



## **The Effect of Movie Subtitling on Incidental Vocabulary Learning among EFL Learners**

**Bahman Gorjian**

Assistant Professor, Department of TEFL, Abadan Branch, Islamic Azad University, Abadan,  
Iran

### **Abstract**

This study investigated the effect of subtitling modality on incidental vocabulary learning among Iranian EFL learners. To this end, 90 freshmen students studying English Translation at BA level in Abadan Azad University were selected after taking a proficiency test to ensure their homogeneity. Participants were randomly assigned to three experimental groups, namely: Bimodal group (A), Standard group (B) and Reversed group (C). They watched eight video clips selected from three animated movies with different modes of subtitles: A) Bimodal subtitles, B) Standard subtitles and C) Reversed subtitles. Research instrumentation included a pre-test and a post-test following an experimental design. Participants took a pre-test containing new words selected from the clips. After eight treatment sessions, the post-test was administered. Data were analyzed descriptively and inferentially. To arrive at any difference between the three different modes of subtitles, the researcher conducted one-way ANOVA. The results obtained from the tests showed that participants in reversed subtitling group performed significantly different and learned more new vocabulary items. Standard subtitling was the second type of subtitling which revealed to be more effective than bimodal subtitling.

**Keywords:** Movie subtitling, Incidental vocabulary, EFL learners.

### **1. Introduction**

Learning vocabulary, as the building block of any language, is believed to comprise a significant part of any language learning program. Without adequate vocabulary knowledge, a foreign language learner will encounter problems in using the four language skills, i.e., speaking, listening, reading and writing. McCarthy (1990) claims that 'No matter how well the student learns grammar, no matter how successfully the sounds of L2 (second language learner) are mastered, without words to express a wider range of meanings, communication in L2 just cannot happen in any meaningful way'. In fact, many researchers such as Harley (1996) believe that vocabulary learning is an inseparable part of each student's life. O'Rourke (1974) points out that vocabulary affects students' thoughts, actions, aspirations, and success, especially in academic achievement.

Recently, new advances in technology in general and multimedia in particular, have played a key role in facilitating foreign language teaching and learning. Multimedia technology (like TV, computers, networks, emails, video cassette recorders (VCRS), compact disc ready-only memories (CD-ROMs) and interactive multimedia) boosts teachers by providing authentic materials which further promotes learners' language acquisition. Many researchers have presented strong evidence that multimedia have useful effects on language learning because of rich and authentic comprehensible input (Brett, 1995; Egbert & Jessup, 1996; Khalid, 2001). Furthermore, the significance of providing

learners with comprehensible input has been stressed in second language acquisition and foreign language learning theories. According to Krashen's (1985) input hypothesis, learners can learn a large amount of language unconsciously through ample comprehensible input.

Video is one of the popular multimedia tools to be used in language classrooms because it helps to display the content, to deepen comprehension and to enhance lexical and grammatical learning.

More and more often, teachers are encouraged to implement multimedia tools such as audios or videos in language classrooms because they seem to be more convenient, entertaining, and most of the time very handy.

From previous studies, a number of researchers have claimed the effectiveness of combining audio and visual aids in language classrooms. They argued that visual input combining with other technology tools stimulates deeper comprehension of the texts and enhances the interaction between the target language and learners' mind which in turn, allow learners to predict the target language more easily and to recall more fully (Stevens, 1989; Neuman, Burden & Holden, 1990; Underwood, 1990).

In addition to its effects on increasing learner's overall language ability, the strength of using multimedia tools in enhancing vocabulary learning has also been studied and reported.

Subtitled videos representing words and pictures in oral and visual form are more probable to activate both coding systems in the processing than words or pictures alone. According to dual-coding theory proposed by Paivio (1971), when pictures are associated with the meaning, the number of signals connected to the message increases. As a result, viewers will more probably keep the message in mind. Therefore, the results of the previous researches appear to sustain the aspect that the use of subtitles causes multi-sensory processing, interacting with audio, video and print mechanisms. These information input foundations make the process of language learning enhanced, improve the comprehension of the content, and increase learners' knowledge of vocabulary by looking at the subtitled words in meaningful and stimulating circumstances.

### **1.1. Statement of the Problem**

As it was mentioned earlier, vocabulary acquisition is one of the central components of developing successful communication and literacy skills and has been seen as an integral part of language by both researchers and teachers. The value of multimedia in general and video materials in particular, in improving students' vocabulary knowledge is increasingly acknowledged by researchers and teachers.

Most of the previous studies seem to confirm that subtitles can improve both language learning and vocabulary learning. However, there is inadequacy of research about the modality of subtitling which results in the optimum vocabulary learning. Furthermore, the results of previous studies are mixed. The present research aims to address this issue. This study is designed to investigate the effect of watching English movies with three different subtitling modalities, i.e., bimodal, standard and reversed subtitled movies on learners' incidental vocabulary learning among Iranian EFL learners. The following question is to be answered in this study:

RQ1. Is there any significant difference in incidental vocabulary learning among EFL students watching bimodal, standard and reversed subtitled movies?

In Iran, the curriculum structure is based on teaching grammar and reading comprehension and productive skills as well as vocabulary are less emphasized. In teaching and learning new vocabulary, a few strategies such as Learning vocabulary through word formation and Learning vocabulary of the same category together are used by teachers and students. The role of video materials in developing vocabulary has not been considered seriously in Iran. The findings of this study can be beneficial to all people, engaged in language program including curriculum and course designers, teachers and students. Course designers can benefit from the findings through incorporating subtitled movies of various types as a part of vocabulary development materials. It can also help teachers in choosing the right type of subtitles for the purpose of teaching new vocabulary to their students.

## **2. Background**

### **2.1. Subtitles and Captions**

According to Reich (2006), subtitling is a branch of translation called audiovisual translation in which viewers can read statements of dialogues on the screen as well as watch the images and listen to the dialogues. Neves (2008) believes that captioning and subtitling have exactly the same definitions

although some make a distinction and believe that *captioning* is considered to be for both deaf and hearing-impaired viewers while *subtitling* is special to hearers.

According to Gerzymisch-arbogast (2008), subtitles are the written translation of film dialogues appearing synchronously with the corresponding dialogues produced on the screen. He adds that the process of subtitling involves 3 steps: 1) from one 'language' to another 2) from verbal speech to a written text 3) from a non-condensed (verbatim) to a condensed (non-verbatim) form of text.

The National Captioning Institute defines captions as 'the process of converting the audio portion of a video production into text which is displayed on a television screen. The captions are typically white upper-case letters against a black background'. Subtitles, on the other hand, are defined as 'the permanently affixed onscreen text that represents the narration, dialogue, music, or sound effects in a program. Subtitles are typically placed at the bottom centre of the television screen' (Mundomedia digital studios, online glossary).

According to King (2002), closed captions are texts written on the screen to transcribe the conversation of the speakers in the movie and indicate any other sounds as well, like music, lyrics, or phone ring. Whereas closed captions include any sounds, subtitles contain only the words articulated by the speakers. Cordella (2006) notes that subtitles are divided into intralingual and interlingual types.

The National Captioning Institute offers a glossary of caption terms which includes off-line captioning, on-line captioning, real-time captioning, automatic live encoding (ALE), pop-on captions, roll-up captions, live-display captions, closed captions, open captions, submaster, etc.

Concerning the history of subtitles, Cintas (2005) notes that subtitled films were marketed in the second half of 1970s. Reich (2006) holds that although there were voiceless films in cinemas at the beginning of the film-making history, the producers tried to find a solution to convey the dialogues to the viewers. They finally decided to write short statements on a paper and insert them between the film sequences. The written statements were called intertitles. Subtitles are new forms of intertitles.

## **2.2. Advantages and Disadvantages of Subtitles**

When captioning was first introduced for use in foreign language classrooms in the 1980s, it was thought to be a way to increase learners' attention, reduce anxiety, give students instant confirmation of their understanding of what was heard, and increase motivation (Froehlich, 1988; Vanderplank, 1988; Burger, 1989; Grimmer, 1992).

According to Zanon (2006), subtitling enjoys many advantages; it motivates learners and makes them secure and self-confident. Besides, it can help language learners to monitor their speech and find new vocabulary. He also maintains that in spite of all advantages, the drawbacks of subtitling should not be overlooked. For instance, reading of subtitles may gradually become a habit and create a false confidence.

Stewart and Pertusa (2004) hypothesized that films subtitled in the target language are more appropriate foreign language learning tools for English learners although most English instructors use English subtitled films in foreign language classes. They avow that one of the biggest drawbacks for English subtitling is the neglect of the listening skill. On the other hand, Bird and Williams (2002) and Schmidt (2007) maintain that one of the best ways of language learning is watching intralingually subtitled programs. They state that because word boundaries are clear and there are no accent variations, language learners comprehend and learn language to a greater extent.

To examine the effect of captioning on aural word recognition skills, Markham designed another experiment involving multiple-choice tests administered orally. 118 advanced ESL students watched two short video programs (12 and 13 minutes) with or without captions. In the subsequent listening tests, subjects heard sentences directly taken from the script and immediately followed by four single words (one key word which belonged to a sentence just heard and three distractors) presented orally too. The tests showed that the availability of subtitles during the screening significantly improved the students' ability to identify the key words when they subsequently heard them again (Markham, 1999, pp. 323-4).

## **2.3. The Effect of Subtitles on Vocabulary Learning**

In order to assess the effect of subtitles in target language on vocabulary recognition, Stewart and Pertusa (2004) divided two Spanish films into segments. Then, they also divided seven intermediate Spanish conversation classes of English learners into two groups: showing each class one segment, 53 learners watched the segments of the Spanish films with Spanish subtitles, and 42 learners

saw the same films subtitled in English. A multiple-choice test on a video film was administered to the participants before watching the films in order to measure their level of listening comprehension in Spanish. The results indicated that they were all at the same level. In addition, they were given a multiple-choice vocabulary pretest and post-test to measure the level of vocabulary learning. At the end of the study, they were also presented with a questionnaire to express their feelings about their experience. It turned out that there was a slight difference in the two groups' performance on the vocabulary post-test. However, the questionnaires showed that the learners who watched the segments with target language subtitles had better experiences with subtitling.

Sydorenko (2010) examined the effect of input modality (video, audio, and captions, i.e., on-screen text in the same language as audio) on (a) the learning of written and aural word forms, (b) overall vocabulary gains, (c) attention to input, and (d) vocabulary learning strategies of beginning L2 learners. Twenty-six second-semester learners of Russian participated in the study. Group one ( $N = 8$ ) saw video with audio and captions (VAC); group two ( $N = 9$ ) saw video with audio (VA); group three ( $N = 9$ ) saw video with captions (VC). All participants completed written and aural vocabulary tests and a final questionnaire. The results indicated that group with captions (VAC and VC) scored higher on written than on aural recognition of the word forms, while the reversed applied to the VA group.

The VAC group learned more word meaning than the VA group. Results from the questionnaire suggested that learners paid most attention to captions, followed by video and audio, and acquired most words by associating them with visual images. She concluded that captioned video tends to aid recognition of written word forms and the learning of word meaning, while non-captioned video tends to improve listening comprehension as it facilitates recognition of aural word forms.

Lin (2006) investigated the effects of video-based computer assisted language learning (VBCALL) program on English learners' incidental vocabulary acquisition and the differences in vocabulary learning between English learners with high and low English reading and listening proficiency. The participants of the study were 82 university freshmen. Based on the results of an English proficiency test, three English proficiency groups were set up: (1) 44 participants with high reading and high listening English proficiency (the RHLH group), (2) 20 participants with high reading and low listening English proficiency the RHLL group), and (3) 18 participants with low reading and high listening English proficiency (the RLLH group). All participants completed five practice sessions, five vocabulary follow-up tests, and vocabulary pre- and post-tests.. The results of Quantitative analysis demonstrated that RHLH, RHLL, and RLLH groups' vocabulary post-tests were both higher than those of their pre-tests. Paired *t*-test results show that RHLH and RHLL groups respectively performed significantly better in the vocabulary posttest. One-way ANOVA results demonstrate that in the vocabulary follow-up tests, the total scores revealed significant differences between the RHLH and RLLH groups.

Karakas and Saricoban (2012) studied the influence of watching subtitled cartoons on incidental vocabulary learning. The study was conducted with 42 first grade English Language Teaching (ELT) department students at the University of Mehmet Akif Ersoy, Burdur in Turkey. To collect data from the subjects, a 5-point vocabulary knowledge scale was used and 18 target words were integrated into the scale. The pre-test and post-test group design was selected for the administration. After subjects had been randomly assigned into two groups (one subtitle group and the other no-subtitle group), they were given the same pre- and post-tests. The findings of study did not support the assumption that the subtitle group would outperform the no-subtitle group, since there were no significant differences between two groups according to t-test results. However, there was significant improvement in both of the groups from pre-test to post-test scores.

Findings of these studies in general support the common assumption that subtitles and captions are helpful instructional tools in vocabulary recognition and recall. However, due to several reasons, it is difficult to generalize the findings of the studies reviewed above. First, in some of the mentioned studies the subjects were not grouped on the basis of their level of proficiency; second, different types of tests used to measure the effects of subtitles on increasing learners' knowledge. Thirdly, although the effect of different modes of subtitles on vocabulary learning has been explored in some of the above mentioned studies, in none of them the role of three different mode of subtitles, i.e., standard, bimodal and reversed has been investigated.

### **3. Methodology**

#### **3.1. Participants**

The Participants of this study were 90 freshmen BA level students studying English translation as their major at Abadan Islamic Azad University in Abadan, Iran. They were both male and female, ranging in age from 18 to 32 and were selected based on non-random convenience sampling method.

They were assigned to three equal experimental groups (i.e. A, B and C) after taking a proficiency test to ensure their homogeneity level. The groups were named as bimodal group (A), standard group (B) and Reversed group (C) according to the type of subtitles they were to be exposed during treatment period.

#### **3.2. Instrumentation**

In order to assign participants to homogeneous groups, a sample Barron's TOEFL proficiency test (Sharpe, 2005) was administered. The test included 50 multiple-choice items to be answered within 45 minutes. The reliability coefficient of the test was calculated through KR-21 formula as 0.76. A pre-test, including 40-item of multiple-choice vocabulary items was also administered at the beginning of the treatment. Finally, a vocabulary achievement post-test composed of 40 multiple-choice items was administered at the end of the study to measure the variations in the participants' vocabulary knowledge after the treatment. Both pre-test and post-test were constructed on the basis of vocabularies introduced in DVDs which were presented in the classes. The reliability value of the both pre-test and post-test was calculated through KR-21 formula as 0.89 and 0.93 respectively.

#### **3.3. Materials**

The teaching material, beside the routine class activities and materials, was selected from three English animated movies, recorded on DVDs as follows: 1) "The Ant Bully" written and directed by John A, Davis (2006). It includes 12 episodes with the total time of 80 minutes.

2) "The Emperor's New Groove" produced by Randy Fullmer and Don Hahn and directed by Mark Dindal (2000). The movie is consisted of 12 tracks with 70 minutes duration. 3) "Kung Fu Panda 2" written by Jonathan Aibel and directed by Jennifer Yu Nelson (2011) with 96 minutes duration and 17 episodes. These DVDs were selected on the basis of learners' proficiency level and the syllabus of the course which focused on teaching films at the intermediate level. The suitability of the movies was confirmed through consultation with advisor and supervisor professors. At the end of each class session, a part of the movies was presented to the participants in three groups for about 30 minutes twice a week which lasted for eight sessions.

#### **3.4. Procedure**

To ensure homogeneity of the participants, a sample of Barron's TOEFL proficiency test (Sharpe, 2005) including 50 multiple-choice items was administered. On the basis of the test results, the participants were assigned to three homogeneous experimental groups. They took a 40 item multiple-choice pretest to make sure that the target words were new to them. The items of pretest were constructed on the basis of the animated movies recorded on the DVDs.

All participants of the three groups were engaged in the same class activities except for the last 30 minutes of each session. During this period, participants in different groups were presented with episodes of the same film with different modes of subtitling for 10 minutes. Students in group (A), were presented with both English audio and subtitle (bimodal subtitles). In group (B), the students watched the movies with English audio and Persian subtitle (standard subtitles) and the group (c) were presented with Persian audio and English subtitle (Reversed subtitles). The second 10 minutes of this period was devoted to asking questions about the episodes which were displayed in the three groups.

The aim was to check understanding of the students and trying to elicit new vocabulary without emphasizing directly on their novelty. During the last 10 minutes students in different groups were asked to discuss the film content. All students in three groups were given a short quiz containing a few questions about the movies in the beginning of the next session. This procedure lasted for eight sessions and students were presented with 80 minutes of movie tracks selected from the above mentioned DVDs. At the end of treatment period, the post-test was administered. The post-test included 40 multiple-choice items each were containing one target word of the pre-test with a different construction.

### 3.5. Data analysis

To test the null hypothesis, two independent One-way analysis of variance (ANOVA) was run to investigate the effect of subtitling type on incidental vocabulary learning of participants in different groups.

## 4. Results

As the first step in analyzing data, the results obtained from pre-test were analyzed using SPSS 14 software. Table 1 shows the descriptive statistics of the participants' performance in different groups on pre-test.

**Table-1.** Descriptive Statistics of the Pre-test

Groups	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Bimodal (A)	30	30.76	8.528	1.557	27.58	33.95	4.00	46.00
Standard (B)	30	30.13	9.379	1.712	26.63	33.63	6.00	46.00
Reversed (C)	30	27.13	5.923	1.081	24.92	29.34	4.00	39.00
Total	90	29.34	8.144	.858	27.63	31.05	4.00	46.00

As it can be seen in the table, the three groups were similar concerning their performance on pre-test and the mean and standard deviations of the groups are approximately similar.

The next step was to analyze the results obtained from post-test at the end of treatment period. The descriptive statistics of the participants' performance in different groups on post-test are presented in Table 2:

**Table-2.** Descriptive statistics of the post-test

Groups	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Bimodal (A)	30	40.5667	10.86812	1.98424	36.5084	44.6249	6.00	49.00
Standard (B)	30	35.7667	12.41157	2.26603	31.1321	40.4012	4.00	50.00
Reversed (C)	30	44.5000	9.23169	1.68547	41.0528	47.9472	3.00	49.00
Total	90	40.2778	11.37317	1.19884	37.8957	42.6598	3.00	50.00

A glance at the Table 2 and comparing the mean of each group with the corresponding mean obtained from pre-test, reveals that the participants' in all groups has performed better on post-test and the mean of three groups has significantly increased. As it is shown in the table, group C (Reversed group) has achieved the highest mean, followed by group A (Bimodal group) and group B (Standard group) respectively. To see whether or not the differences among the groups concerning their performance on the post-test, are statistically significant, another One-way ANOVA was run. The results are presented in Table 3.

**Table-3.** One-way ANOVA for post-test

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Between Groups	1147.822	2	573.911	4.818	.010*
Within Groups	10364.233	87	119.129		
Total	11512.056	89			

\*Significant at  $p < 0.05$

The analysis in Table 3 shows that observed F value (4.818) is greater than the critical F value which is 3.03 in this case. The computed significance equals 0.01 which is less than significance level set for the study (0.05). This substantiates the fact that there is a statistically significant difference among the three groups concerning their performance on the post-test. Therefore the null hypothesis is rejected.

To find out exactly where the difference lies, a multiple comparisons were performed using the Scheffe test. The results are shown in table 4.

**Table-4.** Scores for post-hoc Scheffe test (Multiple Comparisons)

<i>(I) groups</i>	<i>(J) groups</i>	<i>Mean Difference (I-J)</i>	<i>Std. Error</i>	<i>Sig.</i>	<i>95% Confidence Interval</i>	
					<i>Lower Bound</i>	<i>Upper Bound</i>
A	B	4.80000	2.81815	.240	-2.2186	11.8186
	C	-3.93333	2.81815	.382	-10.9519	3.0853
B	A	-4.80000	2.81815	.240	-11.8186	2.2186
	C	-8.73333*	2.81815	.011*	15.7519	1.7147
C	A	3.93333	2.81815	.382	-3.0853	10.9519
	B	8.73333*	2.81815	.011*	1.7147	15.7519

\* The mean difference is significant at the 0.05 level.

## 5. Discussion and Conclusion

### 5.1. Discussion

This section involves discussion of the results and findings presented in chapter four in order to provide answer to the research question and thereby to reject or accept the null hypothesis which was introduced in chapter one. First, it is necessary to review the research question once again:

RQ1. Is there any significant difference in incidental vocabulary learning among EFL students watching bimodal, standard and reversed subtitled movies?

The results of one-way ANOVA of post-test, which are presented in Table 4.4, show that there has been a significance difference between groups watching movies with different modes of subtitles (Sig=0.01). Since it was hypothesized that "There is not a significant difference among EFL students watching bimodal, standard and reversed subtitled movies concerning vocabulary learning", it can be concluded that the null hypothesis of the research is rejected.

The results of multiple comparison of means shows that there has been a significant difference between group B (Standard) and group C (Reversed) concerning their performances on the post-test (Sig=0.011). This means that participants in Reversed group performed significantly better than those in Standard group. In other words according to the results, Reversed subtitling has been the most effective mode of subtitling in learning vocabulary incidentally through watching movies.

By comparing the mean differences of the groups and levels of significance, and examining the complementary results of Scheffe test in Table 4.6, it is concluded that participants in group A have performed better in post-test than those in group B. This means that Bimodal subtitling has been in the second place concerning the effectiveness in learning vocabulary incidentally and has been more effective than standard subtitling.

These findings can be justified by drawing on the fact that, as mentioned before, it is believed that human beings are able to remember 10% of what they hear, 20% of what they visually perceive, and 80% of what they visually perceive and interact with. While watching subtitled movies, students are not only watching and listening to the audiovisual material, but also interacting with it as they translate the source text into the target language. This interaction seems to be in its pick in case of watching movies in reversed subtitled mode. While watching reversed subtitled movies, students make less effort to understand aural input due to their familiarity with the audio language, i.e. Farsi. As a result they pay more attention to subtitles which are in English.

This increased attention leads to more focus on the spelling of the words, displayed on the screen which in turn causes more retention of the new words form. Besides, since students are familiar with the audio they will be able to match what they hear with what they see on the screen with more ease and less stress. On the other hand, while watching bimodal or standard subtitled movies, such association between audio and subtitles does not exist and more effort is required to understand audio input which causes less matching between audio and subtitles especially for students with low listening comprehension proficiency and in cases when the rate of delivery of speakers in the movies is high.

As a consequence, these visual clues, i.e. English written words which are available while watching reversed subtitled movies are more retained in the mind and are also more probable to help the students remember the meaning of these words on next occasion i.e., when they encounter these words in future.

Based on the above mentioned comparison of the results, it can be concluded that different type of subtitling has a different effect on incidental learning of new vocabulary through watching subtitled movies. These differences were also reported in the findings of previous studies in which the type of subtitling was taken into account as an independent variable.

The findings of this research are in line with the results of some previous researches (e.g., Holobow, Lambert & Sayegh, 1984) in which the effect of mode of subtitles on vocabulary learning was investigated. They investigated the effect of watching TV programs on incidental vocabulary learning in three different conditions: standard subtitles, reversed subtitles and without subtitles. 45 participants randomly assigned to three experimental groups participated in their pretest-posttest design study. The results of their study demonstrated the relative superiority of reversed subtitled TV programs over standard subtitled and non-subtitled TV programs in terms of enhancing reader's learning of unknown words. On the other hand, Holobow, Lambert and Sayegh (1984) found the reversed mode is more effective for the students in French immersion programs than the bi-modal subtitling. Moreover, Danan (2006) examined how subtitled video programs could enhance foreign language learning. Danan's study showed that reversed subtitling was the most beneficial mode of subtitling. The results from the current study corroborate those from these studies indicating the superiority of reversed subtitling over other modes of subtitling.

The finding of this research is in contrast with Zarei (2009) which investigated the effect of three kinds of subtitling (bimodal, standard, and reversed) on L2 vocabulary recognition and recall by university students in Qazvin, Iran. Regarding the vocabulary recognition, results indicated that participants in the bimodal and standard groups performed significantly differently from the reversed subtitling group but there was no such difference between the bimodal and standard groups. In conclusion, it was found that the most effective type of subtitling for vocabulary recognition was bimodal subtitling. It generated better results than standard subtitling and significantly better results than reversed subtitling. At the same time, standard subtitling produced significantly better results than reversed subtitling. Regarding vocabulary recall, the bimodal subtitling was the most effective while reversed subtitling was the least effective of the three. The difference in the outcome of this study and Zarei's study could be due to the reason that the participants in Zarei's study were probably more proficient in listening comprehension. Another reason might be the difficulty level of the movies selected as the material of the study.

Besides, according to the results, the mean scores of participants in all groups has considerably increased from pre-test to post-test. This means that participants in all groups had a better performance in post-test regardless of the type of movie subtitles they were exposed to during the treatment period. In other words watching movies with subtitles has a positive effect on incidental learning of new vocabulary.

This is in accordance with the findings of many previous studies in which the effect of watching movies with subtitles on improving vocabulary knowledge of learners was investigated (e.g. Reese & Davie, 1987; Neuman & Koskinen 1992; Jones, 2002 )

## **5.2. Conclusion**

Based on the results of the present study it can be concluded that the type of subtitling is an effective factor influencing vocabulary learning. The overall results of study in three different conditions suggest the relative superiority of reversed subtitling group (C) over those of standard subtitled (B) and Bimodal group (A). In other words, the participants in the reversed subtitled condition had higher English vocabulary scores than those of standard subtitled and bimodal groups.

According to the obtained results, it can be concluded that the most effective type of subtitling for learning vocabulary incidentally, is reversed subtitling; this kind of subtitling generates better results than bimodal subtitling and significantly better results than standard subtitling. At the same time, bimodal subtitling produces better results than standard subtitling .It can be argued that reversed subtitles can visually support students who have difficulty in distinguishing orally presented unknown English words, ultimately allowing them to match the aural input with visually presented word by making the appropriate adjustment between their native language sound track and L2 subtitles . This finding is crucial because a weakness in the ability to distinguish L2 words in aural input can hinder vocabulary learning for L2 students. The findings of the present study also support the general idea that the students can acquire elements of a foreign language, including vocabulary, through watching subtitled TV programs or movies.

As mentioned earlier, the outcome of the current research shows that employing subtitled videos as a teaching material in language teaching environments can assist learners to receive the language through multisensory channels. Using subtitled videos would also help language learners develop their knowledge of vocabulary. As it was stated earlier, the role of captioned movies in developing vocabulary has not been considered seriously in Iran. The findings of this study can be beneficial to all people, engaged in language program including curriculum and course designers, teachers and students. These findings might encourage learners to devote more time to watching subtitled TV programs including movies, cartoons and news in order to improve their overall language skills as well as their vocabulary knowledge. Course designers can benefit from the findings through incorporating subtitled movies of various types as a part of vocabulary development materials. Teachers can benefit from the findings of this study by using multimedia including subtitled movies as a part of their teaching material. It can also help teachers in choosing the right type of movie subtitles which has been proved to be the most effective one according to the results of this study and the similar studies. In sum, the findings of this study and other related researches should incite professional developers to update methods of language teaching in a way that multimedia in general and subtitled videos in particular are included in teaching and learning programs.

Despite the apparent congruity of parts of the findings of this study with those of previous studies, the discrepancies between these finding and those of a group of other studies is possibly an endorsement of the need for further research. It seems that the conclusion of this study would need to be verified by a longitudinal study because one of the limitations of this study was that the interval between two tests was too short, which might have caused bias in the interpretation of the results. Another limitation of the study was that due to some limitation it was not possible to assign male and female participants equally to the groups. Since male and female students' learning styles is proved to be different, it is suggested that the possible effect of gender be investigated in a study similar to this one.

The main focus of the study was the development of some specific vocabulary items after watching some target language movie clips with or without captions. Further research can be conducted to examine the effects of watching such movie clips on other aspects of language, such as reading or listening comprehension, and even pronunciation. The target words included in the tests of this study were chosen on the basis of participants' proficiency level .Words belonging to the same part of speech (i.e., verbs, adjectives, etc) can be chosen for a further study.

## References

- Bird, S. A. & Williams, J. N., (2002). The effect of bimodal input on implicit and explicit memory: An investigation into the benefits of within-language subtitling. *Applied Psycholinguistics*, 23(4): 509-533.
- Brett, P., (1995). Multimedia for listening comprehension: The design of a multimedia-based resource for developing listening skills. *System*, 23: 1-10.
- Burger, G., (1989). Are TV programs with video subtitles suitable for teaching listening comprehension? *Zielsprache Deutsch*, 20(4): 10-13.
- Cintas, J.D. (2005). Back to the future in subtitling. EU-High-Level Scientific Conference Series. MuTra 2005 – Challenges of Multidimensional Translation: Conference Proceedings. (Accessed April 7, 2013). Available from: [http://www.euroconferences.info/proceedings/2005\\_Proceedings/2005\\_DiazCintas\\_Jorge.pdf](http://www.euroconferences.info/proceedings/2005_Proceedings/2005_DiazCintas_Jorge.pdf).
- Cordella, M., (2007). Subtitling the film the children of Russia: Enhancing understanding through a series of linguistic transformations. Retrieved, 2009. Available from <http://www.institucional.us.es/revistas/revistas/comunicacion/pdf/numero>.
- Danan, M., (2006). Reversed subtitling and dual coding theory: New directions for foreign language instruction. *Language Learning*, 42(4): 497-527.
- Egbert, J. & Jessup, L., (1996). Analytic and systemic analyses of computer-supported language learning environments. *TESL-EJ*, 2(2): 1978.
- Gerzymisch-Arbogast, H., (2008). Introduction to multidimensional translation research. (Accessed April 21, 2009). Available from [http://www.translationconcepts.org/pdf/Multidimensional\\_Translation\\_Research\\_Forli\\_05-2008](http://www.translationconcepts.org/pdf/Multidimensional_Translation_Research_Forli_05-2008).
- Grimmer, C., (1992). Supertext english language subtitles: A boon for English language learners. *EA Journal*, 10(1): 66-75.
- Harley, B., (1996). Introduction: Vocabulary learning and teaching in a second language. *The Canadian Modern Language Review* 53 (1): 3-11.
- Holobow, N.E., Lambert, W.E. & Sayegh, L., (1984). Pairing script and dialogue: Combinations that show promise for second or foreign language learning. *Language Learning*, 34 (4): 59-76.
- Jones, L., (2004). Testing L2 vocabulary recognition and recall using pictorial and written test items. *Language learning and technology*, 8(3): 122-143.
- Karakas, A. & Saricoban, A., (2012). The impact of watching subtitled animated cartoons on incidental vocabulary learning of ELT students. *Teaching English with Technology*, 12(4): 3-15. Retrieved 2012. Available from: <http://www.tewtjournal.org>.
- Khalid, A., (2001) .The effect of multimedia annotation modes on L2 vocabulary Acquisition: A comparative study. *Language Learning & Technology*, 5(1): 202-232.
- Krashen, S., (1985) .The input hypothesis: Issue and implications. New York: Longman.
- Lin, L.F., (2006). English learners incidental vocabulary acquisition in a video-based call program. *Asian EFL Journal*, 12(5): 1-25.
- Markham, P., (1999). Captioned videotapes and second language listening word recognition. *Foreign Language Annals*, 32(3): 321 – 328.
- McCarthy, M. J., (1990). *Vocabulary*. Oxford, UK: Oxford University Press. Press: Cambridge.
- Neuman, S., (1990). Using subtitled television to improve the reading Proficiency of language minority students. Falls Church, VA: National Captioning Institute.
- Neuman, S., Burden, D. & Holden, E., (1990). Enhancing children's comprehension of a televised story through previewing. *Journal of Educational Research*, 83: 258-265.
- Neuman, S. & Koskinen, P., ( 1992). Subtitled television as comprehensible input: Effects of incidental word learning from context for language minority students. *Research Quarterly*, 27(1): 95-106.
- Neves, J., (2008). 10 fallacies about subtitling for the d/deaf and the hard of hearing. *The Journal of Specialized Translation*, 10.
- O'Rourke, J. P., (1974). *Toward a science of vocabulary development*. The Netherlands: Mouton & Co. N.V. Publishers.
- Paivio, A., (1971). *Imagery and cognitive process*. New York: Holt, Rinehart & Winston.

- Reese, S.D. & W.R. Davie, (1987). Captioning effects on television news learning. Paper Presented to the Radio-Television Journalism of the Association for Education in Journalism and Mass Communication Annual Conference, San Antonio, Texas. Retrieved (2008). Available from [http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/1b/fc/3f.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1b/fc/3f.pdf).
- Reich, P., (2006). The film and the book in translation. MA thesis. Masaryk University. (Accessed April 21, 2009). Available from: [http://is.muni.cz/th/64544/ff\\_m/Diplomova\\_prace](http://is.muni.cz/th/64544/ff_m/Diplomova_prace).
- Schmidt, C., (2007). Same-language subtitling on television: A tool for promoting literacy retention in India. (Accessed April 21, 2009). Available from [http://suseice.stanford.edu/monographs/Schmidt\\_Clara.pdf](http://suseice.stanford.edu/monographs/Schmidt_Clara.pdf).
- Stevens, V., (1989). A direction for call: From behaviorist to humanistic courseware. In M. Pennington (Ed.), Teaching languages with computers: The state of the art. La Jolla, CA: Athelstan.
- Stewart, M.A. & Pertusa, I., (2004). Gains to language learners from viewing target language closed-captioned films. *Foreign Language Annals*, 37(3): 438-447.
- Sydorenko, T., (2010). Modality of input and vocabulary. *Language Learning & Technology*. 14(2): 50-73. (Accessed October 21, 2012). Available from <http://llt.msu.edu/vol14num2/sydorenko.pdf>.
- Talavan, Noa., (2010). Subtitling as a task and subtitles as support: Pedagogical applications. In J. Díaz-Cintas, A. Matamala and J. Neves (eds) *New insights into audiovisual translation and media accessibility*. Amsterdam: Rodopi. pp: 285-299.
- Underwood, J., (1990). Research in hypertext: Desiderata. *Computer Assisted English Language Learning Journal*, 1(4): 33-36.
- Vanderplank, R., (1988). The value of teletext sub-titles in language learning. *English Language Teaching Journal*, 42(4): 272-281.
- Zanon, N. T., (2006). Using subtitles to enhance foreign language learning. *Porta Linguarum* 6. Retrieved (2008). Available from <http://www.google.com/search?hl=en+q=the+effect+of+subtitles+on+vocabulary+learning&start=40&sa=N>
- Zarei, (2009). The effect of bimodal, standard, and reversed subtitling on L2 vocabulary recognition and recall. *SID Journal*, 5(1): 65-84.