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The Potential Influences of Pictorial and Textual Glosses as a CALL Study on
Improving Iranian Intermediate EFL Learners' Vocabulary Level

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ABSTRACT

Vocabulary enrichment is important. Words are the currency of communication. A robust vocabulary improves all areas of communication like listening, reading, writing and speaking. This shows how words are important. This research was aimed at investigating the influences of two types of multimedia glosses, .i.e., textual and pictorial glosses on the level of vocabulary learning of EFL learners in an EFL context in Iran. From the two groups under study, one as the experimental group received the treatment, i.e., resorting to textual and pictorial glosses and the other group as the control group was taught in the traditional way. The participants of the study comprised of 40 male EFL learners in an English language institution in Ilam city. The data were analyzed by using t-tests and one-way ANOVA. Statistical analyses of the results revealed that group under study who were provided with pictorial and textual glosses while learning English words significantly outperformed the counterpart, .i.e., control group learners that were taught in the normal traditional way. The obtained results of the study provide some insights for teachers and administrators to review their curricula, approaches, and educational tools, and to consider the possibility of incorporating CALL technology in general and glosses in particular into their teaching program. In simple terms, the experimental group was taught through textual and pictorial glosses where relevant images and explanations of words were shown, thus helping learners in this way helped them surmise the meanings of the words. In reality, the experimental group received treatment on the pictorial and textual glosses, but the control group received no special treatment. This study was conducted in a semi-large language institution in Ilam city in the spring of 2017. Since the experiment showed that experimental group outperformed the control group it is concluded that this trend is a conducive trend in educational settings. However, each study group consisted of 20 subjects. This study seems to underpinned Pavia's (1971, 1986, 1991) Dual Coding Theory, arguing that when information is available in two modes of presentation, it becomes more elaborate and thus more memorable and is more motivating. When considering motivation, the idea suggests that the combination of textual and pictorial glosses might help

learners better decipher the meanings and be motivated better in vocabulary, and hence arrive at an even deeper learning (of English words). In the light of these findings, the researcher recommends that EFL Iranian teachers should use CALL as a tool for enhancing students' vocabulary and reading comprehension in particular and learning the language in general. In the light of the findings, the researcher recommends that EFL Iranian teachers should use CALL as a tool for enhancing students' vocabulary in particular and learning the language in general.

Keywords: vocabulary, pictorial gloss, gloss types, textual gloss.

1. Introduction

We all know learning English is very important today. As an English learner, you surely want to use English fluently. The first step towards that goal is to have a rich vocabulary. Vocabulary is generally given little emphasis in university curriculum in Asian countries (Fan, 2003). The situation is the same in Iran as an Asian country. Generally, the emphasis on English teaching in universities in Asian countries is on the four language skills. Vocabulary teaching in many classrooms is largely incidental (Fan, 2003; Catalan, 2003). This means that when a particular word or phrase appears difficult for the students, they are given the definitions and they are encouraged to turn to dictionary to look up for meanings of words. I think vocabulary learning is an essential part in foreign language learning as the meanings of new words are very often emphasized, whether in books or in classrooms. It is also central to language teaching and is of paramount importance to a language learner. Recent research indicate that teaching vocabulary may be problematic because many teachers are not confident about best practice in vocabulary teaching and at times don't know where to begin to form an instructional emphasis on word learning. As you may know, vocabulary is a set of lexemes, including single words, compound and idioms. A person vocabulary is the set of words within a language that are familiar to that person. A vocabulary usually develops, with age, and serves as a useful and fundamental tool for communication and acquiring knowledge. Acquiring an extensive vocabulary in general is one of the largest challenges in learning a second language. Words are clearly vocabulary, if learners want to use language fluently and want to sound like native speaker, they need to be able to put words together quickly in typical combination. Educators know that words and vocabulary strongly impact learners' lives. Now that vocabulary is essential part in learning finding, a good way of mastering vocabulary especially in EFL setting is a need. This study aims at examining the effect of textual and pictorial glosses on vocabulary improvement.

Any language learner has the experience that however one's grammar is correct, however, one's speech sounds are beautiful, without proper words, the communication cannot go on. So the wide-range and in-depth of vocabulary decide one's language ability and indicate one's language accuracies and richness. As children learn mother tongue, the first stage is one word stage, and telegraphic stage, the phrasal stage, the whole sentence, and lastly the pragmatic application. Both mother tongue and second language learning need large vocabulary. Especially in the second language learning, vocabulary is basic for the grasp of the target language. But vocabulary acquisition has not been attached much importance compared with the grammar learning in Iran. Curriculum designers have tried to include computer and technology courses in educational curricula (Atai & Dashtestani, 2011; Bagheriet al, 2012). Glosses are part of multimedia technology. The term "gloss" refers to an explanation or a definition of words written on margins in reading passages that helps learners readily work out the meanings of the words (Shiki, 2008). Few studies (Chun & Plass, 1996; Kost, Al-Seghayer, 2001; Jones & Plass, 2002; Rott & Williams, 2003; Bowles, 2004; Ko, 2005; Yoshii, 2006; Akbulut, 2008) have corroborated the contributions of multimedia glosses to reading comprehension, in general, and vocabulary acquisition, in particular.

In line with the advancement of technological devices and their effect on education, old methods are replaced rapidly by new methods and Computer-Assisted Instruction (CAI) has been integrated in the teaching-learning process to improve the quality of education. Further, there has been much tendency by English teachers to use the new technology in classrooms and apply these facilities in language teaching. Most schools are being equipped with computer software and new instructional materials and a lot of money is invested on

computer-assisted instruction. Recently, multimedia has been emerged in the field of language learning with the development and integration of computer and technology. Today, many language learners utilize different features of computer technology in order to improve vocabulary development as well as reading comprehension. Today, researchers are paying attention to multimedia glosses as a new way to promote vocabulary development as well as reading comprehension. Multimedia facilitates the applications of computers in foreign language education by providing audio-visual presentations and interactions tailored to the needs and interests of different individuals or groups of learners (Rezaee & Sharbafshoar, 2011). Some studies have also been carried out on the effects of different types of multimedia glosses on vocabulary acquisition as well as other components of language including reading comprehension (e.g. Chun & Plass, 1996; Lyman-Hager & Davis, 1996; Al-Seghayer, 2001; Shahrokni, 2009; Gorjian, 2011; Rezaee & Sharbafshoar, 2011; Sadeghi & Ahmadi, 2012). Anyhow, this study aimed at investigating the effects of two types of multimedia glosses, i.e., textual and pictorial on increasing the level of vocabulary of Iranian EFL learners. Teachers usually use different methods to teach vocabulary in classrooms. Nation (2001) believed in a systematic approach to vocabulary instruction. He stated that one should focus on vocabulary as a part of the design of communicative task and argued that vocabulary teaching should be integrated into listening, speaking, reading, and writing, i.e. vocabulary can be acquired by receiving meaning-focused input through reading and listening, through meaning focused-output by speaking and writing, through fluency development and through language-focused instruction.

Now that vocabulary is a current focus in ESL pedagogy and research (Wei, 2007), a fundamental query is why learning vocabulary is such a challenging and unproductive experience. Which method could be used to make vocabulary less of a struggle? Learning vocabulary is an important instructional aim for teachers in all content areas in middle grades schools (Harmon, Wood, & Kiser, 2009). Experienced teachers of English as a second language know very well how important vocabulary is. Recent research, however, indicates that vocabulary instruction may be problematic because many teachers are not “confident about best practice in vocabulary instruction and at times don’t know where to begin to form an instructional emphasis on word learning” (Berne & Blachowicz, 2008, p. 315). Learning new vocabulary is an integral part of learning a new language. Some researchers estimated that in order to understand nontechnical English text, learners should know at least 5000 lexical items (Nation, 2006). A vocabulary usually develops, with age, and serves as a useful and fundamental tool for communication and acquiring knowledge. Acquiring an extensive vocabulary is one of the largest challenges in learning a second language. Words are clearly vocabulary, if learners want to use language fluently and want to sound like native speaker, they need to be able to put words together quickly in typical combination. Educators know that words and vocabulary strongly impact learners’ lives. In fact, educated individuals are often identified by their written and spoken vocabularies (Blachowicz & Fisher, 2004).

Vocabulary is a core component of language proficiency and provides the basis for effective communication. Maintaining a large store of vocabulary is a demanding job for language learners and L2 teachers want to know which strategies and tasks are more effective in helping their students acquire as much vocabulary as they can in the most economical way (Khoii & Sharififar, 2013). Vocabulary learning strategies (VLS) have been appealing to teachers and learners because learners of a foreign language are confronted with vocabulary learning right from the very beginning of language instruction, and it is a never-ending, challenging task. Nowadays, it is widely accepted that vocabulary learning is a fundamental component both of acquisition of one’s native language and of learning a foreign language (Morra & Camba, 2009). Vocabulary knowledge is not only important for oral comprehension, but also for reading comprehension. For instance, learners cannot understand a reading passage if they do not have an adequate vocabulary and do not have the skills to guess meaning from context. In summary, vocabulary knowledge is an essential component of learning a second language for several reasons. Both native speakers and learners recognize the importance of getting the words right because lexical errors are numerous and disruptive. Thus, it is important for learners to have good lexical skills in order to produce sentences and to understand them correctly (Gass & Selinker, 2001). Learning a second or foreign language (EFL/ESL) involves the acquisition of thousands of unknown words. McCarthy (cited in Fan, 2003) states that vocabulary constitutes the biggest part of the meaning of any language, and it is the

biggest problem for most learners. He firmly believes that language is lexis-driven, and vocabulary learning is also the real key to second language learning. He believes that learners will be more successful if they can develop their own techniques and disciplines, i.e. 'strategies', for vocabulary learning. Richards (1976) contends that knowing a lexical item includes knowledge of word frequency, collocation, register, case relations, underlying forms, word association, and semantic structure. One view distinguishes between the recall and the use of word, that is, whether learners can differentiate between the words acquired and the other ones or whether they have the ability to use the words in appropriate settings that call for it (Hayati, 2005). It is obvious that input has great importance in second language learning. This indicates that a greater level of attention needs to be paid to the modality of input in language learning (Sydorenko, 2010). In recent years, many researchers have considered the effect of multimedia materials on second language learning. With the increasing popularity of multimedia sources among the younger generation, one can hardly deny the effect of various aspects of multimedia on the learning of various language components and skills. This claim is corroborated by several researchers who have shown the positive effect of using different kinds of multimedia on language learning. For instance, Danan (2004) and Wang (2012) state that captioned movies can assist L2 learners to recall second language vocabulary through combining images, spoken words, and written text. In reality, vocabulary is the knowledge of words and word meanings.

1.2 Statement of the Problem

In the realm of second language acquisition (SLA), the most recent effort to enhance the process of language learning has involved computer technology and ever since practitioners have agreed that this technology holds great potential for language learning, leading to what is known as Computer-Assisted Language Learning (CALL). With regarding the importance of learning vocabulary in EFL contexts and the need felt for an appropriate technique of teaching lexical items, many studies have been conducted to find alternative teaching techniques with more capacity to impart meaningful learning in the context of teaching English. Hence, there appears to be the potential for teaching lexical strategies in EFL context for developing students' vocabulary knowledge. English language is an international language and is being used widely in businesses, academic, and other aspects of life. Research efforts have been going on to investigate ways to improve learning languages including learning English as a foreign language. In Iran, English language education is considered especially important for experts of the other fields. The problem is that students who have received several years of formal English instruction frequently face difficulties to use language grammatically, whether in the spoken or written form. One of the reasons for this inability is lack of required vocabulary. One of the major concerns for EFL learners is to master the vocabularies if not all but a big part of them. Hence, finding a supportive way to meet learners' needs is vital to their vocabulary learning. This study aims at exploring the effects of two types of multimedia glosses, i.e., textual and pictorial on the improving vocabulary of intermediate EFL learners in Ilam city, Iran.

1.3 Research Questions and Hypotheses

This research sought to find an empirically justified answer to the following questions:

Q1: Is there any significant relationship between the use of the multimedia program drawing on textual and pictorial glosses and vocabulary improvement of Iranian intermediate EFL learners?

Q2: What is the impact of textual and pictorial glosses on vocabulary improvement of Iranian intermediate EFL learners?

A pertinent null hypothesis was formulated as follows:

HO: There is no statistically significant relationship in the use of the multimedia program drawing on textual and pictorial glosses and vocabulary improvement of Iranian intermediate EFL learners.

2. Review of Related Literature

Given the importance of using multimedia in language teaching, computers have become very popular in schools, and many teachers are now using these devices for language learning. Yanguas (2009) studied the effects of different types of textual, pictorial, and textual-pictorial glosses on text comprehension and vocabulary learning. The participants of this study were 94 university students assigned to four groups based on four conditions of glossing. The material used in the study was an internet-based passage from an

online newspaper. The length of the text was 543 words. Both qualitative and quantitative measures were used. The results of both measures showed that all kinds of glosses are better than the no-gloss condition. Regarding the production of the target vocabulary items, the results did not show any significant differences among different conditions. But the combined glossing condition had more effect on comprehension compared to other conditions. Yanguas (2009) also explored the impact of various types of multimedia glosses including textual, pictorial and textual-pictorial on text comprehension and vocabulary learning regarding a computerized text. In the study, 94 participants read a text using one of four gloss types. Meanwhile, the subjects were asked to think aloud. In a pre-posttest design, reading comprehension, recognition, and production measures were applied. According to the quantitative and qualitative analyses, the group used multimedia gloss outperformed in noticing and recognizing the target words than the control group. Moreover, no significant difference was observed between the groups in terms of production of the target vocabulary items. In terms of comprehension, it was also revealed that the group used combination gloss had better performance than the other groups. In another work, Babaie Shalmani, H. (2010) analyzed the impact of three types of multimedia glosses on EFL learners' reading comprehension. Out of three experimental groups, one group was studied by five academic reading passages through picto-textual glosses such that both textual definitions and relevant images of words popped up. Then, learners were asked to surmise the meanings of the keywords. In a similar vein, the other two groups were provided with a treatment consisting of the same passages but they used either pictorial or textual glosses in which related pictures or textual definitions of the keywords appeared on the screen. As observed, the group employed picto-textual-gloss had a better performance compared to the other two groups. Also, the pictorial-gloss group had a better performance than the textual-gloss group.

In a comparative study, Poole (2011) studied the effect of textual glosses enhanced with modified corpus-extracted sentences and textual glosses enhanced with dictionary definitions on academic word acquisition at an intermediate to advanced level. In this study, 26 non-native speakers of English were investigated. The subjects registered in introductory composition courses at a university in U.S. The purpose of the study was to show the effect of using concordance-based (meaning-inferred) or dictionary-based (meaning-given) glosses on the improvement of the participants. The participants' attitudes towards different online gloss modules were also examined. As found, learners used concordance-based had positive tendencies in their performance but it was not significant. According to the statistical results, there was no significant difference between the performances of different groups.

Nation (2009) believed that glosses may improve vocabulary acquisition, although the research on this is not conclusive. Some of the studies have examined the effects of textual glossing on vocabulary acquisition (e.g. Yoshii & Flaitz, 2002; Xu, 2010). Xu (2010) investigated the effect of three different types of glossing, i.e. glossing in both Chinese and English, glossing in Chinese, and glossing in English, on the incidental vocabulary acquisition through reading. To this end, 103 students of Qingdao University of Science and Technology took part in the study. First, subjects were asked to finish a reading comprehension test, which contained ten comprehension questions after a reading passage. The reading passage contained 18 target words, among which six were glossed in Chinese, six in English and the remaining six in both Chinese and English. After all the subjects had finished the test, the test of the knowledge of the target words was administered. A week later, a delayed test of the new words was given. The results indicated that the mean of the scores in glossing in Chinese was the highest among the three types and the means of the scores in other two types were very close to each other in immediate retention of key words. Moreover, the mean of the scores for the words glossed in both Chinese and English was the highest among the three in delayed post-test. Lyman-Hager and Davis (1996) carried out an experiment, employing two conditions: computerized reading, and non-computerized reading. The first group had access to multimedia annotations while the other group consulted printed text with the same glosses. After the experiment, a written recall protocol together with a vocabulary quiz of the target words was used. The findings of the study showed that students who worked with the multimedia program were better able to retain vocabulary words than students who worked with non-computerized text. Glosses are attractive for students with a high level of active role and interesting in the

field of teaching (Zoi, Bellou & Mikropoulos, 2011). Nowadays, glosses are integrated with multimedia forms such as pictures, videos and sounds (Yoshii, 2006). This integration of glosses with multimedia, which is based on using computer software, attracts great attention and interest in the field of language instruction. "Multimedia is the use of text, graphics, animation, pictures, video, and sound to present information" (Najjar, 1996, p.129). Ko (2005) summarizes four advantages of glossing. First, gloss helps readers understand new words more precisely. Second, there is no need for L2 readers to look up the new words persistently. Third, readers relate prior knowledge to new knowledge with the help of gloss. Fourth, gloss gives readers greater autonomy.

Some other studies have been done in order to investigate the effect of gloss on reading comprehension as well as vocabulary learning. Johnson (1982) investigated vocabulary retention under four different conditions on reading comprehension. The four conditions were no help with vocabulary, reading the definitions of new words before reading, reading a passage with the new words in glossed form, and reading the new words before reading and reading the text with glosses. Seventy-two ESL university students participated in the study. All the students took part in a cloze test, recalling the story in their L2 and recognizing exact sentence from the passage after reading. The results revealed that different types of vocabulary conditions did not significantly affect the comprehension. However, background knowledge of reading facilitated reading comprehension. Ramachandran and Rahim (2004) conducted a research in which the participants were 40 elementary level ESL learners from a secondary school in Malaysia. They were divided into two groups: the experimental group, teaching in English and Malay and the control group teaching in English only. The researcher taught 20 target words in a reading passage during one month: five words each week. An immediate posttest and a one month delayed posttest were administered. The participants were asked to provide the meanings of target words in Malay or English. The results of this research revealed that experimental (L1) group outperformed the control (L2) group in recalling and retention of target words. One explanation for this result is that the subjects used L1 as a resource to compensate their limited L2 vocabulary knowledge. In another study, Duan and Yan (2004) conducted a research to compare the effects of multiple-choice glosses, single glosses and no-glosses. The results of this study revealed that both multiple-choice glosses and single glosses significantly outperformed the control grouping vocabulary acquisition, while multiple-choice gloss group had a better performance than single glosses in incidental vocabulary learning.

A master thesis by Cheng (2005) investigated the effects of deliberate vocabulary learning on Taiwanese college EFL learner's language skills. Cheng selected an implicit vocabulary teaching (Laufer and Osimo, 1991) in which embedded glosses were used to increase participants. Lexical awareness for improvement of text comprehension and vocabulary acquisition. The participants who were 135 university students were provided with four types of glosses: L1 gloss with L2 example sentences, L1 in-text gloss, L1 marginal gloss, and no-gloss. The subjects were asked to read texts of similar difficulty, then a text comprehension, an immediate vocabulary test, and two delayed post tests were administered. The findings were in agreement with the previous related research (Lee & Good, 2003; Rott, Williams, & Cameron, 2002). It was reported that all gloss type's improved vocabulary acquisition but they had no effects on text comprehension. Zarei and Mahmoodzadeh (2014) conducted a study to consider the effect of textual, pictorial and textual-pictorial glosses on reading comprehension and vocabulary production of sixty five female students. Results showed no significant differences among multimedia gloss groups in both reading comprehension and vocabulary production. Multimedia glosses have not largely studied until the last century Plass, Chun, Mayer and Leutner (1998) investigated the effect of verbal (textual) and visual (pictorial) types of gloss on vocabulary learning. 103 American university students who were studying German as a second language participated in the study. They read a text which included 24 target words under the same condition, 12 target words with text and picture glosses, and the other 12 target words with text and video glosses. Based on the results, the students performed better in the condition in which text and picture glosses were presented comparing to the condition in which text and video glosses were presented regarding vocabulary learning.

Nagata (1999) conducted a study in order to compare the effect of a single gloss and a multiple-choice gloss. American college students who were taking the second semester of Japanese course participated in the

study. They were asked to read the text on the computer. Results revealed that multiple-choice gloss was notably more effective than the single gloss. Similarly, Al-Seghayer (2001) conducted a study in order to compare text and picture glosses with text and video glosses. 30 students studying English as a second language were asked to read a text in L2 (English) including 21 target words while the target words were divided into three groups: seven words with text-only gloss, seven words with text and video gloss, and seven words with text and picture gloss. The results of the immediate vocabulary test indicated that text and video gloss was more useful than text and picture.

Yeh and Wang (2003) conducted a different study with 82 university students in Taiwan in order to investigate the effect of three gloss types: text-only, text and picture, and text, picture and sound. Both L1 (Chinese) and L2 (English) were included in the text. The results revealed that the students' performances were the best in text and picture type of glosses. Supporting Chun and Plass (1996), Yanguas (2009) measured the effects of textual, pictorial, textual-pictorial glosses and no-gloss condition on vocabulary learning as well as reading comprehension. The students were divided into four groups under one of the four mentioned conditions of glosses. The results revealed that participants in all kinds of glosses performed better than no gloss condition. Moreover, it was reported that no considerable differences were found among the groups regarding vocabulary production. Furthermore, textual-pictorial glosses were significantly the best group in reading comprehension.

Al-Jabri (2009) investigated the effects of L1 and L2 glosses on reading comprehension and idea recall. Nineteen non-native learners were assigned into three groups of L1 gloss, L2 gloss, and no gloss groups. A 470-word English text with 19 glossed words was offered to all the three groups. Although the L1 group performed better than the L2 group on immediate multiple-choice reading comprehension test, there were no significant differences between the no-gloss group and the gloss groups. With regard to idea recall, the L2 gloss group was the least successful group in the recall protocol. Tabatabaei and Shams (2011) evaluated the effect of different kinds of multimedia glosses such as text, picture and text-picture on online computerized L2 text comprehension and vocabulary learning. In this study, they studied 60 junior high school students divided into four groups including three gloss groups with textual, pictorial, and textual-pictorial glosses, and one control group. According to the research findings, all the participants employed multimedia gloss better comprehend online texts compared to the control group. Also, the group applied multimedia gloss better learn the target words compared to the control group. The best reading comprehension was also observed in the group applied combination gloss.

3. Methodology

3.1 Participants

The study participants included 40 EFL learners learning English as a Foreign Language in the spring of 2017 in a language institution in Ilam city, Iran. These subjects were identified as intermediate-level EFL learners based on their scores on the proficiency test. Participants in this study were Iranian EFL students, consisted of male students, with the age range between 15-21. This study was an attempt to determine the visible impact of real textual and pictorial gloss on the level vocabulary improvement. The null hypothesis in this research asserted that there is no relationship between real textual and pictorial gloss and on the level of extroverts and intrinsic motivation of Iranian English as foreign language (EFL) learners. The subjects were divided into two groups of 20. One group in the experimental group and the other group in the control group.

3.2 Instruments

The main instruments under study comprised three types of Multimedia Computer-Assisted Language Learning (MCALL) programs as the independent variables authored by one of the researchers as well as a pre and posttest. One type, known as Pictorial-Gloss MCALL Courseware, consisted of five academic reading passages whose keywords were annotated pictorially, i.e., definitions (glosses) of words whose meanings were key to the understanding of the passages were given to the subjects through static pictures. The second type, known as Textual-Gloss MCALL Courseware, comprised the same reading passages, but used textual definitions only. Likewise, the third type, known as Picto-Textual-Gloss MCALL Courseware, used a combination of both textual and pictorial definitions to help make meanings clear to the subjects. The

programs also came with a built-in countdown timer, allowing the researchers to control the time variable and the amount of treatment. This idea was first suggested by Razmjoo(2015) a way of helping learners master words. Other instruments involved an English proficiency test to choose subjects of the desired level of language proficiency and a randomizer to randomly assign the participants to equivalent groups of subjects. A posttest of vocabulary was also conducted at the end of the study to compare the achievements of the learners' scores.

3.3 Procedure and Data analysis

At the beginning of the experiment, a proficiency test of receptive skills based on the UCLES IELTS examination papers was administered to 120 students who were learning English in a language instruction in Ilam city. From among them, 40 students who got five on the test were identified as intermediate-level learners and were assigned to two equivalent groups of subjects: one control group and one experimental group. Each participant was given a number from 1 to 20. The program then randomized the numbers in such a way that the first 30 subjects were put in the control group and the other thirty subjects were assigned to the experimental groups. It should be noted, however, that the subjects comprised groups of males only.

Once the students took the test, their papers were scored and the test item statistics were then calculated through an item analyzer called Test Analysis Program (TAP). Once the construct validity of the test was established, it was administered to the three target groups under study. The purpose of pre-testing was twofold: to ascertain the homogeneity of the groups a priori regarding the passages being introduced and to establish a criterion to which the efficacy of glosses could have been appraised. At the researchers' signal, all the subjects in the three groups sat at the computer terminals in the institution's lab and wore headsets. Next, they put the program's CD into the CD/DVD drives and listened to the robot guide showing them how to take the test. They then took the test within a span of 60 minutes. The pre-test did not provide subjects with annotations; so, they had to draw on their prior knowledge when approaching the test. At the end of the session, the subjects' profiles were analyzed and their mean scores were obtained.

To determine the groups' homogeneity, the Levene's Test of equality of variances and an ANOVA analysis were then used. The results of the analyses showed that the three groups were homogeneous at the beginning of the experiment ($p > 0.05$). The experimental group received treatment (pictorial and textual glosses). The treatment session began right after a one-hour break. The subjects should not have left the lab, as they might have remembered the keywords and looked them up in the dictionary. The experimental group received treatment on the passages through a multimedia program drawing on pictorial-textual glosses where a combination of textual definitions and relevant pictures would pop up on the screen by moving the mouse cursor over the keywords. Likewise, the experimental group received treatment on the same passages through a multimedia environment using pictorial annotations where only pertinent images of the concepts associated with the very keywords would pop up. The control group was taught in the traditional way.

In trying to accept or reject the null hypothesis, a T-test was run. In order to conduct the project, the researcher selected some 60 male students, aged 15-21, out of 100 students from among four similar classes in a language institution. Their mother tongue was Persian. The subjects were equally divided into two similar classes of 30 based on the scores' analyses, one that was considered as the experimental group and the other as the control group. In the current study, data was gathered using employed devices which included a T-test, a proficiency test, and an achievement test. Based to the T-test, 60 subjects were selected based on their scores. The participants were chosen whose scores were one standard deviation below and above the mean. Subsequently, proficiency pre-test was administered to the subjects in both groups. All groups took part in exam. The purpose here was to determine the visible impact of real textual and pictorial gloss on the level of extroverts and vocabulary improvement. At the end of the experiments to answer the question of the study and reach a logical conclusion, an achievement test was conducted to compare the results of the two groups.

The dependent variable was the participants' productive knowledge in post-test. The design to carry out this study was experimental, with a pretest, the treatment for experimental as well as a post-test for both experimental and control groups. To answer the research questions regarding that "Do textual and pictorial gloss on the level of vocabulary? In this study one-way ANOVA analysis was used. The statistical difference

between the mean scores obtained from pre-test. As the mean and standard deviation show, there was no significant difference between mean scores of experimental and control groups. This means that English language proficiency of three groups, i.e. experimental and control, to some extent, was equal. The mean and standard deviation are bigger than that of. Thus, it would be concluded that mean differences of experimental and control groups are statistically significant. This can be attributed to the affirmative impression of textual and pictorial gloss on the level of extroverts and intrinsic motivation.

The data gathered verified that textual and pictorial gloss on the level of vocabulary. Overall statistical analyses revealed that the scores obtained by EFL students enjoying textual and pictorial gloss were higher than their counterparts who received no such instructions learning. It should be noted that, comparing the mean scores of both groups in post-test, one would find out that the effects of textual and pictorial gloss on vocabulary improvement was significant. Therefore, the visible impact of textual and pictorial gloss on vocabulary improvement is unquestionable.

4. Findings and Discussion

Many English teachers state that teaching English with multimedia makes an English class more active than in the teacher-centered model (Yang and Fang, 2008: 137). In contrast to traditional English classrooms, in multimedia classrooms, the teacher can use a button and keyboard to show significant content in several seconds, as long as he or she is familiar with the operation of the multimedia. In the present study which the impacts of glosses was examined on vocabulary level, the subjects in the experimental group obtained higher mean scores on the post-test as compared with the pre-test means. This implies that the textual and pictorial glosses were effective to culminate in vocabulary increase for experimental group with regarding to the scores they obtained. Moreover, based on the results (tables 1 to 3 below) the difference among the means was statistically significant ($p < 0.05$).

Table 1:pretest scores

	Sum of Squares	df	Mean Square	F	Sig.
Control Group	.533	2	.267	.039	.962
Experimental Group	393.650	57	6.906		
Total	394.183	59			

Table 2: Posttest scores

	N	Mean	Std. Deviation	Minimum	Maximum
Control group	20	14.6500	2.68083	9.00	18.00
Experimental group	20	14.8500	2.43386	10.00	19.00

ANOVA

Table 3:posttest scores

	Sum of Squares	df	Mean Square	F	Sig.
control Group	178.033	2	89.017	17.999	.000
experimental Group	281.900	57	4.946		
Total	459.933	59			

This research sought to find an empirically justified answer to the following question:

Q: Is there any significant difference in the use of the multimedia program drawing on textual and pictorial glosses and EFL learners' vocabulary improvement? With regarding to the results the answer is "yes". Accordingly, the null hypothesis formulated a priori, which assumed no significant difference in the use of the three types of multimedia glosses, was rejected. The experiment showed that the experimental groups who received treatment through a combination of textual and pictorial annotations outperformed the one who received no special treatment. Simply put, the present study further showed that the experimental group who received treatment through pictorial-textual glosses outperformed the other control group in the post test.

One explanation, as the researchers argue, is that relative to the pictorial-gloss condition, a combination of both textual and pictorial definitions might even better reveal the underlying meanings to learners. This added elaboration might, then, lead to an even deeper understanding of words and a higher motivation.

Another justification is that the associations that are made between the textual and visual representations of the keywords in the working memory make the associated meanings even more memorable. When students quickly access the meanings in their memory, they might arrive at an even deeper understanding, as they can now more concentrate on the main ideas rather than the meanings themselves. This higher motivation will lead to a deeper understanding in the long run, as students more effectively concentrate on the main ideas without losing their train of thoughts.

The present study was an attempt to study the effects of multimedia glosses on EFL learners' vocabulary development level. What was found in this research correctly reflected what Tella (2007), Putman and Walker (2010), and Yeung et al. (2011) argued in their papers that gloss has a direct influence on learning outcomes. Although there have been different point of views on the relation between multimodality and vocabulary learning outcomes as reviewed in the section of literature review, this research showed that children could recall the words they had learned well with the support of multimodality.

Using multimodality for teaching English in general and teaching vocabulary in particular should be considered because of some challenges it posed. First, what Shenton and Pagett (2007) claimed that it takes teachers much time to prepare materials was in line with what the teacher doing this research faced. Knowledge of technology as HAI and LI (2007) informed in their paper can create a barrier that prevents good ideas from coming true. It is also noticed that the modes of text were adopted in an appropriate way in this research. They were not used individually but some of them were combined with each other. Furthermore, they were used as sources for designing activities (games) making children more enjoyable in learning. The way that three different games played also brought new feelings to children in each section, leading to the capability of maintaining their interests in learning vocabulary.

The result of this study is in tune with several other studies in this domain. First, the result of this study is in line with Tabatabaie and Shams (2011), who concluded that the multimedia gloss groups learn the target words better than the control group. Likewise, Jones (2004) showed that all glossed groups outperformed the control group in learning and got better motivated. Yanguas' study (2009) showed that textual-pictorial glosses lead to better reading comprehension. In tune with the result of above mentioned studies, and unlike the present study, Shalmani and KhaliliSabet (2010) concluded that pictorial-textual glosses were the most effective gloss on reading comprehension. Multimedia groups learnt the material more comfortably and were highly motivated in shorter time.

5. Conclusion

With the advancement of technology and the boom of digital revolution, foreign-language teachers should think about effective new ways to create better foreign-language teaching or learning milieus that are supported by multimedia technologies. It is widely agreed that language instruction that integrates technology has had a tremendous impact on the language learning process. There is little doubt that multimedia instruction can be a great help for teachers and learners in improving the proficiency level in English courses as well as in vocabulary improvement. By means of multimedia glosses in English classrooms, teachers can create a pleasant situation for teaching and keep learners interested and motivated by adding more pictures and even music to the instructional program. Students can also have a better comprehension with less difficulty. Consequently, as multimedia glosses create a pleasant environment, facilitate learning, help retention of materials in learners' mind, and relieve the burden of teachers, they can be useful for both teachers and learners.

Based on the findings of the study, the following main suggestions are presented:

1. Technology should be included in the English-language curriculum, creating a lively classroom atmosphere and facilitating learning.

2. Students should be encouraged to use computers and other technological devices; these efforts can increase students' motivation in English courses, and thus, effective and successful goals can be achieved.
3. Teachers also should let their learners recognize the importance of CALL in general and glosses in particular in their learning process and make them aware of advantages of computer and software in better understanding of the materials they study.

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