International Journal of English Language and Literature Studies
ISSN(e): 2306-0646
ISSN(p): 2306-9910
DOI: 10.18488/journal.23.2020.93.172.184
Vol. 9, No. 3, 172-184.

URL: www.aessweb.com

THE USE OF VOCA-LENS TO ENHANCE THE STUDENTS' VOCABULARY REPERTOIRE

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Article History
Received: 25 March 2020
Revised: 30 April 2020
Accepted: 3 June 2020
Published: 22 June 2020

Keywords
Vocabulary
Reading motivation
English as a second language (ESL)
ICT
Quantitative
Language education.

ABSTRACT

Education has shifted to the digital era. The primary pupils whom known as the alpha generation, grow up with technology, were no longer passive learners. Information and communications technology (ICT) is used as teaching tool in which claims to help in dissemination of learning contents. English language educators play the role to bridge the gap between ICT and English language teaching in order to optimize its benefits in education field. This current study which employs mixed method triangulation design model is intended to (1) enhance the repertoire of vocabulary and (2) reading motivation among primary pupils. A total of 56 respondents were chosen from 3 schools in Song and Mukah. The quantitative data was collected from pre and post tests of reading comprehension achievement test to answer first research question. Quantitative data from semantic differential scale questionnaire which comprises of 20 items was analysed to answer the second research question. It was also justified by qualitative data from semi structured interview. The positive findings from the three instruments showed the effectiveness of Voca- Lens. The innovation of Voca- Lens could be further utilized in the lesson if the availability of devices and internet connection were enhanced.

Contribution/ Originality: This study depicts the significances of Voca-Lens in enhancing the learning of vocabulary among the primary school learners and provides new ideas to teachers in teaching vocabulary by incorporating technology in the classroom.

1. INTRODUCTION

English is entitled as lingua franca due to its essential role in global education and job opportunities. Due to the vital role of English, the young English language learners has gradually become the focus of growing interest as cited in Michel, Kormos, Brunfaut, and Ratajczak (2019). Mangen, Hoel, Jernes, and Moser (2019) shared the current project which aimed to assist English learning focused on new media found in the daily life of young learners, namely digital technologies. Due to the intuitive touch screen interface, the use of tablet such as iPad is more user friendly to the young learners. The popularity of tablet has been integrated in the language teaching so as to improve young learner's English proficiency level. Tablet technologies has gradually replaced print picture books. Recent is the One Laptop per Child (OLPC) programme by which the education authority provided laptops

(free or at subsidized cost) to the learners rather than traditional textbooks (Mora, Escardíbul, & Di Pietro, 2018). Many researches had been conducted so as to test the effectiveness of ICT in teaching English language reading skill as cited in Mora et al. (2018). ICT has been funded across different school districts in United Kingdom and the result revealed the positive impacts on English grades. Contrary to expectations, the finding in several Dutch primary schools with low-income students revealed the negative impacts of ICT in learning English. On the other hand, the data in school of California showed the enhancement of internet access in the lesson, did not show any impact on pupils' achievement.

Education has moved into the digital era. Montrieux, Vanderlinde, Schellens, and De Marez (2015) brought the awareness on the need to shift as the learners were no longer seen as passive consumer of input but as active participants. In Malaysia, Zhang, Yang, Chang, and Chang (2016) reviewed the literature from the period and found that one of the keys aims of Malaysia Education Blueprint is to enable pupils participate actively through ICT. ICT is being emphasized because the primary level pupils who are born from the year of 2010 to 2025 are known as the Alpha generation. According to Mutalib, Halim, and Yahaya (2015) Malaysian researchers drew the attention on the positive impacts of using social media in the lessons. This was supported by Teoh and Yunus (2019) who highlighted the essential of bringing the pupils outside the four walls of the classrooms, learning beyond the classroom through social media. Educators need to undergo revolution; changes are needed. Learners learn best when the educators could attend to their learning preferences. Based on the statistic in Malaysian Communications and Multimedia Commission (MCMC), the percentage of Internet users had risen from 76.9% in 2016 to 87.4% in 2018. At primary school level, 9 out of 10 pupils are internet users. In Malaysia, students are exposed to English language subject since preschool level. Nevertheless, they still struggle to learn English language because of the insufficient of vocabulary range as cited in Hashim, Rafiq, and Yunus (2019). This was further justified by a statement, which is "vocabulary acquisition in a foreign language is a problematic and time-consuming task" Yunus, Salehi, and Amini (2016). Without sufficient vocabulary, the learners could not comprehend the context in which later impede the learning to take place. Hence, it is essential to increase the vocabulary range of the students so as to tackle the difficulties in reading comprehension skill.

Moreover, rural schools in Sarawak are in straitened circumstances in acquiring English language. Cheng, Yunus, and Mohamad (2016) also highlighted that in the rural school of Sarawak, English language is the killer subject in UPSR. The researchers of these studies would like to highlight the pupils in rural areas have weak foundation in English language. Basic vocabulary is required so as to comprehend the words before phrases and sentences. In order to enable the learners to make a first move, motivation is needed. They need to be interested to learn. In rural areas, the learners are excited when the smartphones are utilized to play the music as required in the lesson. Abeele (2016) indicated that the use of smartphones among youth and students is growing rapidly and it is parallel to the Education 4.0. Hussin (2018) explained that Education 4.0 is the response to the needs of Industrial Revolution 4.0 (4IR) whereby, human and technology are aligned to enable new possibilities in job recruitment and broader fields.

The advancement of technology changes the teaching and learning method and it promotes collaborative learning among learners to complete their tasks. For instance, Google applications for education have become significantly important and useful in education system. Despite being a popular search engine, Google offers a broad selection of apps such as Google Classroom for both learners and teachers. Another app that is gradually being used was Google Lens. It is an image recognition technology developed by Google. It aims to provide relevant information related to objects it identifies using visual analysis. The researchers in this study would like to implement Google Lens in the lesson so as to teach vocabulary. Instead of taking the pictures of the products, the learners take the picture of the words and search for the meaning. The adaptation of Google Lens for education purpose has led to the innovation of Voca Lens. The innovation had been conducted by a researcher Yevheniy (2018) in Ukraine who initiated the idea that Google Lens was effective in self-educational process. Learning with

technology needs more than making learning activities digital, it is also about creating contexts for authentic learning.

Thus, the aims of this study are to enhance the repertoire of vocabulary and the reading motivation among primary pupils. The study aims to answer the following research questions:

1) How does Voca- Lens enhance the repertoire of vocabulary among primary pupils?
2) How does Voca- Lens assist the reading motivation among primary pupils?

2. LITERATURE REVIEW

English is used and spoken as a second language in the countries which are typically ex-colonies of the United Kingdom or the United States including Malaysia. Yunus and Sukri (2017) stated that individuals who are proficient in English language are likely to enjoy more benefits and privileges than the others. Foreign researcher such as Bakken and Lund (2018) explained English becomes a compulsory subject for pupils in Norwegian schools as the need for language skills has increased and learners' perception of the need for English language acquisition has changed. In the context of Malaysian Education System, Malaysian primary students' English proficiency will be assessed through *Ujian Penilaian Sekolah Rendah* (UPSR) on various language skills including reading comprehension, writing and grammar component by the end of six-year education. Moghadam, Zainal, and Ghaderpour (2012) reviewed that vocabulary learning is the central in language acquisition, whether second or foreign language (Sidek & Rahim, 2015). Furthermore, respondent teachers in Bakken and Lund (2018) indicated that reading text as a source of input for vocabulary building and starting point to develop other English language skills. Thus, it is important to increase the repertoire of vocabulary among primary students in order to improve their academic performance. The consequences of having low vocabulary could result in having difficulties in comprehending the contents of reading materials as well as slow learning progress.

Information and Communication Technology (ICT) is a boom for students today as it has significant and positive effects on learners' achievement (Budhwar, 2017). Pathak and Manoj (2018) referred ICT as the varied collection of technological gears and resources which are made use of to communicate. Many studies have been conducted in the field and proved that use of ICT in education enhances the quality of education if used properly. Skryabin, Zhang, Liu, and Zhang (2015) examined the influence of individual ICT usage on student achievement. It was found that the use of ICT for school-related task improved students' achievements. At the dawn of commercial technology, smartphone is becoming so handy in assisting people completing their tasks with ease. Chan, Walker, and Gleaves (2015) conducted a study focusing on smartphones to explore students' live experiences of using smartphones in diverse learning contexts. According to Chan et al. (2015) the participants viewed smartphones as devices and digital companions to help them in their studies and making friends.

In 21st century teaching and learning classroom, Google becomes the most preferable medium for language teachers to seek for teaching materials and resources alongside with Google Apps. Motteram (2013) justified the use of Google by different users globally in case studies from search engine to specific Google Apps such as Google Docs, Google Drive, Google classroom and etc. Malaysia Ministry of Education (MOE) announced the termination of Frog Virtual Learning Environment (VLE) and replaced with Google Classroom (Kementerian Pendidikan Malaysia, 2019). This VLE platform is capable of creating an interactive and information-rich educational environment with the integration of other Google applications such as Google Drive, Gmail, YouTube and many more (Bondarenko, Mantulenko, & Pikilnyak, 2018). Finally, Google released Google Lens in 2017 and Yevheniy (2018) was among the first to explore the idea of implementing Google Lens in STEM education and deemed it was effective in self-educational process.

3. METHODOLOGY

3.1. Research Design

This study had employed and adopted mixed method triangulation research model. In this model, the researchers collected and analyzed quantitative and qualitative data separately. The researchers collected quantitative data by utilizing reading comprehension achievement test and semantic differential scale questionnaire. To triangulate the data, semi-structured interview was conducted. Both quantitative and qualitative data was conducted on the same phenomenon. The different results were converged, by which the researchers compared and contrasted the different results during the interpretation. As mentioned by Creswell and Plano (2011) researchers use this model to compare results or to validate, confirm, or corroborate quantitative results with qualitative findings. The researchers attempted to merge the two data sets. During analysis, the two data sets were transformed to facilitate integration as shown in Figure 1 (Creswell & Plano, 2011). The purpose of this model is to end up with valid and well-substantiated conclusions about a single phenomenon.

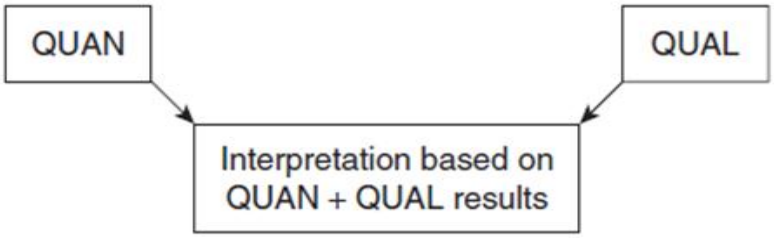

Figure-1. Mixed method triangulation design model.
Source: Creswell and Plano (2011).

These two sets of data collections were conducted in two cycles. In the first cycle, the researchers planned on the conventional way to tackle pupils' vocabulary. Since the schools' libraries were equipped with the reading resources of dictionary, the researchers would like to benefit the resources by implementing dictionary in the lesson. The dictionaries were in the form of thesaurus dictionary, direct translation dictionary and monolingual dictionary. Some of the pupils were self-equipped with their own dictionary. In the average, each class would have 11 dictionaries for the enrolment of 20 pupils. By interpreting the quantitative and qualitative data, there was no significant correlation between the use of dictionary with the reading achievement and reading motivation score. The pupils also showed no positive response during interview. Reflecting on the implementation, the pupils brought the researchers with the perspective that one of the major drawbacks of dictionary was impracticality in time bound. Dictionary is an effective teaching tool. It contains the information of the word's spelling, pronunciation, word class, exemplars of sentences, synonym and antonym. Unfortunately, very little time was provided for dictionary use in most classroom as Saleh (2016) mentioned that it was due to the valid limitation of time. However, he highlighted that the good use of a dictionary encouraged learning outside the classroom, providing autonomy on self- learning.

Before conducting the second cycle, the researchers distributed reading comprehension achievement test to assess pupils' proficiency level, which is the pre- test. The researchers would like to utilize the benefits of using dictionary at the same time to meet the practicality of time. Thus, the innovation of Voca- Lens was initiated. In the second cycle, the researchers brought the pupils to the library. This transition stage was carried out before the schooling hour so as to ensure the pupils were familiar with Voca- Lens. Each school had conducted three times in the average before the implementation of Voca- Lens in the lesson. The pupils were divided into groups with members of 4, sharing a smartphone. The pupils were briefed on the steps of using Voca- Lens, then applied it on the story books in the library. The implementation began in the fifth week and conducted in every English lesson of the week. By the end of eighth week, the researchers collected the data by conducting reading comprehension achievement test, semantic differential scale questionnaire and semi-structured interview.

3.2. Sample

The research was conducted at three primary schools in two districts, Song and Mukah. The two rural schools in the districts of Mukah were located about 60 kilometres from Mukah. The schools were located in a rural village, Jalan Orang Kaya Abang Selair and Jalan Mukah-Balingian. Each school had approximated 150 enrolment of pupils and 13 teachers. The ethnic groups are majority Iban and Melanau with economic background are farmers and fishermen. The school of Song was located around Katibas River, 30 kilometers from Song. The school had a population of 50 pupils, and 10 teachers. The majority of the pupils' population in the school belongs to Iban ethnic group. The main occupations in this village are fishermen and farmers. The enrolment of Year 3 pupils in each school was shown in Table 1.

Table-1. Number of Year 3 pupils in each school.

School	District	Enrolment
A	Mukah	25
B	Mukah	30
C	Song	4
	Total	59

The research was done on 59 Year 3 pupils in three different schools from Song and Mukah. In order to select respondents with different opinions, the researchers had chosen not to accept voluntarily participants. A sample of 56 respondents with low to intermediate English proficiency level were chosen based on Krejcie and Morgan (1970) sample size table. In all cases participants' consent was obtained from parents as well as the pupils. The pupils in the three schools were very similar in terms of culture background and English proficiency level. Based on the pupils' overall performance on formative assessment in schools, their English-L2 proficiency varied between the A2 to B2 level on the CEFR.

3.3. Research Instruments

3.3.1. Reading Comprehension Achievement Test

The instruments used for pre-test and post-test were adapted from Get Smart Workbook, which were in relevance to Year 3 pupils' learning content. The tests were in four main formats, namely matching words with pictures, multichoice questions, completing the phrases and answering simple Wh-questions. Each test had an accumulated score of 100%. Each week the pupils would be provided with only one type of test format. In order to conserve pupils reading motivation, the difficulty level would be increased gradually, in which week 1 will be exposing to picture matching, week 2 on multichoice questions as listed on the format.

The pilot test was conducted when the test was applied on a random sample of 30 pupils from other school. The random sample shared similar characteristics of the study sample. The result was to measure the test's validity and reliability. It also helped to define the suitable time for conducting the test. The time needed was estimated according to the following equation: (time of the first pupil + time of the last pupil)/2 = (40+60)/2 = 50 minutes, within the timeframe of the English lesson. To check the content validity of the test, the researcher introduced the test to the School Improvement Specialist Coaches (SISC+). According to the valuable remarks, the test was selected.

3.3.2. Semantic Differential Scale Questionnaire

The semantic differential scale questionnaire was employed from Rodriguez, Riaa, and Gomez (2017) to assess participants' motivation towards reading. The participants had to choose a score in an open scale from 1 to 7, depending on their closer opinions of the statements on both ends see Table 4. The 20 items found in the questionnaire include aspects on respondents' attention span on reading task (item 1 to 11), teachers' assessable

(item 12, 13, 19 to 20) and peer cooperation in reading task (item 14 to 18). The items in the questionnaire were reviewed in terms of the aspects of clarity, redundancy and readability by two experts so that the items would be more reader-friendly to the primary school pupils. The validity of reading motivation scale was enhanced in three ways. First, the reading motivation scale was first given to a set of pupils who shared similar characteristics of the 30 samples for pilot test. Next, the scale was revised by the counsellors from schools. The counsellors have the experiences of counselling pupils for at least 5 years. The reviews from experienced counsellors helped to enhance referee validity. The reliability of the scale was enhanced by ensuring the internal consistency had been achieved. Each scale showed they were closely related set of items as a group.

3.3.3. Semi-structured interview

The semi-structured interview was developed in English, translated into Bahasa Malaysia during interview section. The semi-structured interviews were performed informally after the schooling hour. The interviewees were divided into two group based on their preferences. For every focus group, a semi-structured interview of 45 minutes was conducted in order to investigate the participants' perceptions after 4 weeks of using Voca- Lens in the reading lesson. More specifically, 13 explorative questions were structured into five categories: introduction questions, questions concerning with the use of dictionary versus Voca- Lens, questions concerning learning preference and final questions see Table 2.

Table-2. Semi- structured interview questions.

Item	Questions	Categories
1	How do you feel on today's lesson?	Introduction questions
2	Do you know how to use a dictionary? Can you show me the steps?	Use of dictionary
3	How often do you use it? Do you use it in the class? What about at home?	
4	Do you like to use dictionary to find the meaning of the words?	
5	Did some problems occurred by using dictionary?	
6	Tell me the pros and cons of using dictionary.	
7	Do you know how to use Voca- Lens? Can you show me the steps?	Use of Voca – Lens
8	Do you like to use Voca-Lens to find the meaning of the words?	
9	Did some problems occurred by using Voca- Lens	
10	Tell me the pros and cons of using Voca- Lens	
11	Which do you prefer? Voca-Lens or dictionary?	Learning Preferences
12	Why do you prefer Voca-Lens/ dictionary?	
13	What are your expectations for the future?	Final questions

3.4. Implementation Procedure

Figure-2. Install Voca- Lens from Appstore.

Figure-3. Click Voca- Lens.

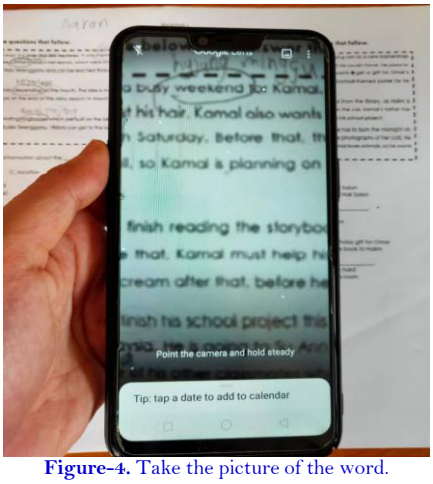

Figure-4. Take the picture of the word.

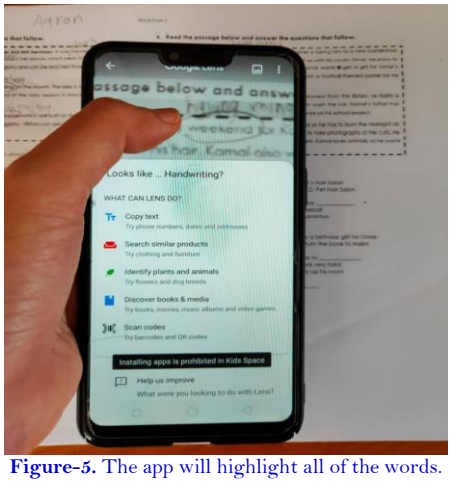

Figure-5. The app will highlight all of the words.

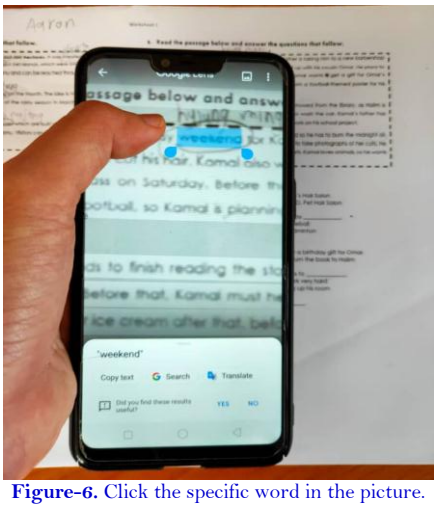

Figure-6. Click the specific word in the picture.

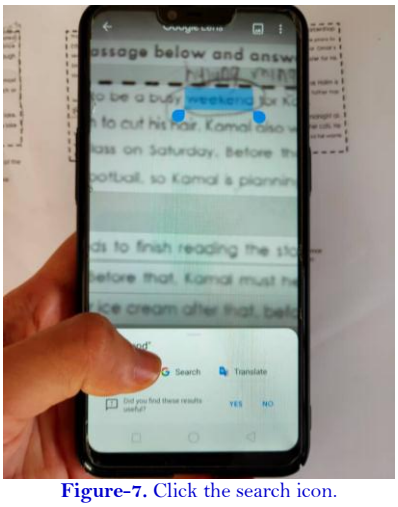

Figure-7. Click the search icon.

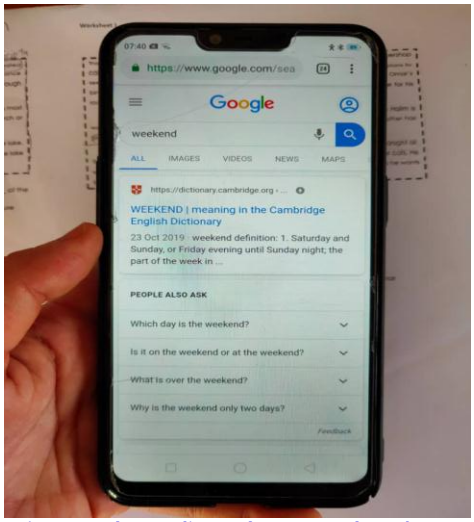

Figure-8. The app directs the users to the webpage.

Figure-9. The users will be enlightened by clicking the tab of image or video.

3.5. Data Analysis

The quantitative measure was obtained from the pre-test and post test results. The mean scores were compared to answer first research question of (1) How does Voca- Lens enhance the repertoire of vocabulary among primary pupils? Another descriptive data of mean was computed from semantic differential questionnaire to answer second research question (2) how does Voca- Lens assist the reading motivation among primary pupils? This research question was also answered by thematic analysis through coding and grouping to find emerging themes. Thus,

findings obtained from reading comprehension achievement test were triangulated with descriptive and thematic analysis.

4. FINDINGS

RQ1: How does Voca-Lens enhance the repertoire of vocabulary among primary pupils?

In order to answer the first research question, the instrument of reading comprehension achievement test was utilized. The quantitative data analysis was obtained by comparing the results from pre-test and post test of the instrument. The data was analyzed descriptively. Table 3 presented the average score of three schools in Song, Kapit and Balingian, Mukah.

Table-3. Respondents' mean score between pre and post tests based on schools.

School	Pretest (%)	Post-test (%)	Increment value (%)
A	61	69	8
B	67	88	21
C	57	71	14

Based on the quantitative data showed in Table 3, the respondents from three schools showed significant improvement in their performance, specifically in the learning of vocabulary.

Table-4. Average punctuations obtained by means of the semantic differential scale.

No.	Descriptions	Mean of scale	Descriptions
1	It was boring.	6.6	It's been fun.
2	I lost time.	5.3	I used the time in a positive way.
3	I have learned fewer things than other times.	5.6	I learned more things than other times.
4	I read less than usual.	6.1	I read a lot.
5	It was not interesting.	6.3	It was interesting.
6	I have not understood what we've done.	5.6	I correctly understood the activity.
7	I got distracted.	5.9	I was concentrated.
8	I copied and pasted information.	5.3	I have created and shared information.
9	I am no longer interested in this topic.	6.0	I want to learn more about the topic.
10	It has been useless.	5.9	It has been useful.
11	I did not like this way of working at all.	6.4	I loved this way of working.
12	The teacher has not helped me.	5.3	The teacher has helped me.
13	The teacher has not given us clear instruction.	5.2	The teacher has clearly explained to us what we need to do.
14	We have not shared among peers' materials.	5.8	We have shared materials among peers.
15	Now I find it difficult to interact with my peers.	6.0	Now I find it easier to interact with my peers.
16	We have not managed to do the job when working as a group.	5.2	Working as a group we have managed to do the job.
17	The group size has not been adequate (there was too few or too many homework)	5.8	The group size was adequate.
18	I have not been comfortable with my teammates	6.0	I've been comfortable with my teammates.
19	The teacher has not been monitoring our work.	5.7	The teacher has told us if we did well the tasks.
20	The teacher has not told us the quality of the work presented.	5.4	The teacher told us what good or bad job was.

Respondents from School B were showing a tremendous improvement of 21% in mean score. Small class size enabled one-to one facilitation on using Voca-Lens during the instructional activities between teacher and pupils, contributed to better results. As for School C, a notable increment of 14% in mean score was achieved by the

respondents. The familiarity of using smartphones had made it easier for the pupils to use Voca-Lens in their reading tasks, in which conduced to the increment of marks. Participants from school A had shown a slight improvement of 8% in the mean score. The finding was as such due to technical problem of operating the smartphones. The researcher's smartphone was lagged due to insufficient storage hence disrupted the process of completing the task. Despite of this drawbacks, the slight improvement could show the effectiveness of Voca-Lens in enhancing pupils' vocabulary. The significant increment of marks between pre-test and post-test in school B and school C showed that Voca-Lens is efficacious in enhancing the vocabulary learning among participants in the schools involved.

RQ2: How does Voca-Lens assist the reading motivation among primary pupils?

Research question two was answered via semantic differential scale questionnaire. The analysis was made to derive a relevant qualitative data in the themes of perspective towards learning, the usefulness of Voca-Lens and learning preference. The mean of scale obtained for each item in the Semantic differential scale questionnaire was illustrated in Table 4.

As illustrated in the Table 4, item 1 inferred that most respondents had positive perspective towards learning by indicating 'it is fun' since the mean score is between 6 and 7 which are the maximum score towards the positive end. The use of Voca-Lens in vocabulary learning permitted the primary pupils to use smartphones in the classroom, which was an 'attraction' to retain their interest towards learning. It acted as an extrinsic motivation to sustain their interests. In addition, item 4 suggested that most of the participants agreed that Voca-Lens helped them to read more with the average score of 6.1. Motivation, either extrinsic or intrinsic is a drive to boost up pupils' interest in completing the reading tasks. As the activities were carried out in groups, most of the participants preferred cooperative learning with the mean score of 6.4 on the semantic differential scale questionnaire. The comfortability in the groups and the suitability of learning approach played a part in captivating pupils' interests towards the learning of vocabulary. Group activities lowered pupils' anxiety level in answering questions especially for low achievers' group, instead of doing it individually. Thus, it would encourage the pupils to attempt in answering the questions and completing the tasks. Henceforth, this intervention has positively impacted the respondents in term of assisting their reading motivation.

Table-5. Semi-structured interview analysis.

Semi structured interview questions	Respondent/District	Excerpts	Theme
How do you feel when you are using Voca-lens?	Boy, Song Girl, Mukah Girl, Mukah	• **Happy** and **fun** • **Happy** and [paused] **excited** • ***Gembira. Saya mau bagi adik cuba.*** *Boleh?*	Positive feeling encourages sharing
Can you tell me how you use it?	Girl, Mukah Boy, Song Boy, Mukah	• **Take photo** and **translate** • **Take picture…click word… see picture.** • **Click**… ***tekan cari***…and **video**	Applicable and achieve ICT skill
Which do you prefer Voca-Lens or dictionary? Why?	Girl, Mukah Boy, Song Boy, Mukah Girl, Song	• Voca-Lens. **Easy to use. Dont have to spell**. • Voca-Lens. It is **funny** ***kerana gambar bergerak*** **(gif).** • Voca-Lens ***senang dan seronok.*** • Voca-Lens **can see** (pause) **pictures, video.** ***Camping ada gambar jadi tahu.***	User friendly encourages learning to take place subconsciously

The qualitative measure was further extended by conducting a semi-structured interview in order to establish a more reliable data regarding respondents' perspective on the use of Voca-Lens to assist their reading motivation. The responses were coded using thematic approach as shown in Table 5.

The use of Voca-Lens in vocabulary learning during reading lesson instilled positive feelings towards learning. For example, a boy from Song and a girl from Mukah used the positive adjectives 'happy' 'fun' and 'excited' to describe their feelings while using Voca-Lens. It indicated that they viewed the learning process as an enjoyable process. Besides, a girl from Mukah was also interested in letting her younger sibling to use Voca-Lens. This showed that the respondent found that Voca-Lens was beneficial in the learning of vocabulary. Hence, instilling pleasure in the learning of vocabulary is a good way to light up fire under the pupils to read.

Apart from that, Voca-Lens provided a more interesting learning context for the learners to learn English language instead of using conventional dictionary. Nowadays, the pupils are familiar to smartphones and current technology, therefore, it is significant to use smartphone as a tool in the teaching and learning process. For instance, a boy from rural area, which is Song was able to explain the steps of using Voca-Lens explicitly by saying 'Take picture... click word... see picture." This denoted that Voca-Lens is applicable in the classroom as well as helping the pupils to achieve ICT skill. The user-friendly feature of Voca-Lens, makes it preferable among the pupils. The exerpts from semi-structured interviews expressed that pupils favoured Vova-Lens over the conventional dictionary to search for meaning of vocabulary. Both responses indicated that Voca-Lens was easy to be used, therefore, preferred by the pupils.

The utilization of Voca-Lens in vocabulary learning provides variety types of visual cues that suit pupils' learning styles. The learners are actively participating in the learning process. Their attention span was longer when Voca-Lens was integrated in the lesson due to its interesting features. For example, a boy from Song said that "It is funny *kerana gambar bergerak* (gif)." In addition, a girl from Song stated that Voca-Lens provided pictures which help her to understand the meaning of the word. Thus, the pupils were offered with different learning contexts to fit their learning style, instead of depending solely on the conventional dictionary, which is too wordy and less attractive.

The positive response from the respondents was summarized into these three themes, namely positive feelings, achievable ICT skills and user friendly. These three themes which act as the factors that sustain the pupils to motivate to read, to read more than they usually do.

5. DISCUSSIONS

The aims of this study were to enhance the repertoire of vocabulary and assist reading motivation among primary pupils. The findings of current research were aligned with Holmes and Gardner (2016) who suggested that Mobile Assisted Language Learning (MALL), Computer Assisted Language Learning (CALL), and E-learning have become more favorable in English language classroom. Besides, the findings are corresponding to the current trend in the global educational reform, whereby the English language teaching has been extensively influenced by the development in the field of Science and technology. Davies, Dean, and Ball (2013) asserted that ICT integrated instruction is a way of learning in an integrative way with the excessive use of ICT. As mentioned by Skryabin et al. (2015) their study further justified the significance of using ICT in enhancing repertoire of vocabulary where Voca-Lens in this study is highly effective as the respondents' repertoire of vocabulary was enhanced. This is further supported by Hashim et al. (2019) who emphasized that students learn better when they are aroused in the technology-based teaching method lesson.

The observations from this study demonstrated that teaching vocabulary using Voca-Lens was more motivating and able to increase the repertoire of vocabulary among the primary pupils. Alkamel and Chouthaiwale (2018) claimed that ICT provides a platform for the learners to pick out the elements which suit their learning strategies. He further claimed that this is failed to be fulfilled by the conventional methods. Based on the findings,

Voca-Lens is beneficial towards respondents' vocabulary learning by providing visual cues to aid their understanding of the word meaning. The findings were also parallel to findings in a research conducted by Hashemi and Pourgharib (2013). They conducted a research to examine the effect of visual aids on new vocabularies learning. As a result, it was undeniable that suitable visual aids can increase and lead to a useful approach in teaching and learning. Nevertheless, the advantages of using visuals in language teaching are enormous such as grabbing and maintaining concept as well as to boost their motivation to learn the language (Patesan, Balagiu, & Alibec, 2018). Thus, Voca-Lens is a tool to assist the learners in vocabulary learning and to captivate their interest and motivation. Although there is not much research and study conducted about Google lens but our experimental set up bears a close resemblance to reconnect with the researcher, Yevheniy (2018) in Ukraine. The potential of Google lens in language teaching is yet to be further developed.

6. CONCLUSION

The findings of this research showed the significances of Voca-Lens in enhancing the learning of vocabulary among the primary school learners as well as to increase their motivation. The study contributed to the English Language Teaching (ELT) among primary school teachers and learners as it provided new ideas to teach vocabulary by incorporating technology in the classroom. The importance of motivation in learning is undeniable as it is found that visual cues from Voca-Lens had a great impact in motivating learners to enhance their reading skill to have better text comprehension ability. Furthermore, Voca-Lens promotes student-centered learning approach to enhance their collaborative learning. Therefore, on the other hand, ICT could be carefully integrated into the lesson to solve some difficulties in the teaching and learning process. The findings of this research could also be used for future studies on language teaching tools as well as to be extended to further develop other language skills such as writing and speaking skills. There is a mutual relationship between vocabulary acquisition and reading comprehension: the more the repertoire of vocabulary, the better the learners in reading comprehension tasks. The present research has several limitations. Firstly, teachers and learners have to deal with the availability of equipment itself as bringing smartphone to school is against the rules in most of the schools. Secondly, the visual cues from Voca-Lens are subject to internet connectivity. It is recommended that future research in this area will be able to develop an application that can be operated offline to achieve an optimum learning.

Funding: This research was supported by the grants from the Faculty of Education, Universiti Kebangsaan Malaysia, GG-2018-001 and GG-2019-009.
Competing Interests: The authors declare that they have no competing interests.
Acknowledgement: All authors contributed equally to the conception and design of the study.

REFERENCES

Abeele, V. M. M. (2016). Mobile lifestyles: Conceptualizing heterogeneity in mobile youth culture. *New Media & Society, 18*(6), 908-926.Available at: https://doi.org/10.1177/1461444814551349.

Alkamel, M. A. A., & Chouthaiwale, S. S. (2018). The use of ICT tools in english language teaching and learning: A literature review. *Veda's Journal of English Language and Literature-JOELL, 5*(2), 29-33.

Bakken, A. S., & Lund, R. E. (2018). Why should learners of English read? Norwegian English teachers' notions of EFL reading. *Teaching and Teacher Education, 70*, 78-87.Available at: https://doi.org/10.1016/j.tate.2017.11.002.

Bondarenko, O. V., Mantulenko, S. V., & Pikilnyak, A. V. (2018). *Google classroom as a tool of support of blended learning for geography students*. Paper presented at the CEUR Workshop Proceedings.

Budhwar, K. (2017). The role of technology in education. *International Journal of Engineering Applied Sciences and Technology, 2*(8), 55–57.

Chan, N. N., Walker, C., & Gleaves, A. (2015). An exploration of students' lived experiences of using smartphones in diverse learning contexts using a hermeneutic phenomenological approach. *Computers & Education*, *82*, 96-106.Available at: https://doi.org/10.1016/j.compedu.2014.11.001.

Cheng, L., Yunus, M. M., & Mohamad, M. (2016). Issues contributing to low performance of English in a national school in Song, Sarawak. *Proceedings of the ICECRS*, *1*(1).

Creswell, J. W., & Plano, C. V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Los Angeles: SAGE.

Davies, R. S., Dean, D. L., & Ball, N. (2013). Flipping the classroom and instructional technology integration in a college-level information systems spreadsheet course. *Educational Technology Research and Development*, *61*(4), 563-580.Available at: https://doi.org/10.1007/s11423-013-9305-6.

Hashemi, M., & Pourgharib, B. (2013). The effect of visual instruction on new vocabularies learning. *International Journal of Basic Sciences & Applied Research*, *2*(6), 623-627.

Hashim, H., Rafiq, K. R. M., & Yunus, M. M. (2019). Improving ESL learners' grammar with gamified-learning. *Arab World English Journal*(5), 41-50.

Holmes, B., & Gardner, J. (2016). *E-Learning: Concepts and practice*. London: SAGE.

Hussin, A. A. (2018). Education 4.0 made simple: Ideas for teaching. *International Journal of Education and Literacy Studies*, *6*(3), 92-98.Available at: https://doi.org/10.7575/aiac.ijels.v.6n.3p.92.

Kementerian Pendidikan Malaysia. (2019). Google classroom. Retrieved from https://www.moe.gov.my/pemberitahuan/pengumuman/google-classroom-gc.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607-610.Available at: https://doi.org/10.1177/001316447003000308.

Mangen, A., Hoel, T., Jernes, M., & Moser, T. (2019). Shared, dialogue-based reading with books vs tablets in early childhood education and care: Protocol for a mixed-methods intervention study. *International Journal of Educational Research*, *97*, 88-98.Available at: https://doi.org/10.1016/j.ijer.2019.07.002.

Michel, M., Kormos, J., Brunfaut, T., & Ratajczak, M. (2019). The role of working memory in young second language learners' written performances. *Journal of Second Language Writing*, *45*, 31-45.Available at: https://doi.org/10.1016/j.jslw.2019.03.002.

Moghadam, S. H., Zainal, Z., & Ghaderpour, M. (2012). A review on the important role of vocabulary knowledge in reading comprehension performance. *Procedia-Social and Behavioral Sciences*, *66*, 555-563.Available at: https://doi.org/10.1016/j.sbspro.2012.11.300.

Montrieux, H., Vanderlinde, R., Schellens, T., & De Marez, L. (2015). Teaching and learning with mobile technology: A qualitative explorative study about the introduction of tablet devices in secondary education. *PloS One*, *10*(12), 1-17.

Mora, T., Escardíbul, J.-O., & Di Pietro, G. (2018). Computers and students' achievement: An analysis of the one laptop per child program in Catalonia. *International Journal of Educational Research*, *92*, 145-157.Available at: https://doi.org/10.1016/j.ijer.2018.09.013.

Motteram, G. (2013). *Innovations in learning technologies for English language teaching*. London: British Council.

Mutalib, M. A., Halim, N. D. A., & Yahaya, N. N. (2015). *A review on use of social media in teaching and learning*. Paper presented at the 2nd International Education Postgraduate Seminar (IEPS), Johor Bahru, Malaysia.

Patesan, M., Balagiu, A., & Alibec, C. (2018). Visual aids in language education. *International Conference Knowledge based Organization*, *24*(2), 357-360.

Pathak, K., & Manoj, N. (2018). ICT in educational institution: Need, role and importance. *IOSR Journal of Humanities and Social Science*, *23*(1), 42-46.

Rodriguez, A. I., Riaa, B. G., & Gomez, M. C. S. (2017). Collaborative learning and mobile devices: An educational experience in primary education. *Computers in Human Behavior*, *72*, 664-677.Available at: https://doi.org/10.1016/j.chb.2016.07.019.

Saleh, A. I. M. (2016). *The effectiveness of using keyword based-instruction on developing eighth Graders' English vocabulary and its retention in Gaza*. Masters Dissertation, The Islamic University–Gaza.

Sidek, H., & Rahim, H. A. (2015). The role of vocabulary knowledge in reading comprehension: A cross-linguistic study. *Procedia-Social and Behavioral Sciences, 197*, 50-56.Available at: https://doi.org/10.1016/j.sbspro.2015.07.046.

Skryabin, M., Zhang, J., Liu, L., & Zhang, D. (2015). How the ICT development level and usage influence student achievement in reading, mathematics, and science. *Computers & Education, 85*, 49-58.Available at: https://doi.org/10.1016/j.compedu.2015.02.004.

Teoh, X. C., & Yunus, M. M. (2019). Primary pupils' use of social media to learn ESL. *International Journal of Innovative Technology and Exploring Engineering, 8*(12), 2076-2080.Available at: https://doi.org/10.35940/ijitee.l3272.1081219.

Yevheniy, S. (2018). The potential of using google expeditions and google lens tools under STEM-education in Ukraine.

Yunus, M. M., Salehi, H., & Amini, M. (2016). Impact of using CALL on Iranian EFL learners' vocabulary knowledge. *English Language Teaching, 9*(1), 173-187.Available at: https://doi.org/10.5539/elt.v9n1p173.

Yunus, M. M., & Sukri, S. I. A. (2017). The use of English in teaching mathematics and science: The PPSMI policy vis-à-vis the DLP. *Advances in Language and Literary Studies, 8*(1), 133-142.Available at: https://doi.org/10.7575/aiac.alls.v.8n.1p.133.

Zhang, J., Yang, J., Chang, M., & Chang, T. (2016). *ICT in education in global context. The best practices in K-12 schools.* Singapore: Springer.