

Computer Assisted Vocabulary Instruction: A Case of Applying PowerPoint Presentation into Iranian EFL Classes

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Abstract

Recently, with the growth of technology computer assisted language learning (CALL) has equipped teachers with new tools to transform education. In order to exploit the advantages of CALL, this study explored whether applying Power Point presentations (PPTs) brings about significant improvements in high-school learners' English vocabulary knowledge. To this end, 120 Iranian male high-school students were divided into three experimental group and one control group. The administration of a 40- item multiple-choice vocabulary test, developed on the vocabularies to-be-instructed during the study period, demonstrated that the four groups were homogeneous in terms of their entry ability level. While all four groups received instruction in vocabulary during one and a half hour per week for six months, PPTs were employed only in the three experimental groups. Specifically, in the first group, the teacher used PPT to teach vocabulary and he exploited students' assistance in explanation of presentation. In the second group, the students were required to prepare and present PPTs to teach vocabulary. Simultaneously, the teacher helped the students to clarify ambiguities of their presentations. The students in the third group were also demanded to have PPTs; however, the teacher did not provide them with any assistance, clarification, or explanation. Finally, the fourth group which acted as the control group was the one in which the teacher instructed vocabulary in a traditional way without the exploitation of PPT. At the end of the study, the same vocabulary test was administered as a post-test and the results of the statistical analysis indicated that the first and the fourth group significantly outperformed the other two groups.

Keywords: CALL; Power Point presentation (PPT); vocabulary achievement

1. Introduction

Over the years, technology and its different manifestations such as games, virtual worlds, and augmented reality have been applied to different areas including language education and pedagogy. One of the most ubiquitous manifestations of technology in education is known as computer assisted language learning (CALL); the use of CALL has been examined by different scholars from past up to now; for instance, Levy (1997) states that CALL is an important source aiming to open new horizons towards teachers and scholars to integrate technology in their curriculum and teaching methodology. In fact, computers can cope with individual needs contributing to break the walls between the classroom and the outside world.

Computers could be used in pedagogical setting for different purposes including language pedagogy; language pedagogy covers a wide range of skills and components one of which is vocabulary learning. Vocabulary as one of the influential elements of achieving proficiency in a new language (Groot, 2000) has been investigated by many researchers (e.g. Khezrlou, & Ellis, 2017; Lo, Anderson & Bunch-Crump, 2017) and one of the sub fields of CALL, computer assisted vocabulary instruction (CAVI) has been dedicated to investigation of this field (Başöz & Çubukçu, 2014).

Researchers interested in CAVI try to find effective ways for learners to learn and practice new vocabularies by the assistance of technology. Electronic dictionaries, concordances, hypertexts, glosses, computerized exercises, and the Internet are among the tools that offer students interesting and innovative vocabulary learning experiences. Recent developments in CALL have created the need and opportunity of investigating the consequences of using multimedia exercises on vocabulary acquisition. Numerous studies (Chun &

Plass, 1996; Cobb, 1999; Goodfellow & Laurillard, 1994; Groot, 2000) have shown that computerized media might be helpful to learn vocabulary in a foreign language.

More specifically, easy to access PPT might be considered as a potential method of vocabulary instruction. Surpassing the use of chalk-talk teaching method, PPTs are now prevalent in most lectures. Therefore, instructors mainly use PPT while encouraging students through giving tasks to them so that they improve giving a presentation at a conference, expressing their ideas and feelings, and informing others of the results they have achieved. A presentation is an opportunity to discuss issues that you probably would not mention in your paper (e.g., ideas and negative results), all of these might stimulate useful questions and feedback from the audience.

The current study as part of an ongoing investigation to examine the efficacy of PPTs aims at examining students' vocabulary achievement through using Power Point Presentations in teaching process.

1.1. Research Questions

1. Does using teachers-made PPTs along with collaboration of teachers and students in explanation have a significant effect on L2 learners' general vocabulary achievement?
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3. Does using students-made PPTs along with students' explanation of have a significant effect on L2 learners' general vocabulary achievement?
4. Does using traditional way of classroom instruction have a significant effect on L2 learners' general vocabulary achievement?

2. Literature Review

During the years, the use of technology has had a significant impact on the education systems, and adding variety and new experiences to the classrooms that has built

substantial interest for the practitioners. That is why technological tools are increasingly being used as powerful elements can transform and promote education (Chalhoub-Deville, 2001). PPTs have been used for years, but in recent decades they have just begun to spread to schools and ESL classrooms to promote both the quality and attractiveness of the EFL/ESL classes (Fisher, 2003).

In this regard, the present study attempts to provide an insight into the value of using PPTs in the presentation of different instruction in general, and language teaching in particular. Generally, it is assumed that the use of PPTs helps significantly to improve the presentation methods and strategies. Although teachers and students are aware of the benefits of using CALL in language teaching that leads to positive attitude (Tal & Yelenevskaya, 2012), it may bring about some anxiety for them (Rahimi & Yadollahi, 2011).

Due to the fact that teaching with the assistance of computers is an interactive process and has positive effects (Sarica & Cavus, 2009, Khodi, 2015) and provides various materials such as auditory or visual materials, animated materials, music and sound effects, etc. it can motivate children to study more (Maulan & Ibrahim, 2012). It is essential that educators should be trained in the ability to apply new technologies into teaching and to interact with students during the learning process (Afshari, et al, 2013). We bear in mind that a number of factors affect the implementation of CALL in the classroom, those factors can be categorized into two groups namely internal and external factors (Sarica & Cavus, 2009). Internal factors include teacher-related factors (e.g. teachers' attitudes toward CALL) while external factors include context-related factors (e.g. computer facilities and technical support) (Sarica & Cavus, 2009). PPT can be considered as an effective tool of presenting material that can address and

accommodate students' learning preferences in the language learning class (Chalhoub-Deville, 2001). PowerPoint Presentation is one of the multimedia technologies. One of the important functions of technology is to enable teachers to incorporate various multimedia content into their instructions by using presentation software packages, which are easy to use and easily available. Presentation software packages are authoring computer applications give us the opportunity to combine texts, graphics, and images, with sounds and create sophisticated multimedia presentations (Gordon, 2007).

Currently, many teachers, from elementary school to college and university level, are using PPTs as useful instruction tools. It is argued that PPT "enhances instruction and motivates students to learn" (Harrison, 1998, P. 9). On the one hand, some believe that the software is rigid format "usually weaken[s] verbal and spatial reasoning and almost always corrupts statistical analysis" (Tufte, 2003, P. 3). While on the other hand, many believe that using PPTs for the students is a productive learning activity (Mason & Hylinka, 1998). Yet many detractors believe that its rigid format stifles not only students' creativity, but also their ability to understand and convey information (Tufte, 2003). With such conflicting and opposing views about the use of PPTs, practitioners and teachers are faced a dilemma in their career. Moreover, many in this dilemma start questioning about the methodology of using PPTs in instruction of language. The answer is, it's a matter of teachers' choice and they should decide how to accomplish it in instructions. There are various advantages of the use of PPTs as discussed and they should suffice the EFL teachers willing to incorporate this tool in their teaching and instruction. All these things definitely contribute to its popularity and should therefore be exercised and practiced.

3. Methodology

3.1. Participants

A total of 120 high-school Iranian male students who were selected conveniently took part in this study. Specifically, 60 students were majoring in the field of science in Neyshabur. The other 60 students were studying in the field of math in the same centers. These participants, whose age ranged from 17 to 18, were studying in the third year of their education at high school. The course in which the present study was conducted was English Language.

3.2. Instruments

In order to address the research questions, a 40-item multiple-choice vocabulary test was designed based on English book that was instructed at high schools, 5 lessons of which was required to be taught during the study period. It was administered two times as pretest and posttest.

The content validity of the test was substantiated and two experts in the field did its semantic disambiguation. The reliability of the checklist computed by the Cronbach's Alpha was reported to be 0.79 for the whole sample. It shows that the results of the test are satisfactorily reliable within their internal consistency.

3.3. Procedures

3.3.1. Data Collection

Prior to the experiment, a vocabulary test was administered as a pretest to check homogeneity of the participants in terms of their vocabulary knowledge. Then, the participants were categorized into one control and three experimental groups randomly. While the teacher taught vocabulary in the traditional way in the control group, the participants in the experimental groups were instructed through the exploitation of power point presentation.

The experimental groups, however, differed in terms of the method of power point presentation. The first group received teacher-made PPTs, in which the teacher

taught English vocabulary along with required explanations and students' cooperation. The participants in the second group were taught the same vocabulary content through the PPTs which were designed by the students. Along with the PPTs, they also benefited from the teacher's explanation and clarification.

Similarly, in the third group, the students-made and presented PPTs although the teacher did not provide them with any clarification or help. As a whole, the study lasted for six months in which the participants took part in 22 sessions. At the end of the study period, all the participants in the four groups took the same vocabulary test administered as a posttest.

3.3.2. Data Analysis

First, the participants' scores on the pretest, ranging from zero to 20 were specified. This data was analyzed through the version 22 of SPSS software package. One-way ANOVA was run to determine whether there was a significant difference among the vocabulary mean scores of the participants of the four groups before the study. Similarly, the participants' scores on the post-test were also specified and analyzed through one-way ANOVA. This was done in order to find out whether the groups varied significantly regarding their vocabulary achievement after receiving computer assisted vocabulary instruction during the semester.

4. Results

In this section, Table 1 illustrates the descriptive statistics of the participants. Each group was comprised of intermediate high school students who received different methods of PPTs.

as it is indicated the mean for the participant who received teacher-made PPTs, student' PPTs along with teachers explanation, student-made PPTs and book were 18.53, 17.86, 19.23 and 16.13 respectively.

Table 1. Descriptive Statistics

	N	Mean	Std. Deviation	Std. Error
Teacher	30	18.53	1.04	.26
S &T*	30	17.86	1.31	.33
Book	30	19.23	.75	.19
Student	30	16.13	1.06	.27

* S &T: refers to the participants who received students' presentations along with teachers explanations (student & teacher group)

Table 2. ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	79.41	3	26.47	23.48	.000
Within Groups	63.13	56	1.12		
Total	142.54	59			

Table 3. Tukey Post Hoc Tests

Main Group	Sub-Group	Mean Difference	Sig.
Teacher	ST	.66	.323
	Book	-.70	.282
	Student	2.40*	.000
S &T*	Teacher	-.66	.323
	Book	-1.36*	.005
	Student	1.73*	.000
Book	Teacher	.70	.282
	S &T	1.36*	.005
	Student	3.10*	.000
Student	Teacher	-2.40*	.000
	S&T	-1.73*	.000
	Book	-3.10*	.000

The mean difference is significant at the 0.05 level.

*S &T: refers to the participants who received students' presentations along with teachers explanations (student & teacher group)

The biggest standard deviation of 1.31 belongs to the S&T group and also the highest error of measurement equal to .33 belongs to this group. The least standard deviation and the least error of measurement were .75, .19 respectively and belongs to the students who receive the book instructions in the control group. Table 2 shows the ANOVA test results suggesting a significant difference among the groups of the participants with regards to the amount of p-value that is .000.

The results of Post Hoc tests shows that there are significant differences between those who were in the control group and those who receive students' along teachers' presentations in favor of those who received the book.

Likewise, there are significant differences between the groups of the participants received just the students' presentation and all other groups of participants. The biggest difference was between the group of participants who received students-made PPTs and the participants who received traditional instruction; the mean difference of -3.1 shows that there is 3.12 score difference between the mean for these two groups.

5. Conclusion and Discussion

This study was conducted to find out the effect of using PPTs in English classes and its contribution to learning vocabulary achievement learning process. It was found that students of our school were able to prepare and deliver well-structured presentations that were welcomed by both instructor and peers. Almost all of the presenters showed high level of motivation for what they were doing. The use of PPTs for oral presentations was important because using graphic presentation not only may make the classes interesting but also may bring about high level of involvement, for the learners, in the learning process (Shoari & Farrokhi, 2014).

The present study attempts to provide an insight into the value of using PPTs for

presenting various materials while teaching English as a foreign language at high school level. The findings of this study can be shared among EFL teachers and instructors and enables them for a better language instruction. Since it is assumed that the use of PPTs will help language teachers to promote their teaching methods and strategies, the aim of this study was to investigate the effect of using PPTs in learning English as a foreign language in their classes.

Technology is used as another tool in the process of language learning and learners consider it as a helpful tool that must be integrated into the learning curriculum not to replace their classroom-based instruction. They believe that CALL has high face validity with learners while they do not see it as a worthwhile replacement for classroom-based learning but as an important part of the course.

The explanation for these results can be referred to the following reasons: first, the instructional methods (using CDs, PPTs, and Internet) were effective in reducing student's anxiety toward using computer. These results were consistent with the studies of this area (Paradi, 2009; Holzl, 1997) who found that using computer in teaching changed students' attitudes toward computer. In this regard, Tufte (2005) mentioned that computer anxiety is usually thought of as a temporary condition that can be overcome by using and learning in a suitable environment structured. The second reason can be referred to the length of the study that might help to reduce students' anxiety toward using computers. Finally, students' commitments were one of the reasons that helped them to reduce their computer anxiety. There is also evidence in the literature that more experience with computers increases the degree of self-confidence and self-efficacy in using computers and ultimately eradicates negative attitudes towards computer. While before the experiment students thought that their attitudes were dependent on teachers'

attitudes, after the experiment, they felt to be a little bit more independent of the teacher's attitudes. This supports the fact that teachers' role is important in improving students' autonomy in computer-based instructions.

The results showed that the majority of students felt that PPTs helped to organize presentations and focus on the main points, develop non-verbal skills, and improve all four language skills such as reading, writing, speaking and listening, which are extremely important for language learning. Students indicated they were interested in the subject and enough motivated, because it seemed to them they would create something of their own. Students agreed that this tool is useful for their future profession and for the development of their communicative and social skills, because nowadays these skills are seen as essential ones. They mentioned some difficulties such as summarizing material; choosing the main points or statements; using appropriate pictures or diagrams (it is considered time-consuming); sharing responsibilities with peers, if they worked in teams.

Students also remarked that some presenters read the text of their presentation most of the time instead of presenting fluently. Students noted there was too much text on some slides. They made some recommendations on how to improve their use of PowerPoint technology. They include: plan your presentation in advance and use your notes; use colors and animation carefully; students should be trained more on how to use PPTs; it is better to have separate subject or even course for developing students' presentation skills. The technological developments have a significant impact on the education area as well as other areas. Teaching methods, especially used in higher education undergo a change from the traditional teaching methods and are mainly benefited from computers. Lectures presented via PPTs attract students because

they provide them a different atmosphere. Moreover, using PPTs provides some advantages to lecturers such as saving or updating the lecture materials. At the same time teaching with PPTs, enforce the learning effectiveness by stimulating student's imagery systems. When the results of this study was evaluated, a significant impact could not be found concerning the effect of the student's preferences for PPTs in accounting lesson on final examination scores. However, various relations were examined by developing the model used in the study and when the preferences for PPTs analyzed with the studying environment; the results have indicated that this relation has an increasing effect on the final examination scores. In other words, positive preferences of students who access to slides and have enough studying environment effect the final examination score positively.

Consequently, most of the successful students believed that Power Point Presentations made by the teachers or made by students along with teacher's supervision were a reliable and attractive way of teaching.

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