



PERCEPTIONS, ATTITUDES AND BENEFITS OF USING SMARTPHONE APPLICATIONS TOWARD THE LEARNERS' VOCABULARY IMPROVEMENT

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ABSTRACT

Using quasi- experimental approach, comparative and correlation research design, this study primarily focused on the perceptions, attitudes, and benefits of smartphone application toward the learners' vocabulary improvement of grade 9 students of Paaralang Sekundarya ng Lucban Integrated School, Lucban, Quezon for the school year 2020- 2021. The respondents of the study were forty (40) students from Grade 9 level of Paaralang Sekundarya ng Lucban Integrated School.

This is a descriptive study using the questionnaire as the main tool in gathering the data. The data gathered were treated using frequency counts and percentage statistics, weighted mean, standard deviation and inferential statistics of Spearman's Rank Correlation.

The mean level of learner' perceptions on vocabulary learning experiences using smartphone applications were 3.62 interpreted as "Very High Positive" indicates that the learners perceived that the use of smartphone applications provided them an upmost vocabulary experience. On the other hand, the mean level of learner' attitudes on vocabulary learning experiences using smartphone applications were 3.30 interpreted as "High Positive Attitude" indicates that the learners' attitudes noted that the use of smartphone applications provided them a great expectation in vocabulary learning experience. This concludes that there is a significant relationship between students' perceptions, attitudes and benefits of smartphones applications to the students' apps evaluation and vocabulary performance.

I. INTRODUCTION

Using technology has become one of inseparable aspects of life in the 21st century. Almost everybody can feel and appreciate its penetration into all aspects of life. Information and Communication Technology (ICT) by introducing smart devices enabled people to have access to knowledge and information with no spatial and temporal constraints (Sampson, Isaias, Ifenthaler and Spector, 2013). Probably the most important impetus for utilizing technology in the process of language learning is its ability to emancipate all stakeholders from time and space limitations (Burston, 2011) and solve the time boundary problems between instructors and their students (Salleh and Binti, 2010). Roughly speaking, this learning which is aided by technology and especially by computers is called Computer Assisted Language Learning (CALL).

As Savchenkova (2003) states, "Starting in

the early 60s... CALL has become a common practice of language teaching and learning" (p.1). Two positive aspects of CALL are providing learners with authentic learning materials (Martiz, 2015) and widening the potential of language learning by increasing its effectiveness and decreasing its tedium (Savchenkova, 2003). As an almost new branch of CALL, Mobile Assisted Language Learning (MALL) came into vogue with the advent of "Portable Digital Assistant (PDA) and i-Pod" (Burston, 2011, p. 57). MALL is the process of learning a language by the aid of a mobile learning device which is defined as "a handheld, portable computing instrument with Internet or some other network access, which allows for mediated activity for information access and learning in multiple contexts" (Walters, 2012, p.16 as cited by Ebadi and Bashiri, 2018).

Enhancing language learning opportunities needs special attention to the aspects which form the



basis of language. One of these aspects is vocabulary acquisition. Vocabulary, as a key component of any language, has been paid considerable attention with the aim of finding techniques that foster its acquisition (Vahedi, Ghonsooly and Pishghadam, 2016). It should be noted that the role of this component has undergone changes in L2 instruction through time, which has resulted in different approaches towards its role in L2 learning (Celce-Murcia, Brinton and Snow, 2014). According to Leal Alves and de Oliveira (2014), the difficulties faced by EFL learners in vocabulary acquisition are caused by several variables. Furthermore, they believe that these variables “are somehow dependent on factors such as socioeconomic, ideological and cultural conditions beyond their own teaching/learning and the intellectual characteristics of learners” (p.51). Sanchez and Manchon (2007) asserted that there has always been concentration on the best pedagogical way in developing learners’ vocabulary or lexicon.

It is in this light that the researcher decided to conduct a study on the learners’ perceptions, attitude on vocabulary learning through smartphones applications and its benefits.

II. METHODOLOGY

Participants

The respondents of this study were the 40 purposively selected Grade 9 students of Paaralang

Sekundarya ng Lucban Integrated School of S.Y. 2020-2021. The respondents of this study are grouped into two, (20) twenty controlled group and (20) experimental group.

Instruments

The instrument used in the current study included a questionnaire for the experimental group and a pre- test and a post test for both the control and experimental group. Each, pre-test and post-test, has 160 item multiple choice questions. The first instrument used in this study was an online demographic test retrieved from <https://forms.gle/Y7RbqUgre44GZ4fX8> was distributed prior to starting the study. It was designed in Google Docs service and shared to the channels’ members by providing them with the link and a brief introduction to the study’s design purpose.

III. RESULTS AND DISCUSSION

A. Perceptions and Attitudes on Vocabulary Learning Experiences Using Smartphones Application

Table 1 show the the result of the survey of the learners’ perceptions on their vocabulary learning experiences in using the smartphone. Each category is composed of five indicators where the students provide their level of agreement.

Table 1. Learners’ Perceptions and Attitudes on Vocabulary Learning Experiences Using Smartphones Application

Indicators	Mean	S.D.	Verbal Interpretation
1. The apps gave me confidence knowing I had my resources at hand and could access it at any time.	3.40	0.754	Very high Positive
2. I checked the pronunciation of the words I was learning on the apps.	3.65	0.489	Very high Positive
3. Interacting with the apps helped me remember my English vocabulary better.	3.70	0.470	Very high Positive
4. I appreciated the corrective feedback of the apps.	3.55	0.510	Very high Positive
5. I am use the apps to test my vocabulary knowledge was more fun and less stressful.	3.80	0.523	Very high Positive
Overall Mean	3.62		Very High Positive

Legend:

- 3.40 – 3.99 *Very High Positive*
- 2.80 – 3.39 *Positive*
- 2.20 – 2.79 *Neutral*
- 1.60 – 2.19 *Low Positive*
- 1.00 – 1.59 *Very Low Positive*



The students perceived that their learning experiences in smartphone applications was very high positive in terms of increasing vocabulary knowledge (M=3.80, SD=0.523) as interacting with the app helped them better remember English vocabulary (M=3.70, SD=0.470). The students strongly agreed that that use of smartphone applications helped them check on their pronunciation (M=3.65, SD=0.489) as the app provides feedback (M=3.55, SD=0.510) and gave them confidence because it can be accessed anytime (M=3.40, SD=0.754).

The overall mean of 3.62 indicates that the students perceived that the use of Smartphone applications provided them vocabulary learning experiences at a very high positive extent. This means that most of the students are already opened- eyed upon using smartphone application in terms on their vocabulary learning. Thus, Saran et al. (2008, Lu (2008) and Kukulska- Hulme and Shield (2008) as cited by Davie and Hilber (2015) has shown that the students are favorable to the use of mobile device for learning vocabulary and studies have also shown positive results.

Table 2. Learners' Attitudes on Vocabulary Learning Experiences Using Smartphones Application

Indicators	Mean	S.D.	Verbal Interpretation
1. Using the smartphones while doing activities saves time.	3.25	0.786	High Positive Attitude
2. I prefer using the smartphone application to enhance my vocabulary skills.	3.30	0.733	High Positive Attitude
3. I enjoy using the smartphone application while learning English words.	3.55	0.510	Very High Positive Attitude
4. I feel that using smartphone application in learning increases my creativity.	3.25	0.716	High Positive Attitude
5. I learn English easily when using the smartphone.	3.15	0.671	High Positive Attitude
Overall Mean	3.30		High Positive Attitude

Legend:

- 3.40 – 3.99 *Very High Positive Attitude*
- 2.80 – 3.39 *High Positive Attitude*
- 2.20 – 2.79 *Neutral*
- 1.60 – 2.19 *Low Positive Attitude*
- 1.00 – 1.59 *Very Low Positive Attitude*

The students' attitudes noted that their learning experiences in smartphone applications was very high positive attitude in terms of enjoying the apps while learning English words (M=3.55, SD=0.501) as preferred to use the apps to enhance their smartphone applications in learning increased their creativity (M=3.25, SD=0.716) as using the apps while doing activities saves time (M=3.25, SD=0.786) and learned English easily when using smartphone (M=3.14, SD=0.671).

The overall mean of 3.30 indicates that the students' attitudes noted that the use of Smartphone applications provided them vocabulary learning experiences at a *high positive attitude* extent. This means that using the smartphone applications in

learning vocabulary give the students a positive attitude. Hence, Wisnuwardana (2019) stated that smartphones are now considered as the window through which the current generation is looking for knowledge and information. Educators are in need to learn how mobile- based informal learning can be integrated into instructed language learning.

B. Perceptions on the Benefits on the Smartphone Applications

Table 3 show the the result of the survey of the learners' perceptions on the benefit on the smartphone applications. Each category is composed of five indicators where the students provide their level of agreement.

**Table 3. Learners' Perceptions on the Benefits of Smartphones Application**

Indicators	Mean	S.D.	Verbal Interpretation
1. When I play the application, I feel confident to use the vocabulary points that I have learnt.	3.45	0.605	Highly Satisfied
2. The application helps me to remember the meaning of the words.	3.60	0.503	Highly Satisfied
3. I can remember vocabulary points longer after playing the application.	3.45	0.605	Highly Satisfied
4. When playing application, my friends and I can correct vocabulary errors for each other.	3.10	0.788	Satisfied
5. Interacting with the app helped me remember my English vocabulary better.	3.45	0.510	Highly Satisfied
Overall Mean	3.41		Highly Satisfied

Legend:3.40 – 3.99 *Highly Satisfied*2.80 – 3.39 *Satisfied*2.20 – 2.79 *Neutral*1.60 – 2.19 *Fairly Satisfied*1.00 – 1.59 *Highly unsatisfied*

The students perceived that the benefits on their learning experiences in Smartphone applications was *highly satisfied* in terms of remembering the meaning of the words ($M=3.60$, $SD=0.503$) as interacting with the app helped them better remember English vocabulary ($M=3.45$, $SD=0.510$). The students strongly agreed that after the use of Smartphone applications helped them remember vocabulary points longer and gave them confident to use the vocabulary points that they have learned ($M=3.45$, $SD=0.605$) as the app helped them to correct vocabulary errors for themselves ($M=3.10$, $SD=0.788$).

The overall mean of 3.41 indicates that the students perceived that the benefits of Smartphone applications provided them vocabulary learning experiences at a *highly satisfied* extent. This means that using the smartphone application in learning vocabulary give the students a complimentary result. Perhaps the students were more comfortable and accustomed in using their smartphones that gave them motivation in their vocabulary learning experience. Thus, Stefanska and Wanat (2017) articulated that the perceived benefits from the mobile applications may be treated as a motivating factor for installing and using them by the costumers.

C. Learners' Evaluation of Smartphones Application

The table below shows the the result of the learners' evaluation to the smartphone

applications. This is composed of ten indicators where the students provide their level of agreement.

Majority of the students affirmed that when they used Smartphone applications, they focused on the form of words (85.0%) while following separate schedule for each part of the app (85.0%). They also affirmed that the apps provided them feedback (80.0%) reminding them of their weakness and strong points. With the use of Smartphone applications, more than half of them asserted that their vocabulary proficiency increased (75.0%) and they became more optimistic about their vocabulary abilities, at the same time, the apps challenge their vocabulary ability (70.0%). Similarly, more than half of the students stated that they started using the apps based on their pre-planned scheduled and made them curious to look for similar vocabulary apps (65.0%).

However, only a small percentage was noted on how the quizzes in the smartphone applications resemble real-life situations. More than half of the students stated that this is somewhat achieved (60.0%) when the apps were used. The students seemed divided on their perceptions on how the apps can be used without any specialized skill. Some of them agreed with this statement (40.0%) while others believed that this is somewhat (45.0%) or not at all achieved



(15.0%).

This means that despite the favorable perceptions of the students in using the smartphones applications in learning vocabulary, except for insufficient features on the applications like giving authentic and resembled real life situation were observed by the students. This finding supports the study of Shai (2016) and

Sarfoah (2018), as cited by Darko-Adjei (2019) where favorable effects were revealed by the respondents. On the other hand, the study is inconsistent with the study of Kibona and Mgaya (2015) where it was revealed that the use of smartphones for leading negative effects in all level because of its addictive nature shifting the focus of the students from their studies.

Table 4. Learners' Evaluation of Smartphones Application

Statements	Yes		Somewhat		Not at all		Overall Mean
	F	%	F	%	F	%	
1. I started using the app based on a pre-planned schedule.	13	65.0%	6	30.0%	1	5.0%	2.60 (HS)
2. I had separate schedules for using each part of the app.	17	85.0%	3	15.0%	0	0.0%	2.85 (HS)
3. While using the app my main focus was on the form of words.	17	85.0%	3	15.0%	0	0.0%	2.85 (HS)
4. Using the app challenged my vocabulary ability.	14	70.0%	6	30.0%	0	0.0%	2.70 (HS)
5. The quizzes were designed authentically and resembled real life situations.	7	35.0%	12	60.0%	1	5.0%	2.30 (S)
6. The app increased my motivation to improve my vocabulary proficiency.	15	75.0%	5	25.0%	0	0.0%	2.75 (HS)
7. The app made me optimistic about my vocabulary abilities.	14	70.0%	5	25.0%	1	5.0%	2.65 (HS)
8. I was able to use the app without any specialized skill.	8	40.0%	9	45.0%	3	15.0%	2.25 (HS)
9. Using the app made me curious to look for similar vocabulary apps.	13	65.0%	6	30.0%	1	5.0%	2.60 (HS)
10. Provided feedback after quizzes was helpful in reminding me my weak and strong points.	16	80.0%	3	15.0%	1	5.0%	2.75 (HS)
Overall Mean: 2.63 Highly Satisfied							

Legend:

- 2.60 – 2.99 *Highly Satisfied*
- 2.20 – 2.59 *Satisfied*
- 1.80 – 2.19 *Neutral*
- 1.40 – 1.79 *Fairly Satisfied*
- 1.00 – 1.39 *Highly unsatisfied*

The level of performance of the experimental and controlled group during the vocabulary pre-test and post- test was preseted in table 5 and table 6.

**Table 5. Level of Students' Performance in the Pre-test**

Group	Lowest score	Highest score	Mean	Standard deviation	Analysis
Experimental	20	118	55.75	32.451	Intermediate
Controlled	20	104	56.80	2.979	Intermediate

Legend:

- 131.00 – 159.99 Proficient
 105.00 – 130.99 Advanced
 79.00 – 104.99 Upper-Intermediate
 53.00 – 78.99 Intermediate
 27.00 – 52.99 Elementary
 1.00 – 26.99 Beginner

The students in the experimental group showed *intermediate* performance in vocabulary levels test ($M=55.75$, $SD=32.451$) having 20 as the lowest score and 118 as the highest score. The students in the controlled group exhibited the same level of performance ($M=56.80$, $SD=2.979$) having 20 as the lowest score and 104 as the highest score.

This means that the two groups of students showed same level of performance during the pre-test. This means that the students were all at the same level of performance before implementing the use of smartphone applications to the experimental group for their vocabulary learning experience.

Table 6. Level of Students' Performance in the Post-test

Group	Lowest score	Highest score	Mean	Standard deviation	Analysis
Experimental	83	157	123.95	23.300	Advanced
Controlled	26	107	74.40	26.718	Intermediate

Legend:

- 131.00 – 159.99 Proficient
 105.00 – 130.99 Advanced
 79.00 – 104.99 Upper-Intermediate
 53.00 – 78.99 Intermediate
 27.00 – 52.99 Elementary
 1.00 – 26.99 Beginner

The students in the experimental group showed *advanced* performance in vocabulary levels test ($M=123.95$, $SD=23.300$) having 83 as the lowest score and 157 as the highest score. On the other hand, the students in the controlled group exhibited *intermediate* performance ($M=74.40$, $SD=26.718$) having 26 as the lowest score and 107 as the highest score.

This means that the two groups of students showed different level of performance during the post-test. This means that after implementing the use of smartphone applications to the experimental group for their vocabulary learning experience their level of performance is evidently progress from *intermediate* to

advanced. Hence, Jaradat (2014), as cited by Davie and Hilber (2015), examined students' attitudes and perceptions of the use of m- leaning attempted to measure changes to students' performance before and after the use of mobile learning. The results suggest that in case m- learning can be seen as an efficient tool, if not necessarily effective one.

D. Difference in the Level of Students' Performance

Comparison on the level of students' performance between the experimental and controlled group during the vocabulary pre-test and post- test was presented on the table below.



Table 7. Difference in the Level of Students' Performance

Group	Mean		Mean difference	t-value	p-value	Analysis
	Pre	Post				
Experimental	55.75	123.95	3.41	-9.902	0.000	<i>Significant</i>
Controlled	56.80	74.40	0.880	-4.666	0.000	<i>Significant</i>

The students in the experimental group showed *intermediate* performance in the pre-test and *advanced* performance in the post-test. Having a mean difference of 3.41, it was found that there is a *significant difference* in the pre-test and post-test scores of the students in the experimental group ($t=-9.902, p=0.000$). This means that their scores were more homogenous after implementing the use of smartphone applications for their vocabulary learning experience, and hence, involved that the effect of the applications on all respondents was more consistent in comparison with the classic methods where a huge modification between the learners' outcomes were witnessed.

The students in the controlled group showed *intermediate* performance both in the pre-test and in the post-test. Having a mean difference of 0.880, it was also found that there is a *significant* difference in the pre-test and post-test scores of the students in the controlled group ($t=-4.666, p=0.000$). This means that their scores on their pre- test show minimal improvement compare to their post- test result.

Related to the outcomes of the respondents. People can clearly see that the results improved significantly at the post- test in comparison with the corresponding pre- test. Moreover, the total mean score of the post- test is notably higher than the pre- test. This means that the respondents in the experiment improved their level of vocabulary through the smartphone applications. Henceforth, Orawiwanakul (2015), as cited by Basal et al. (2016), also found that the

experimental group in which mobile- assisted vocabulary exercises were used outperformed the control group. The advantage of using mobile phones and mobile applications in teaching vocabulary is having an opportunity to learn beyond classroom borders. In other words, "instructional activities are not limited to set place... but can be conducted anywhere and anytime [and] learners can engage, often asynchronously, with teachers, learning resources and other learners" (Bornman, 2012, p.288)

E. Significant Relationship of Students' Perceptions, Attitude and Benefits of Smartphone Application to the Students' Apps Evaluation and Vocabulary Performance

The foregoing table, Table 8, reveals the significant relationship between students' perceptions, attitudes and benefits of smartphones applications to the students' apps evaluation and vocabulary performance.

It is interesting to note that *significant* relationship exists between the students' perception on the vocabulary learning experiences and their evaluation of the smartphone application ($r=0.536, p=0.015$). The relationship is moderate and positive. This means that the smartphone application gave them confidence and they were optimistic that using the apps help them test their vocabulary knowledge and was more fun and less stressful.

Table 8. Significant Relationship of Students' Perception, Attitude and Benefits of Smartphone Application to the Students' App Evaluation and Vocabulary Performance

	Evaluation				Performance			
	r- value	p-value	Degree of Correlation	Analysis	r- value	p- value	Degree of Correlation	Analysis
Perception	0.536	0.015	Moderate	<i>Significant</i>	0.352	0.022	Weak	<i>Significant</i>
Attitude	0.562	0.010	Moderate	<i>Significant</i>	0.396	0.021	Weak	<i>Significant</i>
Benefits	0.584	0.007	Moderate	<i>Significant</i>	0.384	0.021	Weak	<i>Significant</i>

Degree of Correlation:

- ±0.80 – ±1.00 *Very strong*
- ±0.60 – ±0.79 *Strong*
- ±0.40 – ±0.59 *Moderate*

±0.20 – ±0.39 *Weak*

±0.00 – ±0.19 *Very weak*



A moderate and positive correlation was found between the students' attitude toward the use of smartphone application and its evaluation. The relationship is significant ($r=0.562$, $p=0.010$). This means that the smartphone application gave them enjoyment while learning the English word.

Similarly, a moderate and positive correlation was found between the students' benefits from using the smartphone application and its evaluation. The relationship is significant ($r=0.584$, $p=0.007$). This means that the smartphone applications helped them remember the meaning of the words.

There is a *significant* relationship between the students' perception on the vocabulary learning experiences and their performance in a vocabulary test ($r=0.352$, $p=0.022$). The relationship is weak but positive. This means that the students' perception on smartphone applications shown a weak degree of correlation but a positive result in the students' level of performance.

Weak but positive correlation was found between the students' attitude toward the use of smartphone application and their performance in a vocabulary test. The relationship is significant ($r=0.396$, $p=0.021$). This means that the students' attitudes on smartphone applications shown a weak degree of correlation but a positive result in the students' level of performance.

Furthermore, weak but positive correlation was found between the students' benefits from using the smartphone application and their performance in a vocabulary test. The relationship is significant ($r=0.384$, $p=0.021$). This means that the students' perception on benefits of smartphone applications shown a weak degree of correlation but a positive result in the students' level of performance.

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IV. CONCLUSIONS

Based on the findings, it is therefore concluded that there is a significant difference in the pre-test and post-test scores of the students in the experimental group with the help of the smartphone applications. Thus, the hypothesis was accepted. It is also concluded that there is a significant relationship between students' perceptions, attitudes and benefits of smartphone applications to the students' apps evaluation and vocabulary performance, thus the hypothesis was accepted.

V. RECOMMENDATIONS

With the above findings and conclusions, the following recommendations are advised for:

1. Students may use the smartphone applications to aid themselves to improve their vocabulary.
2. English teachers may consider using smartphone applications as an aid in teaching vocabulary competencies to students.
3. Supervisors and school heads may consider continuous conduct of training and workshops that promote the use of smartphone applications in the teaching-learning process that will guide the students in learning not only vocabulary, but also grammar and literature competencies and also other disciplines (subjects).
4. Similar or parallel studies can be replicated to larger population and different schools, college or university.
5. Future researchers may also use different smartphone applications that focus on grammar and literature competencies that would be a helpful aid in teaching English to learners.

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