ENHANCEMENT OF STUDENTS' ENGLISH VOCABULARY SKILLS THROUGH A MOBILE ASSISTED LANGUAGE LEARNING (MALL) APP

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Abstract

Mobile-Assisted Language Learning (MALL) presents a promising approach to strengthening learner motivation by making language learning content more engaging and relevant. Given the impact of mobile phones in students' lives, leveraging them for vocabulary instruction offers a convenient and accessible avenue for both teachers and learners. Using quantitative research design, specifically the quasi-experimental method, the study employed pre-test and post-test assessments to evaluate the impact of MALL on students' vocabulary skills. The findings revealed a notable increase in vocabulary scores, with pre-test scores averaging 14.77 and post-test scores averaging 23.70. These results suggest that mobile-assisted language learning platforms hold significant promise for enhancing English vocabulary skills among students. Furthermore, the study examined various factors influencing the acceptance and effectiveness of MALL systems, including ease of use, usability, efficacy, compatibility, and intention to use. These findings underscore the multifaceted benefits of integrating mobile technology into language learning contexts. In conclusion, this study underscores the efficacy of MALL in improving English vocabulary skills among students. By leveraging mobile devices, educators can create engaging and accessible learning experiences that cater to diverse learning preferences. As such, the integration of MALL into language learning pedagogy is recommended to enhance both learner engagement and proficiency. Ultimately, this research highlights the transformative potential of mobile technology in facilitating language acquisition and underscores the importance of continued exploration and integration of innovative pedagogical approaches.

Keywords: *Learning objects, Mobile-Assisted Language Learning (MALL), Vocabulary skills*

INTRODUCTION

Vocabulary is the prime concern in second language settings because it is a strong indicator of student success, and it is significant in terms of overall school achievement. National Reading Panel identified vocabulary as one of the five

main components of literacy; it is crucial in reading and comprehending text: readers cannot understand text unless they are familiar with the meanings of the majority of the words. Renandya, & Jacobs (2016) cited that vocabulary is a vital component of language proficiency, as it is the foundation for how people speak, listen, read, and write. Without an extensive vocabulary, learners often achieve their potential and may be discouraged from using language learning opportunities.

Explicit instruction of vocabulary is highly effective, students should be taught both basic terms and word-learning strategies to improve vocabulary intentionally. Relevant word teaching should be rigorous to enhance students' knowledge of word meanings. The ability to provide a definition is often the product of understanding what the word means, so much guidance does not always start with a description. Students actively use and think about word meanings and build relationships between phrases when receiving rich and robust vocabulary instruction. However, Gacia (2021) argued that teaching vocabulary is not a guarantee of success, just as learning to read words is no guarantee of success in reading; nonetheless, lacking either adequate word identification skills or adequate vocabulary will ensure failure. Students need good instructional opportunities to construct their word warehouse, establish deep levels of word awareness, and acquire a toolbox of strategies to help them achieve words independently. According to Alqahtani (2015), vocabulary is essential to remember when learning a second language to acquire proficiency, express oneself, and comprehend the sense of ideas.

Philippines' PISA 2018 National Report showed that Filipino students scored on average, with one out of every five students achieving at least the minimum proficiency level in overall reading literacy. The findings imply that students have low vocabulary skills (PISA 2018, 2019). Understanding the meaning of new words and analyzing the collection of ideas they may experience is aided by using a diverse vocabulary. As stipulated in DepEd Memorandum No. 173 s. 2019 BAWAT BATA BUMABASA (3Bs Initiative), vocabulary is one of the six elements in early literacy program; students must combine the elements with being successful readers. An integrated approach to explicit reading instruction is needed for the teachers to provide meaningful learning connected to students' experiences. Students who understand the meaning of a word are much more likely to interpret and comprehend it within a document. Children must constantly

broaden their vocabulary they can understand and use in context. With word definitions accounting for 70-90 percent of comprehension, vocabulary growth is both an outcome and a guide to understanding. Most performance outputs in the curriculum require English proficiency, and without vocabulary, it would be impossible to achieve the expected goals and skills. Many students' unsolved deficit in vocabulary knowledge is a considerable hindrance to academic achievement in vital areas.

To thrive in school and accomplish anything in the future, it is universally understood that children must be able to understand and utilize language. Academic achievement is strongly correlated with a student's vocabulary comprehension. "Learners with limited vocabularies are at a disadvantage since teaching entails describing, explaining, demonstrating, and identifying things, all of which require an increasingly complex vocabulary." (Garcia, 2021). In other words, a student's academic performance is likely to suffer as a direct result of factors that impede text comprehension, such as a lack of vocabulary knowledge. Since a learner of English as a second language has to know the meaning of every word in a sentence to comprehend what is being said, vocabulary may be seen as the primary instrument for learning a language. Since a limited second-language vocabulary limits achievement, vocabulary awareness is often seen as a critical resource for second-language learners. Additionally, as stated in the concept of the K-12 Curriculum, educators throughout the globe have been called upon during the last two decades to educate pupils for the twenty-first century and assist them in navigating an increasingly globalized and linked environment. Understanding what was read or heard will be valuable. Learning English is all about how to communicate effectively, and listening, comprehension, and reading are all receptive modes of communication. It is important to study terminology to be prepared for them. It has become an essential component of English learning.

It takes effort to increase students' excitement and encouragement when studying English. Find learning strategies and media that are both useful and enjoyable to use while learning. Various research findings suggest that using technology in teaching and learning activities is appropriate and can increase student excitement for learning. According to Kukulska Hulme (2012), mobile technology allows for more versatility in classroom teaching. It brings learning outside of the classroom, often out of sight and the teacher's influence. Learners

find learning languages with MALL applications and devices very inspiring because of their portability, usability, and shared ownership of some mobile devices such as mobile phones, wireless laptops, and video players, Levy (2015). The previous studies revealed that students have a positive attitude towards mobile-assisted language learning. Learners can use their mobile phones to download educational materials and find information when needed. It is also shown that using mobile phones facilitates and improves the ability to communicate for learning purposes. As Garcia (2021) mentioned, the portability and usability of mobile devices provide considerable potential for fostering a pedagogical change from didactic teacher-centered to participatory student-centered learning.

This research will focus on the critical issue of vocabulary acquisition in second language settings, particularly in the context of English language learning. Despite the acknowledged importance of vocabulary instruction, challenges persist in effectively enhancing students' vocabulary knowledge. The study is situated within the broader framework of educational initiatives, such as the National Reading Panel's identification of vocabulary as a fundamental component of literacy and the Philippine Department of Education's emphasis on early literacy programs. These initiatives underscore the importance of vocabulary development in achieving reading proficiency and academic success. However, existing literature suggests that mere exposure to vocabulary instruction may not guarantee success, emphasizing the need for comprehensive and effective teaching strategies. The research also addresses the specific context of Filipino students' performance in reading literacy, indicating a significant need for improving vocabulary skills to enhance overall academic achievement.

Moreover, the study aligns with contemporary educational trends, such as the integration of technology in language learning, particularly through Mobile-Assisted Language Learning (MALL). Recognizing the ubiquity and potential of mobile devices among students, the research explores the effectiveness of utilizing Learning Objects within a mobile application to enhance vocabulary acquisition. The significance of the research problem lies in its potential to address the persistent challenges in vocabulary instruction, particularly in the context of second language learning. By investigating the effectiveness of MALL and Learning Objects, the study aims to contribute valuable insights into innovative teaching approaches that can enhance students' vocabulary skills

and ultimately improve their academic performance. As Huang (2012) stated, MALL is an effective way of increasing learners' motivation since it makes the language learning content more meaningful and exciting for learners.

Specifically, it seeks to answer the following questions:

1. What is the level of vocabulary skills of the students as measured by Nelson Denny Vocabulary Test before and after using Learning objects in a Mobile-Assisted Language Learning (MA)
2. How do the respondents evaluate the learning objects in the mobile application in terms of:
   2.1 Ease of use
   2.2 Usefulness
   2.3 Efficacy
   2.4 Compatibility
   2.5 Intention of Use
3. Is there a significant difference between the vocabulary pre-test and post-test of the students?
4. What are the effects of Learning objects in a Mobile Assisted Language Learning (MALL) in improving students' vocabulary skills?

Null Hypothesis (H0):

There is no significant difference in the vocabulary skills of students before and after using Learning Objects in a Mobile-Assisted Language Learning (MALL) environment.

Alternative Hypothesis (H1):

There is a significant improvement in the vocabulary skills of students after using Learning Objects in a Mobile-Assisted Language Learning (MALL) environment.

METHODOLOGY

The researcher started by conducting the situation analysis or the baseline data analysis. The data showed interesting results as students were already in both educational situations struggling to learn vocabulary. This manifested that even before the pandemic, the said education was already a challenge to both teachers and students. In addition, the shift in school teaching-learning delivery to modular distance learning made fundamental quality education more difficult for both teachers and learners. With this, 15.39 percent of students preferred online delivery learning, 21.18 percent preferred blended learning, and 63.43 percent preferred modular distance learning. The survey was conducted to determine which type of distance learning modality was preferred by students in each grade level. Hence, most Josephian- stu-

dents have limited internet access, so they prefer modular distance learning. Given the circumstances, an innovation to support the vocabulary difficulties of the students was created—the use of Mobile Assisted Language Learning (MALL) which can aid students in learning a second language by facilitating a more efficient learning-teaching process. Hence, using technology to learn a language is a fantastic opportunity for students because they can learn the technology and use it in their learning. It means that they will not waste time doing inappropriate things with their phone and using it as communication tools

Participants and sampling

The research was conducted at San Jose National High School, one of the competitive public secondary schools in the Division of Antipolo City. Using a voluntary sampling technique, thirty Grade 10 students participated in using mobile-assisted learning language apps to learn vocabulary on a self-directed basis for a specified duration. The teacher created a messenger poll, and a text brigade was sent to the parents. The researcher conducted the study in San Jose National High School, Antipolo City where the student-respondents participated in a 10- weeks (2nd quarter) treatment through Mobile-Assisted Language Learning.

Data Gathering Methods

This study used the quantitative research design, specifically the quasi-experimental method, using pre-test and post-test. According to Bruce (2012), the quasi-experimental method is more suitable for a real-world natural setting. It allows researchers to evaluate the conditions. The researcher applied the quasi-experimental research method to determine the impact of the independent variable, MALL, on the dependent variable, students' vocabulary skills. White and Sabarwal (2019) cited that quasi-experimental is almost the same as e4xperimental design except that it lacks random assignment of its participants. The comparison group is much possible than the treatment group in terms of baseline characteristics.

The study used two instruments, the Nelson Denny Vocabulary Test, administered at the beginning and the end of the program. The 30-item test is designed to measure reading, vocabulary, and reading comprehension. A survey questionnaire adapted from Deris et al. (2019) was utilized to evaluate the effectiveness of Mobile Assisted Language Learning in terms of the Ease of use, Usefulness, Efficacy, Compatibility, and Intention of Use; the Likert- scale items range

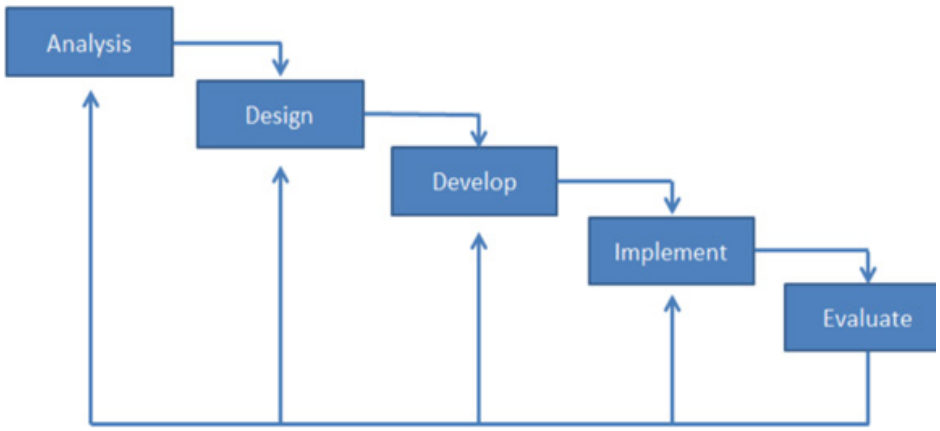
from Strongly Disagree to Strongly Agree.

The researcher conducted a pilot test of the instruments on the 30 participants who were not included in the study for its validity, reliability, discrimination index, and index of the instrument's difficulty level.

The researcher chose the study's target location and respondents, then wrote communication letters and let the authorized person sign them. After administering the pre-test, the student respondents are exposed to the treatment for 10 weeks. The researcher utilized eXelearning, an educational software program, to create learning objects for a particular vocabulary lesson. Students from grade 10 used and assessed the learning objects to get an understanding of how the mobile application's learning objects are being used.

Challenges encountered during the study may include logistical issues with participant recruitment and scheduling, as well as technical difficulties with implementing the MALL intervention. To address these challenges, clear communication with participants and stakeholders, as well as contingency plans for technical issues, will be essential. Additionally, any unexpected challenges encountered during data collection or analysis will be carefully documented and addressed through iterative problem-solving strategies, ultimately enhancing the study's rigor and validity.

Figure 1: Phases of Instructional Design



Source: Royce (1970)

The study followed the phases of instructional design by Royce (1970) in the development of the learning objects. It includes five (5) phases, namely; (1) analysis, (2) design, (3) develop, (4) implement, and (5) evaluate.

a. Data Analysis Plan

The research conducted a situation analysis, from its results, the researcher found out that among the subjects in San Jose National High School (SJNHS), English got the lowest MPS with 42.81%. Since this subject received the lowest MPS, the researcher also explored which year level served as the reason for the low MPS. It was revealed that Grade 10 students got the lowest with 57.14%. After knowing this, the researcher explored then which the competencies they were having problems with. The data revealed that the least learned competency in Grade 10 is the use of lexical and contextual cues in understanding unfamiliar words and expressions.

However, it is interesting to note that in both SY 2021-2022 and 2022-2023, vocabulary was shown to be the most under-developed skill area. Students in both school environments were already having difficulty obtaining the skill in question. They were already having difficulty with this skill even before the outbreak of the epidemic, as this showed. The learning object in Mobile Assisted Language Learning (MALL), described by Barritt and Alderman (2004) in their book "Creating a Reusable Learning Objects Strategy: Leveraging Information and learning in a knowledge Economy," was highlighted in the study.

To safeguard participants' confidentiality, all personal identifying information was kept confidential and anonymized during data collection and analysis. Participants were assigned unique identifiers or codes to replace their names or any other identifying information in research documentation. Additionally, all data collected were stored securely and accessible only to authorized research personnel. In terms of obtaining participants' consent, a detailed informed consent form was provided to all participants before their involvement in the study. The consent form outlined the purpose of the study, the procedures involved, potential risks and benefits, confidentiality measures, and participants' rights. Participants were given sufficient time to review the consent form and ask any questions before providing their voluntary consent to participate. For participants under the age of 18, parental or guardian consent was also obtained in addition to the participants' assent.

All the data was gathered data and

analyzed statistically using the appropriate tool included the following:

1. Weighted mean will be used to evaluate the level of effectiveness of the learning objects as supplementary material as perceived by the Grade 10 students in San Jose National High School.

The Weighted Mean Formula is:

$$WM=\frac{\sum(Wx)}{N}$$

Where:

W= weight of each item or value

X= represents each of the item or

values N= total number of the students

The following was used to know the scale values and interpretation of the responses of the respondents:

Scale Values	Continuum	Qualitative Index (QI)	
5	4.20-5.00	Strongly Agree	SA
4	3.40-4.19	Agree	A
3	2.60-3.36	Uncertain	U
2	1.80-2.59	Disagree	D
1	1.00-1.79	Strongly Agree	SD

Discussion of Results and Recommendations

The descriptive statistics showed that there is an increase in the vocabulary scores of the participants after the implementation of the intervention. Specifically, the results showed that the vocabulary pretest of the participants has a mean score of 14.7 while the posttest of the participants has a mean score of 23.7. This data is then analyzed using a paired t-test to determine whether or not there is a statistically significant difference in the participants' vocabulary pretest and posttest scores. The paired t-test's result was tabulated to easily identify and present the data. The result showed that the t-value is lower than the level of significance presented which is interpreted as a rejection of the null hypothesis, which means that there is a significant difference between the vocabulary pretest and posttest scores of the participants.

Table 1.1

Assessed Level of Students' Vocabulary Skills Measured by Nelson Denny Vocabulary Test (Pre-test)

Score Range	F	%	Performance Level
24-19	1	3.3	Good
18-13	23	76.7	Intermediate
12-0	6	20.6	Limited
Total	30	100	
Mean	14.77		
Standard Deviation	2.53		

Generally, the scores of the student-respondents are in the range of thirteen to eighteen with a frequency of 76.7 % between the performance levels of intermediate and limited. The standard deviation of 2.53 connotes how dispersed the scores of the students are from the mean. This data suggests that the vocabulary skills of the students are insufficient.

Table 1.2

Assessed Level of Students' Vocabulary Skills Measured by Nelson Denny Vocabulary Test (Post-test)

Score Range	F	%	Performance Level
30-25	12	40.0	Advanced
24-19	18	60.0	Good
18-13	0	0	Intermediate
Total	30	100	
Mean	23.70		
Standard Deviation	2.23		

The findings in the table above indicate that in the post-test, the scores of the students gravitated between the score range of 24-19 which corresponds to a performance level between advanced and intermediate, whereas eighteen or 60.0% of the total thirty students were

able to achieve. There were twelve or 40.0% of students who obtained scores in the range of twenty-five to thirty which coincides with the advanced level. The mean of 23.70 for the post-test implies that the performance level of the students after they were subjected to the Mobile Assisted Language Learning App is good.

This result demonstrates an increase in the score result from the pre-test score of 14.77 to the post-test score of 23.70 or an increase of 8.93 points. The use of the Mobile Assisted Language Learning App increased the scores of the students from pre-test to post-test.

The researcher first searched for literature investigating the effects of mobile-assisted language learning. It was found that mobile-assisted language learning enhances different aspects of learning by assessing the different aspects, thus promoting the overall ability to learn languages. The researcher also searched for the methods of measuring the different aspects to be assessed.

The researcher found that the major aspects that were found to be affected and assessed by mobile-assisted language learning are the ease of use, usefulness, efficacy, compatibility, and the person's intent to use. It was also evident in the literature that the most used method of assessing the provided factors was the Nelson Denny Vocabulary Test. The literature has modified the questionnaire to properly suit the chosen participants and given a pre-intervention test to the participants.

After the implementation of the intervention to study pedagogies using mobile-aided language learning in vocabulary, the researcher asked the participants' instructor to hold an assessment in the learnings of the participants in the time allotted to learn using the mobile-aided language learning applications. The vocabulary assessment scores were then acquired by the researcher from the instructor.

Table 2

Paired Samples t-Test on the Respondents' scores

Observations	t-value	Df	p-value
Vocabulary Scores	-14.921	29	0.000

A Paired samples test reveals a statistical significance on the respondents' scores on their vocabulary test before and after the experimental treatment [t (29) = -14.921, p = 0.002]. This means that scores

on the vocabulary after taking the intervention increased compared to the vocabulary scores before taking the intervention. This indicates that Mobile Assisted Language Learning provided a helpful factor in expanding the participants' learning in vocabulary.

The research then utilized the modified Nelson Denny Vocabulary Test to gather data and assess the different aspects that were identified by the researcher. The data gathered from the utilization of the modified questionnaire were then subjected to statistical treatments, specifically t-test.

Table 3

Student Evaluation on the Utilization of Mobile Assisted Language Learning App

Variable	1	2	3	4	5
Mean	3.73	3.62	3.45	3.77	3.63
Standard Deviation	0.42	0.42	0.48	0.42	0.45

Note: 1 = Ease of Use, 2 = Usability, 3 =Efficacy, 4= Compatibility, 5 = Intention of Use

The average score for ease of use is 3.73 (SD = 0.42), which is interpreted as agree. For usability, the mean is 3.62 (SD = 0.42), which also means agree. For the efficacy, the average is 3.42 (SD = 0.48), which means neutral. For compatibility, the average is 3.77 (SD = 0.42), which means agree, and then intention of use is 3.63 (SD = 0.45) or agree. The highest mean is the compatibility, while the least agreed factor is the efficacy.

The researcher used descriptive statistics to tabulate and properly identify the results of the study and easily define the relevant data for the statistical analysis of data. The researcher used a t-test and paired to suit the sample size and was used for the data analysis. The results for the aspects were tested to ensure the reliability of the data by utilizing Cronbach's alpha.

The results showed a mean score of 14.77 for the pretest vocabulary and a mean score of 23.70 for the post-test vocabulary of the participants. The results suggest that the intervention used increases the learning of the participants in terms of English vocabulary. It was found that language learning as aided by mobile devices shows positive results due to factors such as the ease of use of the device, the usability, the compatibility, and the intention of usage of the device.

Ease of Use

For the ease of use factor,

the study's result showed an average score of 3.73 which is interpreted as agreed. It is found in studies that the participants of previous studies show an increased learning of language through the use of mobile devices as they are seen as supplements that aid in learning (Korkmaz, 2020). It was also found that the participant's motivation, which is defined in previous research as an integral factor in the learning of the students, for learning a new language with the use of mobile devices is increased due to the ease of use and the visualization of the need and implementation of the practical usage of the language (Huang, 2012).

Furthermore, it was also found in previous studies that the utilization of mobile devices aids not only in the learning of language but in the instruction of it as well. It was found that mobile devices allow for instruction flexibility (KukulskaHulme 2012). The ease of use of mobile-assisted language learning applications in instructing has been observed to increase the use of these applications in individuals who aim to learn a new language.

Usefulness

The study showed an average score of 3.62 for the usability factor which is interpreted as agreed. As such, studies show that participants view mobile-assisted language learning applications such as duolingo, to be inspiring (Kennedy & Levy, 2008). The participants reported that they found the mobile applications to be innovative and that they were able to use the applications with minimal requirements. Noteworthy characteristics of mobile-assisted language learning apps also include their portability and usability in different platforms such as mobile phones, laptops, PCs, tablets, and so on.

The MALL application also made it possible for the participants to have a more flexible schedule as they are able to use the application at any time, anywhere due to its flexibility in instruction (Kukulska-Hulme, 2012). This found usefulness was observed to be an increase in the individuals who voluntarily use these mobile-assisted language learning applications. Furthermore, the individuals reported perceived usefulness of the application where it uses examples of real life and caters to individuals of varying language knowledge.

Efficacy

Lastly, for the efficacy factor, the study's result showed that there was an average score of 3.42 which is interpreted as neutral. This suggests that there are mixed perceptions of the efficacy of MALL applications in language learning. It was found in one study that investigated second language learning

mobile devices, that although the participants were able to receive increased scores after the intervention, they still perceived the use of mobile devices to be mediocre in terms of its efficacy (Repetto, et al., 2021). This shows that there is a fixed underlying perception of the participants that may have affected the result of the efficacy of the mobile-assisted application.

Another study showed that the efficacy of learning is independent of the material, but is instead greatly influenced by the identification and implementation of the most suited pedagogies (Shadiev, Liu, & Wang, 2020). This supports the bias that may be present in the participants. It explains why it is perceived neutrally in terms of its efficacy as the mode of learning may not be what is considered ideal to the participants.

Compatibility

For the compatibility factor, the study's result showed an average score of 3.77 which is interpreted as agreed. MALL applications were positively viewed by the participants due to their compatibility with different platforms and their ability to store data within cross-platforms (Kennedy & Levy, 2008). Furthermore, the importance of MALL applications is more prominent in the current situation of education as MALL applications aid. It was observed that MALL applications were compatible with the changing lifestyles of the participants either in face-to-face or in distance learning.

Furthermore, it was found to be compatible with the different learning needs of the participants in terms of the different levels of knowledge of the participants in the language (Ghorbani & Ebadi, 2020). It was found that the applications were able to assess the level of understanding of the participants and to adjust the level as such to supplement the learning requirements of the participants. This resulted in the increased perceived usefulness of the application as it caters to those who are both aiming to learn a new language and those who are simply trying to improve their vocabulary in the specific language.

Intention of Use

For the intention of use factor, the study's results showed an average score of 3.63 which is interpreted as agreed. It was found that the learners' motivation and willingness to learn greatly influences the learning that they receive. Likewise, the intent of the use of technology affects the learners' acceptance of the mode and material in which the learning can be derived (Hoi, 2020). It was also found that the learners'

intention of using the mode of learning is
dependent on the perceived need for the language in question (Hoi & Mu, 2021). Mobile-assisted language learning applications were able to address this factor and were reported to be able to aid the participants in the visualization of the practical use of language.

Furthermore, there were studies that showed that MALL applications are generally perceived more positively as compared to the traditional modes of teaching in a certain university in Vietnam (Hoi ,2020). This is mainly due to the cultural perception of the need and importance of learning English, which led to an increase in the intent of use. Likewise, in the Philippines, learning and being able to speak fluently in English is held in high regard due to the culture and the opportunities that are available with the skill.

Effects of Learning objects in MALL to the improvement of vocabulary skills of students

The results showed a mean score of 14.77 for the pretest vocabulary and a mean score of 23.70 for the post-test vocabulary of the participants. The results suggest that the intervention used increases the learning of the participants in terms of English vocabulary. It was found that language learning as aided by mobile devices shows positive results due to factors such as the ease of use of the device, the usability, the compatibility, and the intention of usage of the device.

It was observed that the ease of use of the mobile-assisted language learning applications gave instructional opportunities for the participants which increased the success of language learning. Likewise, the mobile-assisted language learning application also caters to levels of varying degrees which caters to most Filipino students. The participants have also reported an increased period of immersion in learning the language due to the flexible and versatile nature of the application which was duly reported by the participants as the application being usable and compatible to life in quarantine (Kennedy & Levy, 2018).

CONCLUSION

As the study showed an average score of 14.77 and 23.70 for the pre-test vocabulary and post-test vocabulary, respectively, it can be concluded that the use of mobile-assisted language learning platforms is beneficial, and an improvement of the student's English vocabulary skills can be observed. The study also showed results for different factors that affect system accep-

tance and learning, such as ease of use, usability, efficacy, compatibility, and intention to use.

The study showed that the five factors that affect the system acceptance and learning are positively viewed in the application MALL, with the exception of efficacy which was found to be neutral. This suggests that MALL is able to provide the different factors that require it to be effective; however, there is a noticeable hesitance in the use of an alternative learning mode which leads to MALL becoming a supplement to language learning (Korkmaz, 2020). It is also found that compatibility scored the highest in the factors provided. It can be concluded that compatibility is seen as the best quality of MALL.

RECOMMENDATIONS

With the findings made in this study, the researcher recommends that:

To the Students. As it is observed that MALL appeared to be beneficial in enhancing the English vocabulary skills of the participants, the researchers recommend that MALL should be used as a means to supplement the learning of language, but it must be done through the inherent desire to learn.

To the Teachers. The researchers recommend the integration of the use of the MALL in teaching English vocabulary. However, it is to be noted that MALL is to be used with traditional teaching to facilitate the learning of the students.

To Developers. It was observed that the perceived efficacy of the participants towards the MALL applications is neutral. As such, the researcher recommends MALL application developers include the use of a more human-like interaction in the development and innovation of their applications.

To Future Researchers. It was observed that the efficacy factor is the only factor that was neutral. As such, the researchers recommend future researchers specifically tackle the effectiveness of MALL and the factors that influence the perception of the participants towards the efficacy of MALL.

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