely do this kind of game with other friends and family. Another student said that *"I found it hard at first, but understood and learned a lot of spelled words."* Another said that while doing the activity, she initially felt slightly nervous, but she found it very enjoyable while the game continued. A student said she would recommend the device to young teenagers, like 9 or 10 because the game is fun. For the excitement, someone said that she was excited while playing; another said that it was very exciting, and helped her learn new words. Another said, *"Give me one device,"* then someone felt energized, and two (2) said, *"It was cool."* Another group said, *"There was an intense satisfaction since we learned the correct spelling of the words."* There were two (2) who said that it was great and hoped to play it again someday. Another four (4) students liked the device because it helped them learn. Another two (2) students said that it motivated them to learn more about vocabulary, and three (3) said that they liked the device because they learned while playing and were satisfied.

On the contrary, some were confused and found it difficult to manage. Some students said, *"It is tough and challenging."* Another said, *"This would be challenging and easy to write."* Another stated it confused her if her answer or the word count was correct, but it piqued her interest in the game. Under the uninteresting part, someone said, *"Nothing."* However, in the last portion, which concluded other comments, someone said, *"I recommend that a host hold and shake because my classmates usually fight."* Two (2) students stated, *"I recommend this device for children to learn basic English and make them do it."* Another said, *"I recommend that my brother play this to learn to spell."* Another said, *"I would recommend this device,"* and she was delighted. Another student said, *"It is a good game, but I do not like the heart shape because it only has 29 pieces, and most of the words do not match."*

The results align with the study of Mee, et al. [9] which stated that in the 21st-century generation of learners, teachers prioritize fun and creative learning experiences for the students. Gamification provided an avenue for fun and creativity inside the classroom. Fun games embedded in the lessons produce an outcome favorable to learners. It prepares them to become active and take responsibility as far as learning is concerned. Students preferred to learn using gamified learning activities that helped them learn more.

Further, the result is supported by Nguyen [15] who identified some of the benefits of using games while learning vocabulary embedded in the lesson inside the classroom, to wit: games add relaxation and fun and revealed that learners could easily retain words learned; games also involve friendly competition, and learners keep motivated and interested to learn more; and vocabulary games bring real-world context since they did it themselves with experiential knowledge inside the classroom. Games are learner-centered and foster students' participation and initiative.

##### 4.6.2. Students' Feedback on the Acceptability of the Educational Device for Vocabulary Training

The results revealed that 29 students said they enjoyed the game device. There were 10 who said this game is so joyful because of their brain-enhanced spelling skills. Another said that she felt she learned and enjoyed playing the puzzle with a heart. Another eight (8) students said they enjoyed using the device because it benefits them, especially when learning and improving their spelling. Three (3) students declared that it was beneficial; they learned something they had not learned before and enjoyed the activity. Likewise, two (2) students said, *"I am happy and enjoyed,"* thanking the researcher for coming to their school. Another five (5) students said they enjoyed playing the game-based learning, which added to their knowledge, while the other students enjoyed and improved their spelling skills and encountered new words.

Similarly, there were mixed emotions, such as, *"It is not easy to find a spelling word, but it is beneficial to practice spelling."* Another four (4) students said, *"I enjoy it a lot, and it improved my spelling skills; it is so satisfying."* Another three (3) students said, *"I find it enjoyable, sometimes hard to find the words, and at times easy, and I love it, and it can boost my spelling."* Two (2) students were grateful and enjoyed themselves with classmates and friends. Another said, *"It is very easy, but it needs an improvement, such as the layout of the letters, since it is kinda hard to understand, and one thing for sure is that this device helps with spelling."* Another said, *"I find it very adorable because it makes me more able to spell other words; it makes me enjoy it more."* Now I learned spelling words. I am very thankful for this game." Another stated that it is *"Challenging; one of the words I can describe and how I feel."* It makes my mind think of what word I can make or find. I also found the words that I thought were wrong, but they have a meaning."

Another group of students stated, *"I like it so much and I love it!"* Another four (4) students said, *"I learned a new game and I like it!"* Another said, *"It is okay; it helps with our spelling."* Four (4) students stated, *"I recommend this device because it is very satisfying to play and can improve your spelling."* Another four said, *"The game is easy and helpful."* Another said he was delighted and motivated, boosted his spelling skills, encouraged them to apply, and added to their learning experiences. One student said she enjoyed every step she made because the device encouraged her to practice spelling regularly and made it clear to her mind. She highly recommended the device.

Lastly, someone said she was upset; another said *"I loved the game, and the instruction was very easy and an outstanding learning innovation,"* she added. Another said, *"Very cutesy, very creative, very demure! Very mindful, very stress reliever. Slay!"* Three (3) students stated, *"Perfect for indoor and outdoor activities. Thank you for coming, and thank you for this game. Super fun! Bring me one again."*

All the comments and feedback of the users, who are students of different ages, were enjoyed, and they had fun while learning simultaneously. Recent research agreed specifically with the National Education Policy (NEP) in 2020 [6] which supported the recent introduction of joyful learning, which created great interest among students; thus, the most suitable learning method for learners in the 21st Century as predicted. Additionally, game-based learning enhances education, making all educational games increasingly and becoming popular. Likewise, Sundaram and Ramesh [7] posted that educational games can enhance learning efficiency.

Further, Mee, et al. [3] affirmed that learners of the 21st Century enjoy game-like activities rather than pen-and-paper work. Curiosity with an enthusiasm to learn became an avenue to learn more; hence, introducing gamification in classroom activities resulted in learners' desire to enjoy and adapt to new ways of learning. They are becoming responsible in their learning, and gamification thus prepares them to participate more in class. Moreover, enjoyable games embedded in the lessons are believed to be an effective way of having a positive result, as learners are motivated to play more without being aware that they are already learning [3].

#### 4.6.3. Students' Feedback on the Acceptability of the Educational Device for Vocabulary Training

The results revealed students' enjoyment as posted in their comments and feedback. One student said she got no points initially but she was happy since it was her first time experiencing something like this. Three (3) who stated that they liked the game and enjoyed it, which helped add to their knowledge. Another student stated that it is okay and easy to find the words and that they are enjoyable. Another added that she would like to play because she enjoyed it. Four (4) students stated that playing was pleasant, enjoyable, and easy to play, and they had fun. Two (2) added that they enjoyed and had fun moments. Likewise, 18 students posted that they were super happy in playing the game-based device; five (5) students added that they were happy because the game was enjoyable and it was their first time using the device having that first time experience playing while learning, and two (2) students said that they were happy because the test was easy. Someone said: *"I feel happy while playing with my classmates with the guidance of the researcher."*

Meanwhile, some students have mixed emotions, like they enjoyed and were excited while playing, and a student added that she was happy and it was enjoyable but sometimes bored because there were times that it was not easy. Another said she felt excited about the educational game and amused by the fun moments. Another added that she felt excited and happy since the researcher came and shared the device with her classmates. Another one had mixed emotions, such as highly critical, engaging, and enjoyable and four (4) students said it was challenging and had a joyful experience. Few of them said that he/she was satisfied and that the experience was good, with fun moments when they got points, learned new words and improved their spelling skills while playing with classmates and friends. Additionally, it is fun to look for the words, but sometimes, a student cannot understand them since it is the first time she has encountered them.

Intense satisfaction is another theme that the researcher discovered. A few students said they learned many words and were thankful for the experience. They like the games, and someone hopes to do it again, while two (2) students stated that they like the experience of practicing their spelling skills. Another two (2) stated that they like to play and would ask their mother to buy one. Another student was grateful; a few (6) said they liked the game. Another said she was happy and delighted with using the device; two (2) students had fun and stated that it was an educational device. Another student was challenged to think more, which helped him know and learn more words.

For other comments, three (3) were thankful to the researcher, and another student stated that it was nice but with limited time to think. Someone has said, *"The device is well made and effective in reviewing."* Another one stated, *"I would play this with my family."* Two (2) students posted that *"I love the device. I want to bring it home with me."* Another two (2) students said, *"I love playing this game; please publish."* Another said, *"I like this game. Next time I would wanna buy this."* Another student posted, *"Yes, good for taking a break from computers and brownouts. However, it is not something I will play for fun, but for learning. I had fun."*

The students' feedback helped strengthen the device's ability to be published, as Mohamed, et al. [10] stated in their study about GBL or game-based learning, as it appears to have the potential or the ability to improve students' motivation to learn. Thus, it is also stipulated in the study of Akdogan [14] that games have great educational value and are helpful in the classroom to make learners refrain from thinking about different formulas rather than using the language. It encouraged learners to interact, participate, and be creative in using the language in the best way possible and meaningful to the learners through games. Every learner desired to participate every activity, especially to play games, and teachers could affirm that many students desired to be involved in game-based learning. However, they needed to understand and communicate the target language to understand each other, be understood, and practice language skills. Thus, games must be chosen well and provide the best design for learners' needs. The existence of technology also plays a role in gamification. Likewise, the integration of gamification in the delivery of lessons is considered successful in staying novice learners committed and stimulated to acquire knowledge [4].

#### 4.6.4. Students' Feedback on the Acceptability of the Educational Device for Vocabulary Training

Enjoyment is one part of the theme in this study. The results revealed that students felt happy because they were making funny words in their team and enjoyed and joyfully enjoyed together. Someone has said that *"it was fun"*; though she is unfamiliar with the words, she is learning simultaneously. Another student said, *"It was fun, especially when you find a word in every way, whether vertical, horizontal, zigzag, or any other way, as long as it is connected, and it was very conducive for my learning."* Another student added, *"This game is much fun, especially with friends. I do not think there is a need to tweak for this device as it is great to play with."* Three (3) of the students stated, *"I like the game since it is easy, fun, and you can get an experience and learn as well."* Two (2) students stated that they enjoyed and learned something that they had never learned before, even the words found in the dictionary, and they were thankful for the experience. Another two (2) students stated, *"I am so happy and glad that I engaged in playing and I learned new things about it."* Another said, *"So very nice, and this game is enjoyable. Where*



*should I buy this?* Moreover, someone has said, *“The game was fun and I enjoy playing with my classmates because we had much communication.”* All of the statements gathered and posted made this device meaningful to the researcher. It allows the researcher to share with some students and those who desire it, especially in schools, colleges, and universities, even those who play at home with their families and friends.

Similarly, mixed emotions were highlighted in their feedback, such that they like the game; it was not that easy, but it was fun. Some felt like they saw many words but were too shy to write. Two (2) students mentioned that they enjoyed playing Scrabble. It challenged them to find those unique words, and they felt like searching for the word in panic, but they loved the game. Someone has said, *“I feel challenged to find more words to add to my score. It helped me obtain much vocabulary that I did not encounter before.”* Another said, *“The game was fun and full of thrill. We enjoyed seeking words one by one.”* Overall, *“the game brought joy and excitement to me, to all of us.”* Another four (4) students said, *“I am happy that I can use and play this tool as a learning device. It helped me learn new vocabulary words. This device is very exciting and fun.”* Another stated, *“I had fun, and it tested my skills.”* Someone also said, *“Upon playing the game, I felt thrilled. At first, I felt pressured, but along the way, it was interesting and fun.”* One student also said, *“A bit difficult yet full of fun.”*

Additionally, the theme of intense satisfaction also manifested; three stated that it is a good game, while two (2) students said, *“I like it. I see myself focusing on the game and more competitive.”* Another said, *“I like it, it is easy,”* a student added, *“It is so much fun and not boring.”* She hoped she could play this kind of game again and was thankful. Another student said, *“It is so awesome,”* followed by someone who said it is important for him to know and improve his spelling skills and was thankful as well. Another three (3) students stated, *“I feel nice, and it is a great game.”* Another added, *“It is good to play this game and learn like spelling and memory skills, a fun experience, and you will not get bored.”*

The results of the students' comments align with the study of Akdogan [14] that the students' interpersonal skills were enhanced and developed with vocabulary learning. They have the opportunity to speak in their language with confidence while doing the activity with their peers. The students' vocabulary was developed while enjoying the games, activities, and materials used, thus proving to be beneficial for teachers. Akdogan [14] designed and discovered how to develop game materials with questions like, *“How can we easily memorize vocabulary items, and how can we promote effective ways to learn English vocabulary in a relaxed manner?”* The results revealed that the occurrence of memorization is improved with games included in the lesson, and may be an efficient way to encourage language acquisition. Further, games are fun activities that promote interaction, thinking, learning, and problem-solving strategies. These are effective avenues for students' learning and offer an environment where they can think and develop their ways of learning and even make decisions independently. These combined thoughts and actions are behaviors with a purpose to accomplish a goal. The experience would allow the students to play games and help them strategize, consider alternatives, and think flexibly.

#### 4.6.5. Students' Feedback on the Acceptability of the Educational Device for Vocabulary Training

Enjoyment is one of the themes in the students' feedback, which revealed that students are also having fun while learning. A few students said, *“It is good for ice breakers, and it is very fun,”* and *“I am learning to spell while having fun.”* Four (4) students stated, *“I think that the device is very effective in enhancing the vocabulary and knowledge in creating words in our minds. It is delightful.”* Another two (2) students added, *“I enjoyed the game/device. It helps us think of many words, and it makes our brains work. Yey!”* Another student posted, *“This game is so much fun! I enjoyed it! Hoping for more enjoyable games and interesting lessons! Salute, Ms. Galang!”* Another said, *“I enjoyed it, giving Wordscapes and Scrabble. It made my brain work to connect letters I did not know before.”* Another commented, *“I enjoy playing the game. It is fun, and I feel that every cell in my body is happy and energized.”* Another student posted and said, *“This game is fun and amazing! We indeed had a great time. Learning while having fun.”*

There were mixed emotions in line with the theme. A student said, *"The device is so unique, unlike bingo. My feelings while playing are that I feel nervous and I need to think of more words. It is thrilling and challenging."* Another said, *"Fun and relax,"* while someone also posted that *"Playing the game was so fun, though we just guessed some words, we were shocked to see it is a real word with meaning."* Another stated, *"I am surprised and amazed,"* and another said, *"I enjoyed playing this device. I find it interesting, and it is so fun to play with my classmates. I felt relieved playing this. I feel tense during the game and simultaneously pressured for the time."* However, overall, *it was enjoyable.* Similarly, someone said, *"Quite fun, really makes me use my brain and allows me to widen my vocabulary. I need more time."* Since it was intended to finish only within three (3) minutes, students needed to finish within the allotted time, and some were upset since they were quite uneasy at first adjusting to the time. However, they were able to adjust after a few tries. Another two (2) students stated, *"I feel thrilled doing the game. It is exciting, fun, very socializing, and enhances my vocabulary."*

Intense satisfaction is the third theme. Students have varied statements. A student was thankful, and she liked it. It is easy with fun moments, especially when friends playing together or with a family, and she is thankful for the device. Another student added, *"This game is great for improving your spelling and reading skills because reading and spelling are important to our daily lives."* Moreover, three (3) students also stated, *"The game is very beneficial."* Another said, *"I learned a lot."* Further, someone has said, *"It is cute, and I hope we can play it again."* Lastly, a student stated, *"The game is excellent since it helps us think of different words, not random letters."*

All the comments and feedback from the students made this device moving. The researcher could see the desire for the students to learn more using this device. She could attest and prove that what they said and experienced is true. They all moved, thought, and enjoyed learning.

In her study, Bondaug [19] addressed the deteriorating reading proficiency of learners in the country. She stated that DepEd wanted to strengthen the reading programs, and teachers were encouraged to create materials to aid this advocacy. Her study developed instructional material for specific learners' needs to enhance their reading comprehension. She developed a research-based instructional material integrating the principles of game-based learning. The material was effective for the teacher and learner-users. The material was effective based on the results, which showed an increasing level of comprehension among the learners. Thus, there was positive feedback from both teachers and learner-users. As a result, the material increased the learners' interest and made them participative and engaged in their reading classes. Similarly, it is the basic tool for learning new words with the help of teachers who happened to miss learning experiences during face-to-face classes. Students developed low study skills, they lacked interest in studying, their coping skills were unhealthy, and their social awareness was not processed well. The result was supported in the study of [21] as cited in the study of Jereb, et al. [22] that the transition of working and studying from home, which took place quickly, caused numerous issues for the education sector, including higher education, with university students dealing with significant obstacles to their learning process. Students were excited to learn while joining in the activities inside the classroom. Moreover, a couple of studies revealed that there are activities that teaching and learning could help develop the vocabulary skills of the students. One of the best ways to do this is through games that tickle the learners' minds and keep them alive. It stimulates and enhances their vocabulary skills enjoyably. As Jassim and Dzakiria [23] added, using games inside the classroom can foster vocabulary learning. Hence, students' learning was enhanced using the educational device for vocabulary training.

#### 4.6.6. Students' Feedback on the Acceptability of the Educational Device for Vocabulary Training

In the last portion of the feedback, only two (2) students stated, *"I enjoyed playing this device. This device is a great tool for learning new words."* The last theme was mixed emotions; one said, *"Fun but stressful. LOL,"* while another said, *"Happy and sad."* Another one added, *"This activity is enjoyable. It is unique and would help improve your vocabulary."* Another student posted, *"The game was entertaining; it*

*helped us brainstorm many different word combinations in a set time. However, there are different experiences due to the other letters/syllables being slanted. It is a perfect game to gauge as many words as possible.”* Lastly, a student stated, *“I enjoy it a lot! The only problem is sometimes the lack of actual words.”*

Games are beneficial to students in the 21st century. They could easily learn using a different game-based approach. In like manner, Bakhsh [24] revealed in his study that using games as a tool in teaching vocabulary to young learners appears to be very helpful and challenging for teachers in teaching vocabulary using games inside the classroom. Moreover, students usually get bored if the teacher uses the old traditional method and technique. Thus, this educational device for vocabulary training is beneficial to learners. Gamification involves incorporating game-based features and mechanics into non-game settings—such as education, professional training, or marketing—to increase motivation, enhance user engagement, and improve outcomes [25].

Vocabulary acquisition is one of the difficult learning segments for English language students of all ages. Educational games have been working well for teaching vocabulary. The study found that games are beneficial in many ways, like vocabulary learning, since they enhance students’ ability to memorize words, encourage students’ interaction, improve communicative skills, and motivate students. Games can help the teachers create contexts in which the language and vocabulary are valuable and meaningful. Educational games can be effectively helpful when taken positively and attract the learners’ attention when applied to classrooms through teaching and learning new vocabulary [26].

## 5. Conclusion

The evaluation results of the educational device for vocabulary training demonstrate a high level of effectiveness, usability, and learner satisfaction across various educational levels and school types. Overall ratings ranged from Very Good to Excellent, with the State University ( $M = 4.77$ ,  $SD = 0.38$ ) and Public Schools consistently yielding the highest scores across all dimensions and variables. This result confirms the device’s strong potential to enhance vocabulary acquisition and training in formal educational settings.

Specifically, the device was rated Very Engaging, Very Effective, and Very User-Friendly in most contexts, indicating a well-balanced combination of educational value and learner appeal. Motivational factors and overall satisfaction, thus achieved good results, reflecting the device’s capacity to stimulate interest and foster a positive and satisfying learning experience.

In contrast, Private Senior High Schools had slightly lower mean scores (Overall  $M = 4.11$ ); the interpretation remained Very Good, suggesting that the tool performs reliably well across diverse learning environments, though further contextual support may enhance its impact in specific settings.

Thus, the educational device proves to be a valuable tool for vocabulary development, adaptable across educational stages from elementary to university. These results support its broader implementation and encourage further research into its long-term effects, especially in integrating gamified learning into regular instruction.

## 6. Recommendations

Given the device’s effectiveness, it was recommended that the device be introduced to the teachers and students and allow them to use the device often for better results. The researcher desired to advance the following recommendations:

*Students / Learners:* Learners may be encouraged to become part of the learning experiences with the help of the teachers concerned. There may be allotted time preferably every day for vocabulary enhancement, by their teachers to focus more fully and allow them to explore new words and develop a lifelong love for learning vocabulary.

*Teachers:* They play a pivotal role in facilitating the effective use of the device and advance the learning experiences of the students or learners. They are encouraged to design daily activities in integrating the device into their lessons that support slow learners and benefit from added

reinforcement. They could offer feedback and encouragement to maximize student satisfaction and educational outcomes for students to learn more.

*Principals / Heads:* The participation of the school leaders or principals or any head of office is imperative in promoting innovative vocabulary learning experiences. Principals and heads of schools are encouraged to introduce and support the integration of this device during institutional activities like “Cath-Up Friday.” This advocacy can lead to broader adoption of the device across grade levels and departments, making vocabulary learning engaging with a shared and meaningful experience for the school community. Maybe an avenue to learning vocabulary with a heart!

*Researchers:* Other researchers may use another type of research to help the students learn. They may explore alternative research methods to further assess the effectiveness of the educational device. Deeper insights on different studies can be provided across different subjects, age groups, or learning contexts. Other ways or avenues may be used for this purpose like exploring different elements of gamification that influence learning outcomes that may prove profitable for other educational strategies.

*Future Researchers:* This educational device may be useful to other researchers and offers a promising foundation for future studies on gamification and vocabulary training. Researchers interested in educational technology and learner engagement may find it useful for exploring innovative approaches to enhance vocabulary learning. Future investigations could focus on comparative studies, long-term retention, or the integration of similar tools into digital platforms.

### 6.1. Rules of the Game using the Educational Device for Vocabulary Training

1. Anybody is encouraged to play, children or adults alike, as long as everyone agrees. First, shake the base receptacle (Educational Device) with a cover and ensure everyone has paper and a pen.
2. When everything is ready, open the cover, and everyone has a chance to play; within three (3) minutes look for words in the diagonal, horizontal, vertical, beside, or adjoining letters.
3. No capitalized or hyphenated words are allowed. Multiple forms of the same words are allowed, like singular or plural forms, and other derivations as long as they are found in the dictionary.
4. Each player records all the words they find as many as possible on a piece of paper.
5. After three (3) minutes, each player must stop writing, and scoring follows. Each one will have a chance to give the words they find written on paper.
6. Each player needs to listen attentively, and whenever a player writes the same words given by another player, the same word written by all the players will be eliminated from their lists.
7. The validity of each word must be checked in any dictionary agreed upon by the players.
8. An archaic word is counted, while obsolete words will become invalid and eliminated from the lists.
9. One chip is printed with "Qu" because U always follow Q in English words. For scoring, Qu counts as two letters; for example, square would score four points (for a six-letter word - see suggested points) despite being formed from a chain of only two in a chip. Early game versions had a "Q" without the accompanying "u".
10. Meanwhile, consonant blends were also provided in the lozenge chips for a more challenging learning experience.
11. Once duplicate and invalid words have been deleted, points are given based on the length of each remaining word in the lists.
12. Count the remaining words with the corresponding points based on the players' agreement. It may vary depending on the players' capacity to play. The player with the highest score is declared the winner. Players can play as many times as possible, as long as they are capable and can play longer.

The following are the suggested points to consider:

1. 3-letter word – 1 point
2. 4-letter word – 2 points
3. 5-letter word – 3 points
4. 6-letter word – 4 points

5. 7-letter word – 5 points
6. 3-letter word with consonant blends – 4 points
7. 4-letter word with consonant blends – 5 points
8. Blest (Blank chip) – any letter that the learners desired to form a word – 1 point

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### Transparency:

The author confirms that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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