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# The Effect of Online Cloud-Based Ed Technology on L2 Vocabulary Learning Iranian EFL Learners

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**ABSTRACT:** The present study was carried out to find out the effect of online Cloud-Based Ed Technology on L2 vocabulary acquisition among Iranian EFL Learners. To do so, two samples of students of Apadana institute in Roomeshkan Iran were selected randomly as the control and the experimental group (60 students out of 100 were selected). Because students at the institute started to learn English from elementary to intermediate at the same institute they were at the same level of proficiency. After that, the traditional method of teaching vocabulary, like translation into and out of the target language, vocabulary memorization, and pattern practice, was used for the control group and Cloud-Based Ed Technology for the experimental group. The students of the experimental group were thought by using Cloud-Based Ed Technology while students of the control group were thought by using the traditional ways. When 8 sessions of instruction ended, another test (vocabulary test), as the posttest, was given to the students of both groups to assess their vocabulary proficiency. Using Samples T-test, it was shown that using Cloud-Based Ed Technology was more effective than the traditional method of teaching vocabulary on the Iranian EFL learners. Two weeks later a delayed posttest was administrated in order to measure the effectiveness of using Cloud-technology on vocabulary retention and the results supported the effectiveness of using Cloud-technology on vocabulary retention.

**Keyword:** Cloud Technology, ED Technology, Electronic Learning, Vocabulary, Mobile Learning.

## INTRODUCTION

Vocabulary is crucial to language and is of great significance to language learners. How we deal with vocabulary is definitely central to the process of language teaching and language learning. One thing that students, teachers, material developers, and researchers all agree is that vocabulary acquisition is an essential part of mastering a second language. However, the best means of achieving vocabulary learning is still unclear partly because it depends on a wide variety of factors (Schmitt, 2008).

Vocabulary development is a nonstop process where learners meet the words many times in their learning to increase and deepen their knowledge and their use of words in the foreign language (Cameron, 2001). Word memorization is also facilitated through using meaningful activities to practice vocabulary as it provides learners with opportunities to memorize words effectively, which means that this cannot be achieved successfully if they just practice them orally by drilling or by using flashcards. Activities which involve learners in thinking about words and making decisions about them allow learners to remember words effectively.

The importance of learning vocabulary cannot be stressed enough for any student at any stage of educational growth. In the background of proven research about the importance of vocabulary development, it becomes

necessary that the teaching of vocabulary be debated and the techniques used for it be evaluated from time to time. Judd (1978) stated that vocabulary teaching has been transferred to secondary status in favor of syntax. However, it is argued that vocabulary development should be treated as a skill which is independent and complementary to reading and writing skills. And language skill development should include a selection for teaching of vocabulary as a separate skill as it is one of the major aspects of fluency in a language. Hence vocabulary should be taught as a separate skill in all stages of education. Even though the importance of teaching vocabulary is a determined field of study, the transfer of such matter in a language classroom fails to incorporate the students' interest in the teaching practice.

Vocabulary knowledge as one of the component skills seems to play an important role in language achievement. Kitajima (2001) argues that without words that label objects, actions, and concepts, a speaker cannot express intended meanings. Words are the units of meaning. Sentences, paragraphs, and whole texts are formed from words. Language ability is often regarded as the number of words that we know. Therefore, vocabulary teaching/learning is a critical area that deserves paying special attention. The term vocabulary refers to "a list or set of words for a particular language or a list or set of words that individual speakers of a language might use" (Hatch & Brown, 1995). In importance of vocabulary Wilkins argued that "without grammar very little can be conveyed, without vocabulary nothing can be conveyed" (Wilkins, 1972). According to Mehrpour and Rahimi (2010) it has been consistently demonstrated that reading comprehension is strongly related to vocabulary knowledge. Any experienced teacher knows that even after students have more or less mastered grammar, they still face masses of unknown words as they continue to study (Laufer, 1986). According to Cohen & Weaver (2005) Vocabulary learning is a skill-related strategy that cuts across all four skills.

People are adapting to new communication norms in an increasingly digital world, learning to quickly attend to process, and respond to multiple and sometimes simultaneous messages (Davison, 2011). Given the many possible ways that digital communication tools will continue to influence practices of teaching and learning (Schuck & Aubusson, 2010), instructional communication scholars should enact programmatic research to understand how these tools impact classroom communication and subsequent learning outcomes. Other views suggest that people are adapting to new communication norms in an increasingly digital world, learning to quickly attend to, process, and respond to multiple and sometimes simultaneous messages (Davison, 2011). Thornton and Houser, (2005) showed that learners demonstrated linguistic gains by receiving mini lessons via mobile email, and more than 70% of learners preferred to receive these over mobiles compared with desktop computers.

According to Peters (2005, as cited in Hashemi & Ghasemi, 2011) a mobile technology device should meet three criteria: it must be capable of providing communication and/or information functions, be small enough to be easily carried and be used, at least part of the time, without a physical connection to a fixed power source or telecommunications services. Mobile, to most means portable and movable. Wanger and Wilson (2005) state that Mobile learning can bridge formal and informal learning experiences. With the rapid growth of wireless and mobile learning technology, the use of mobile phone and other portable devices are now beginning to have an impact on language teaching and learning throughout the world. Similarly, the development of language learning technologies recently has tended to be mobilized, portable, and personalized. These trends have led to learning forms changing from traditional classroom learning to electronic learning (E-learning), mobile learning (M-learning) or ubiquitous learning (U-learning). Among these noble learning forms, mobile learning is effective and flexible; that is, mobile learning can overcome restrictions of time and space, enabling learners to study whenever and wherever possible (Christensen, 2008). As Cavus and Ibrahim (2009) explain there is an increase use of wireless technologies in education all over the world. In fact, wireless technologies such as laptop computers, palmtop computers and mobile phones are revolutionizing education and transforming the traditional classroom-based learning and teaching into anytime and anywhere education.

Kara (1992) stated that many studies tackled the history of foreign language teaching, each tried to promote teachers and learners with a better way for teaching foreign language. However, language teaching is still a hard task. She went on to assert that: this may be due to the following reasons:

1- The effectiveness of mother tongue: students make up sentences first in their mother tongue, and then they translate them into English.

2- English as an abstract knowledge: it is difficult to study a foreign language when they never get a chance to practice it outside the classroom.

3- The size of the classroom and the number of the students: If the classroom is arranged in four rows and students sit behind each other, they cannot appropriately communicate with each other.

4- The syllabus consists of more skills, and time is limited for teaching these skills.

It can be easily noticed that students in Iran have problems in learning English, although some of them begin learning it even before the elementary school. It could be said that learning is an extremely complex process as

learners are individuals with different personalities, styles, and preferences. Despite the efforts that teachers devote to improve students' language skill, it can be observed that students finish high school with limited proficiency. Teachers and parents always complain of the low level of students' proficiency.

## MATERIALS AND METHODS

### *Research Design*

The study used on experimental design called: pre-test post-test control group design. It has a control group and experimental group the subjects have been randomly assigned between the groups and the researcher only tests one effect at a time. The researcher applied the experiment on the experimental group to identify the effect of using blogs in teaching vocabulary items for intermediate students. Blogs used in teaching the participants of the experimental group while the traditional methods used with the control group participants.

### *Data Analysis*

The data were collected through a pre- and posttest in order to answer the research questions. The results of both tests were analyzed using the SPSS program. First, the data of the pretest for each group were inserted and analyzed separately in order to find the mean and standard deviation of the scores of each group. The same procedure was followed with the scores of the posttest of each group. Independent sample t-test was employed to see if there were significant differences in vocabulary acquisition between the control and experimental groups. The hypothesis was tested at a .05 level of significance.

## RESULTS

This chapter presents the quantitative analysis of the data and describes the findings based on the research questions. The questions are:

1- Is there any significant difference between the results of cloud technology vs. traditional technique in vocabulary acquisition among Iranian EFL learners?

2- To what extent does the using of cloud technology effect on the long term recall and the new vocabulary among Iranian EFL learners?

To answer the research questions , several statistical procedures were used to examine the experimental and the control group performance on the immediate and delayed posttest from statistical point of view. The data collected from pretest, as well as immediate and delayed posttest were analyzed statistically and are summarized in the following section. The results are presented in both graphic and tabular forms.

### The Participants' Performances in the English Vocabulary Pre-test

The scores obtained from the test of English vocabulary for both group of the control and the experimental were compared and analyzed statistically. The means and standard deviations for the pretest scores are presented in Table 1.

**Table 1.** Descriptive Statistics for the Participants' Performance in the Vocabulary Pretest.

| Group Statistics | | | | |
|---|---|---|---|---|
| Group | N | Mean | SD | Std. Error Mean |
| Pre-test of the Experimental group | 30 | 23.5667 | 3.94517 | 0.72029 |
| pre-test of control group | 30 | 24.1667 | 2.45066 | 0.44743 |

As shown in Table 1 above, the mean of control group was higher than that of the experimental group (24.16 and 23.56 respectively) to see if this difference was statistically significant or not, an independent t-test was applied. Table 2 shows the results.

**Table 2.** T-Test Results for the Participants' Performance English vocabulary Pretest.

| Independent Samples t-test | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Levene's Test for Equality of Variances | | | t-test for Equality of Means | | | | | | |
| | F | Sig. | t | df | Sig. | MD | SD | 95% Confidence Interval of the Difference | |
| | | | | | | | | Lower | Upper |
| Equal variances assumed | | | -0.708 | 58 | 0.482 | -0.60 | 0.8479 | -2.29 | 1.097 |
| Equal variances not assumed | 5.73 | 0.02 | -0.708 | 48.48 | 0.483 | -0.60 | 0.8479 | -2.30 | 1.104 |

As shown in Table 2, the mean difference between the two groups was not significant (t =-0.708 p>0.05). This shows that the students in the two groups were nearly at the same level of English vocabulary knowledge.

Figures 1 shows the graphical comparison of the two groups in the pretest.

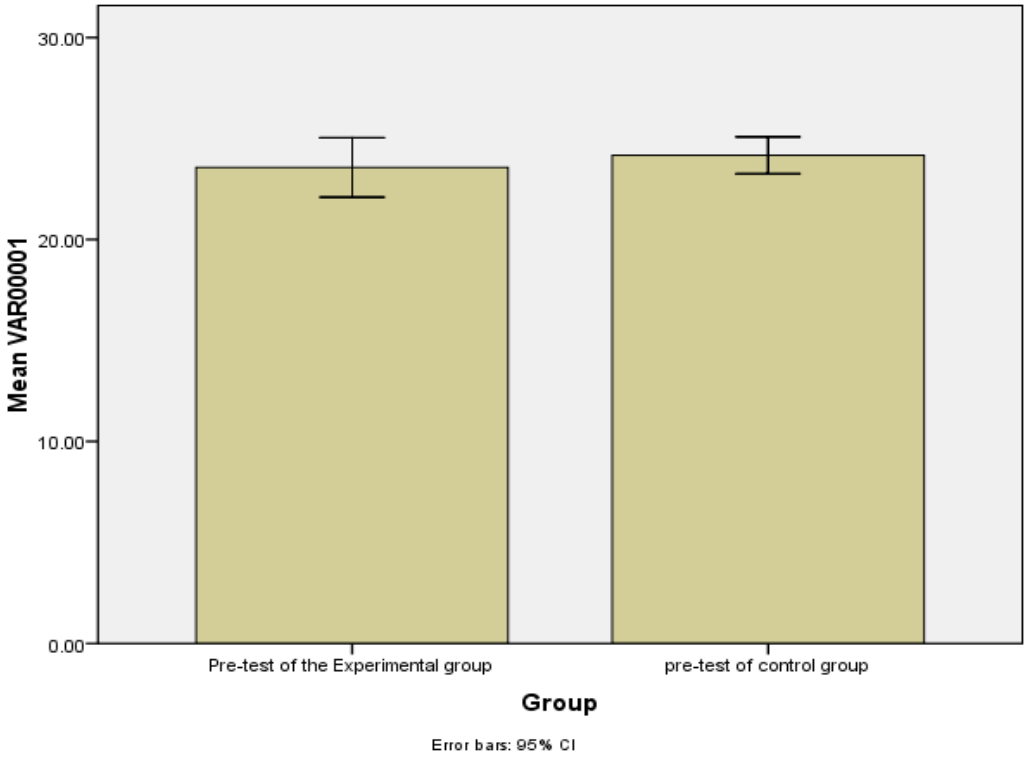


**Figure 1.** The Graphical Representation of the Groups ' Performances in the vocabulary Pre-test.

**The Participants' Performances in the Immediate Vocabulary Posttest in Both Groups**

The scores obtained from the immediate posttest of vocabulary for both groups of the control and the experimental were compared statistically. The means and standard deviations for the immediate posttest are presented in Table 3.

**Table 3.** Descriptive statistics for the participants' performance on the immediate posttest

| Group Statistics | | | | |
|---|---|---|---|---|
| Group | N | Mean | SD | Std. Error Mean |
| Posttest of experimental group | 30 | 33.8000 | 3.63318 | 0.66332 |
| posttest of control group | 30 | 25.1333 | 2.43159 | 0.44395 |

As shown in Table 3 above, the mean of the experimental group was higher than that of control group (33.80 for the experimental group and 25.13 for control group). Then, an independent T-test was performed using SPSS to see if the possible differences between the two groups were satirically different. The results are showed in Table 4 below.

**Table 4.** T-Test Results for the Participants' Performance in the Immediate Posttest.

| Independent Samples t-test | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Levene's Test for Equality of Variances | | | t-test for Equality of Means | | | | | | |
| | F | Sig. | t | df | Sig. | MD | SD | 95% Confidence Interval of the Difference | |
| | | | | | | | | Lower | Upper |
| Equal variances assumed | 3.90 | 0.05 | 10.85 | 58 | 0.000 | 8.66 | 0.798 | 7.068 | 10.26 |
| Equal variances not assumed | | | 10.85 | 50.63 | 0.000 | 8.66 | 0.798 | 7.063 | 10.26 |

The results of the independent samples t-test in Table 4 show that there was a significant difference between the two means (t=-10.858, Sig=0.000). At the level of 0.05.Therefore, it can be concluded that participants of the experimental group improved to a greater extent due to the treatment they received. Therefore, the answer to the first research question is that using Cloud-Based technology has effectively improved participants' learning English vocabulary this is also illustrated in Figure 2.

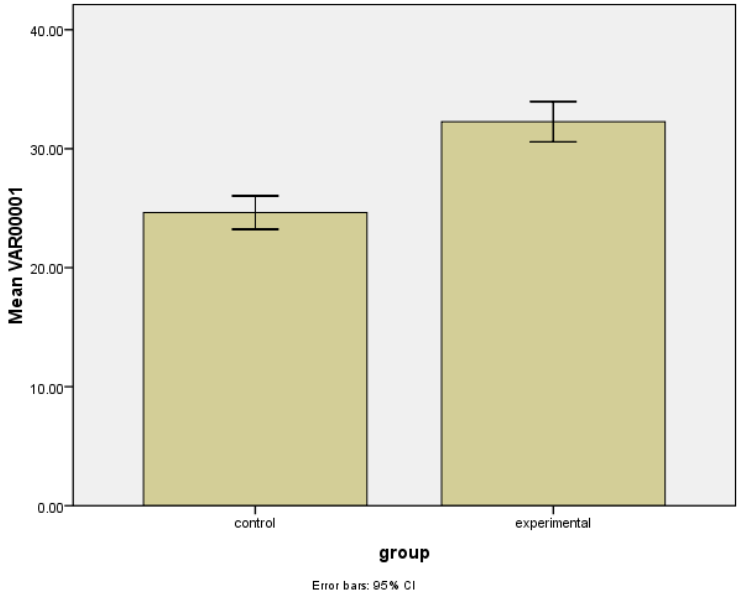


**Figure 2.** The Graphical Representation of the Groups' Performance in the Immediate Posttest in both groups.

**Control group's' Performances in the Vocabulary Immediate Posttest and Delayed Posttest**

The same statistical procedure was used for the delayed posttest results. First, the scores of immediate posttest and delayed posttest were analyzed by the software (SPSS). The statistical analysis of the posttest and delayed posttest for the control group is presented in Table 5.

**Table 5.** Descriptive Statistics for the Control Group Participants' Performance in Delayed Posttest.

| Group Statistics | | | | |
|---|---|---|---|---|
| Group | N | Mean | SD | Std. Error Mean |
| Posttest of control group | 30 | 25.1333 | 1.69143 | 0.30881 |
| Delayed posttest of control group | 30 | 20.3000 | 2.07032 | 0.37799 |

As shown in Table 5 above, the mean of control group immediate posttest was higher than the delayed posttest of control group (25.13 and 20. 30, respectively). In order to see whether differences were significant or not, an independent samples t-test was run. Table 6 shows the result.

**Table 6.** T-test Results for the Participants' Performance on the Vocabulary Posttest and Delayed Posttest.

| Independent Samples t-test | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Levene's Test for Equality of Variances | | | t-test for Equality of Means | | | | | | |
| | F | Sig. | t | df | Sig. | MD | SD | 95% Confidence Interval of the Difference | |
| | | | | | | | | Lower | Upper |
| Equal variances assumed | 1.54 | 0.21 | 9.90 | 58 | 0.000 | 4.833 | 0.48810 | 3.85 | 5.81 |
| Equal variances not assumed | | | 9.90 | 55.78 | 0.000 | 4.833 | 0.48810 | 3.75 | 5.81 |

According to Table 6, the value of the t-observed reveals that difference between the means was statistically significant (t= 9.902 and Sig 0.000). The results showed that the differences between two groups was statistically significant for delayed posttest and posttest of control group (p>0.05). Therefore; the performance of the control groups' immediate posttest was better than that of delayed posttest. It shows that the students in the delayed posttest lost their knowledge of vocabulary they had learned due to the teaching process, and this supports the ineffectiveness of the traditional method. Figure 3 shows the graphical comparison of the two groups in the immediate posttest and delayed posttests.

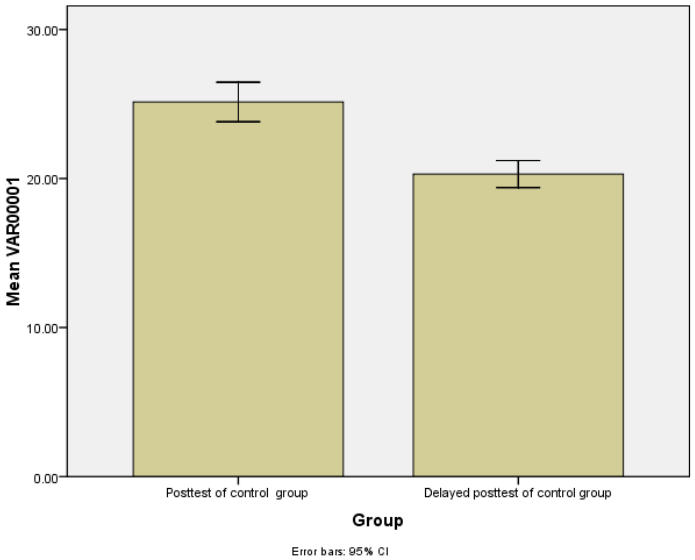


**Figure 3.** Graphical Representation of Groups on the Posttest and Delayed Posttest.

**The Experimental Groups' Performance in the Immediate and Delayed Posttest**

According to the below table, the mean of the experimental group on posttest was higher than the delayed posttest (33.80 and 32.60 respectively).In order to see whether the difference was significant or not, an independent samples t-test was run. Table 8 shows the result.

**Table 7.** The mean of the experimental group on posttest was higher than the delayed posttest.

| Group Statistics | | | | |
|---|---|---|---|---|
| Group | N | Mean | SD | Std. Error Mean |
| Posttest of control group | 30 | 33.8000 | 2.04096 | 0.37263 |
| Delayed posttest of control group | 30 | 32.6000 | 1.30252 | 0.23781 |

**Table 8.** T-test Results for the Participants' Performance of Experimental Group in the Vocabulary Posttest and Delayed Posttest.

| Independent Samples t-test | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Levene's Test for Equality of Variances | | | t-test for Equality of Means | | | | | | |
| | F | Sig. | t | df | Sig | MD | SD | 95% Confidence Interval of the Difference | |
| | | | | | | | | Lower | Upper |
| Equal variances assumed | 8.455 | 0.005 | 22.715 | 58 | 0.009 | 1.20 | 0.442 | 0.315 | 2.084 |
| Equal variances not assumed | | | 2.715 | 49.2 | 0.009 | 1.20 | 0.442 | 0.311 | 2.088 |

The result of the paired samples t-test calculation in Table 4.6 show that there was not a significant difference between the two means (t=-22.715, Sig=0.009), at the level of 0.05.Therefore, it can be concluded that participants' performance of the experimental group in delayed posttest has not changed to a great extent compared to their performances in the immediate posttest. Therefore the answer to the second research question is that using cloud technology improved participants' long term recall and the new vocabulary.

This is illustrated in the figure 4.

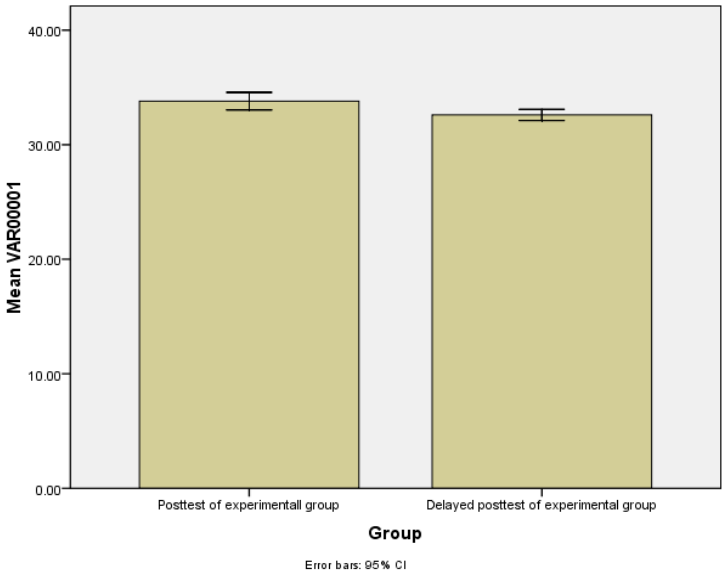


**Figure 4.** Graphical Representation of Groups on the Posttest and Delayed Posttest.

## DISCUSSION AND CONCLUSION

The purpose of this study was to see whether teaching vocabulary through Cloud-Based technology helps students to learn better and also investigate the role of Cloud-Based technology in retention of the vocabulary. This research was designed to answer to the following questions:

1-Is there any significant difference between the results of cloud technology vs. traditional technique in vocabulary acquisition among Iranian EFL learners?

2- To what extent does the using of cloud technology effect on the long term recall and the new vocabulary among Iranian EFL learners?

After analyzing the data through descriptive statistics and a t-test for the experimental and the control group on the immediate posttest and delayed posttest, the results revealed that the experimental groups' outperformed the control group. Therefore, it can be said that the training program had positive effects on the experimental groups' performance.

The findings of the present supported the studies done by Baki (2010), Atiyyat (1995), Abo Oda (2010), Lu (2008), Naraghizadeh, and Barimani (2013), Lin et al (2014) to investigate the effectiveness of technology –based methods on learning English. The findings of the study confirm that the experimental group's mean score was greater than that of control group due to the teaching procedures. Therefore, it can be said that the Cloud-Based based instruction positively affect learning vocabulary by the Iranian EFL learners. While discussing these results, it would be relevant to recall briefly some other important issues mentioned in the review of literature.

Cloud computing technologies, such as Google Docs, Adobe Creative Cloud, Dropbox, and Microsoft Windows Live, have become increasingly appreciated to the next generation digital learning tools. Cloud computing technologies encourage students' active engagement, collaboration, and participation in their learning, facilitate group work, and support knowledge or information sharing among students. With the cloud features, learning can be accessed anywhere at any time and the world can be a classroom. Students can learn from anywhere and teachers can teach from anywhere. Cloud-based app features such as convenient and on-demand network access to a shared pool of files are indeed providing support for learning and instruction. Learning is now turned into anywhere learning and collaboration, both locally and globally.

Language ability is not merely the ability to speak, listen, read, and write in the traditional form. It is important for instructors to emphasize the development of the student as a whole. Therefore, teaching responsibilities should not start and stop solely with language instruction. Students should be encouraged and helped to develop and practice trust-building, leadership, decision-making, communication, conflict management, and technology skills. Cloud computing tools earn reputations on promoting collaborative and self-directed learning.

Using Cloud-Based technology was shown to be an effective way to vocabulary learning compared to GTM vocabulary list memorization in short term retention. Learner absorbed target vocabulary items when they repeat them accompany with using Cloud-Based. In other words, those who learned target vocabulary items by using Cloud-Based technology performed better on immediate posttest in comparison with those who learned traditionally.

Also the results of the delayed posttest showed that using Cloud-Based technology in teaching vocabulary did have significant effect on the long term retention of the vocabulary items compared to traditional ways of vocabulary learning. In fact, retention of vocabulary in control group decreased significantly more than those of in the experimental group in time interval. In addition, learners found this strategy enjoyable and helpful in EFL vocabulary learning items.

The result of this study confirms that using Cloud-Based technology is beneficial at least in the case of English vocabulary learning and retention. As previously mentioned in cahpter1, vocabulary learning is considered to be an important part in learning a new language. Therefore, results of this study can have implications for teachers and instructors in modern era who are willing to use new ways of teaching to improve their students' rate of learning. So, Cloud-Based instruction can be considered as a teaching technique, a tool for learning, or an opportunity that schools and English institutes should not neglect.

### Suggestions for further research

This study has shown some remarkable findings, yet there other factors to be considered. Here the researchers present some suggestion for further research. Eager researchers can investigate the role of gender in vocabulary retention of students who worked with Cloud-Based technology which was disregarded in this study. Other suggestion for researcher is to investigate the effect of using Cloud-Based technology on vocabulary learning of participants with different English proficiency level which might bring new and interesting results. This current study investigated the effect of using Cloud-Based technology on vocabulary learning and retention of students.

Another topic which can be considered as an interesting field for research is to investigate the effect of using Cloud-Based technology on grammar.

**Conflict of Interest**

The authors declare no conflict of interest.

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