THE EFFECT OF STANDARD AND REVERSED SUBTITLING VERSUS NO SUBTITLING MODE ON L٢ VOCABULARY LEARNING

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Abstract

Audiovisual material accompanied by interlingual subtitles is a powerful pedagogical tool which can help improve the vocabulary learning of second-language learners. This study was intended to determine whether or not the mode (standard and reversed) of subtitling affects the incidental vocabulary acquisition of Iranian L٢ learners while watching TV programs. Forty-five participants were randomly assigned to one of the three experimental conditions: (a) watching an English movie with original soundtracks and without subtitles (non-subtitling), (b) watching the same movie with foreign language in sound track and native language in subtitles (standard subtitling), and (c) watching the movie with foreign language in subtitles and native language in sound track (reversed subtitling). The study was carried out using a ١٥-minute-long episode of an animated cartoon about a group of ants trying to confront grasshoppers. The results were clearly suggestive of the paramount and fundamental role of subtitling

mode in learning vocabulary. Many of the studies done in the same field mainly have shown the effects of subtitling on the education of the different components of EFL/ESL one way or another. However, unlike many studies, this study enjoying a controlling non-subtitling group demonstrated the relative superiority of reversed subtitled TV programs over standard subtitled and non-subtitled TV programs in terms of enhancing readers' learning of unknown words. It can have implications for language teachers to take into consideration the incorporation of subtitled films into their materials and classrooms.

Keywords: subtitled television program, standard subtitling, reversed subtitling, L^2 vocabulary learning

1. Introduction

The learners' development of vocabulary in both native and foreign language partly depends largely on experience within rich and natural language context. The different meanings of a word cannot be fully grasped unless the word is encountered in varied semantic and syntactic contexts (Anderson & Nagy, 1991; Read, 2004). Vocabulary use, moreover, occurs not because the learner is trying to learn words but because the learner is trying to understand what is said, sung, or written. In this regard, the meaning of words is not given but inferred from the context in which they are presented. The learning of words from context may be regarded as a stepwise process in which the learner constructs the meaning of a word, making use of the semantic and syntactic cues that the context provides (Beck & McKeowen, 1991).

Most research on incidental vocabulary learning has focused on written texts. In addition to written texts, subtitled television programs seem to provide a rich context for incidental vocabulary acquisition (d'Ydewalle & Pavakanun, 1995; 1997; Grignon, Lavaur & Blanc, 2005; Koolstra & Beentjes, 1999; Zarei, 2009). Watching television has become a common way of receiving information from all over the world. Moreover, many of television programs from some countries are available in many other countries. Accordingly, one has often to view television programs in languages other than the native language. Because of the larger costs of dubbing, which consists of replacing the original soundtrack in foreign language by a version in the native language, subtitling has become a popular way of dealing with the language problem. In subtitling, the original soundtrack is left intact while subtitles in the target language are projected at the bottom of the screen.

A possible learning effect of watching subtitled television programs is the acquisition of foreign languages, which is discussed in the current study. According to Koolstra and Beentjes (1999), the expectation that subtitled television programs may contribute to foreign language acquisition seems quite reasonable.

(Because) subtitled television programs seem to provide a rich context for foreign language acquisition in terms of various forms of information which have been offered. These are in three modes: 1-spoken (original sound tract of the film), 2-written (mother tongue subtitles of the film) and 3-visual (images of the story of the film).

Moreover, watching subtitled television programs may result in acquiring various types of language properties. In addition to word meanings, one may learn the situations in which these words may be used. There may also be improvement in the ability to discern separate words in the flow of spoken language, word pronunciation, and proficiency in constructing correct sentences. Viewers may learn to discriminate between different ways of pronunciation (e.g. British, American) and the attached connotations (e.g. aristocratic or slang).

In the hope of shedding some light on the participant of incidental vocabulary acquisition through watching subtitled television programs, this study will investigate to what extent incidental vocabulary acquisition is influenced by the mode in which the subtitle is presented. More precisely, this study attempts to consider the effect that the two most common types of subtitling, namely standard subtitling mode and reversed subtitling mode, may have on incidental vocabulary acquisition of EFL learners. It aims at finding answers to the following research questions:

1) Does watching subtitled television programs affect incidental vocabulary acquisition by Iranian EFL learners?

2) What type of subtitling mode (standard subtitled or reversed subtitled) leads to a greater incidental vocabulary acquisition by Iranian EFL learners?

Considering the fact that few studies have investigated the effect of different subtitling modes on L2 vocabulary learning (see Zarei, 2009), the current study intends to investigate this issue further to provide clear insights on the effectiveness of the use of subtitling. Since the creation and use of subtitled visuals requires resources, the current study intends

to show the importance of subtitling on L2 vocabulary learning.

2. Review of Literature

2.1 The effect of captioning

Before moving any further, it is important to have a clear understanding of the concepts of captioning and subtitling. Captions have been defined by the National Captioning Institute as the process by which some audio portion of a video production is converted into text which is displayed on a television screen. Reese and Davie (1987), based on their study, claim that viewers benefit from captions by directing attention and cuing recall of specific content. Another study on the effectiveness of captioning in foreign-language instruction investigated bilingual students' English vocabulary acquisition among Southeast Asian and Hispanic students living on the East Coast of the United States (Neuman & Koskinen, 1992). The results indicated that participants who watched captioned programs learned more new words from the second language than participants in any other conditions. Also Borras and Lafayette (1994) mentioned that same language subtitling can help the EFL/ESL learner associate the aural and written forms of words more easily and quickly than video without subtitles. Their result gave support to the fact that captions had the potential value in helping learners not only comprehend authentic linguistic input better, but also produce comprehensible output.

In comparison with captions, subtitled TV programs as a more advanced form of captions can be desirable for language learning which is discussed in the following section.

2.2 The effect of subtitling

A number of studies mentioned below provide evidence to the belief that both audio and video channels can provide more information than just one channel. Based on empirical studies, Wang, Chou, Wang and Hsieh (2003) mentioned that message from subtitles added to visual channel will neither distract nor interfere the oral and pictorial information. Multiple resources of message can expand the capacity of working memory and effectively promote learning achievements.

An attempt was made to measure foreign language acquisition resulting from watching television with standard subtitles in non-instructional settings by taking into account the effect of the similarity between the foreign and native languages (d'Ydewalle & Pavakanun, 1997). To this end, Dutch-Belgian high school students were exposed to subtitled television programs with soundtracks in languages similar (e.g. South-African and German) or dissimilar (e.g. Chinese and Russian) to their mother language. It was found that language acquisition, including vocabulary acquisition, was highest for programs with soundtracks in languages similar to Dutch. Learning words from dissimilar languages might have been lower because it was more difficult to discriminate separate words in the flow of relatively unfamiliar sounds.

Furthermore, in a study investigating the effect of subtitled video programs on foreign language learning, it was found that reversed subtitling was the most beneficial method for enhancing foreign language learning when compared to no-subtitling and standard subtitling (Danan, 2006). Baltova (2006) argued, on the basis of empirical evidence, that bimodal video which is subtitled in L2 is an effective way of enhancing L2 learners' understanding of authentic texts and learning of vocabulary since simultaneous exposure to spoken language, printed text, and visual information, all conveying the same message, is provided.

In another study, the contribution of computer-based subtitling to language learning was investigated and conclusion was made that subtitling encourages learners to understand the content of the film that otherwise would not reach them (Zanon, 2006). To investigate the effectiveness of subtitles on film comprehension, Grignon, Lavaur and Blanc (2005) compared three versions of a film (dubbed, subtitled, and original versions) and found that dubbed and subtitled versions lead to a better performance in comparison to the original version.

In a more recent study, a multimedia listening activity which contained a video of an academic lecture was used for the purpose of comparing the effect of L2 subtitles and lecture transcripts on the comprehension of the lecture (Grgurovic & Hegelheimer, 2007). Taking

a step further, Guichon and McLornan (2008) designed an experiment to compare the effect of multimodality on L2 learners by using an authentic audiovisual recording. They found that L2 subtitling was more beneficial than L1 because it caused less lexical interference implicitly indicating that the participants preferred and used more subtitles in the transcript.

Moreover, the effect of three kinds of subtitling (bimodal, standard, and reversed) on L2 vocabulary recognition and recall by university students in Iran was investigated (Zarei, 2009). 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. Regarding vocabulary recall, the bimodal subtitling was the most effective while reversed subtitling was the least effective of the three. In conclusion, it was found that reversed subtitling was the least effective with regards to both bimodal and standard subtitling.

To summarize, these studies suggest that foreign language words may be learned in non-educational or educational settings by adult and children learners through watching subtitled television programs, in particular when these programs use a foreign language that sounds familiar to the viewer.

3. Method

3.1 Participants

The participants of the present study were 100 Iranian EFL learners enrolled at a private English center called Oxford institute. All the participants had studied English as a compulsory course during their junior high school and high school. They also had finished the *Intro* level of *Interchange Third Edition* series and had started the *Interchange 1* level.

3.2 Materials and instrumentation

The materials and instruments used in the study were as follows:

A modified version of Nation's (1990) Vocabulary Levels Test (VLT) was administered to ensure the homogeneity of the participants. This test is designed to establish the participants' basic knowledge of common meaning of words at 2000, 3000 word levels. The validity and reliability of VLT has been studied by Schmitt, Schmitt and Clapham (2001). Also, a listening test (Richards, 2003) was administered to ensure the participants' listening abilities were of the same level. In order to make sure the vocabulary level of different tests used in the study corresponded to the participants' vocabulary level, VocabProfile (VP) was used. VP is a computer program developed by Laufer and Nation (1995) that performs lexical text analysis. It measures the proportions of low and high frequency vocabulary used by a native speaker or language learner in a written text.

Furthermore, based on the use of VocabProfile (VP), a 15-minute-long episode of an animated cartoon was selected for the experiment. The selected film was entitled "A Bug's Life," which was about a group of ants who decided to confront the grasshoppers which forced the ants to collect them food as offering. In the first condition, a version was shown with original sound track and without the subtitles; in the second condition, the participants watched the movie in the standard subtitling (English dialogues with Persian subtitles); and in the third condition, the participants watched the movie in the reversed subtitling mode (Persian dialogues with English subtitles).

Finally three post-tests were given to the participants: a word-form recognition test, a multiple choice test and a meaning by translation test (discussed in the next section).

3.3 Procedure

To ensure homogeneity of the participants, a modified version of Nation's (1990) Vocabulary Levels Test (VLT) was administered in order to assess the vocabulary level of the students. The reliability and validity of the test has been studied by Schmitt, Schmitt and Clapham (2001). The first level of the test is designed to estimate the learners' basic knowledge of common word meanings at the 2000 word level

which matched the participants' language proficiency level at Interchange Book 1 (Richards, 2005) which is used as the main text of their language study in the institute. The transcription of a sample text of the Interchange Book was imported into VocabProfile (VP) in order to make sure that the vocabulary level of the Book corresponds to that of the participants. The participants who took the Vocabulary Levels Test (VLT) were 100 students, from whom seventy students, whose vocabulary knowledge was within a relevant range, 2000 word level, were chosen for the experiment. Thirty students were excluded due to scoring below 27 out of 30.

Having undergone the VLT, the participants took a listening test from Richards (2003). This was done to ensure the homogeneity of the participants with regards to their listening ability. The suitability of the test was checked based on the VocabProfile's report of the correspondence between the vocabulary level of the test to that of the participants. Twelve participants were excluded due to their low scores on this test.

Then the participants' pre-knowledge of target words was checked. About two weeks prior to the experiment, the fifty eight participants were given the transcription of the movie and they were asked to scan the texts and underline the words that they did not know. There were eight target words in the transcription, and those who circled these target words were selected for the experiment, showing that they had no pre-knowledge on these target words. Thirteen participants who had pre-knowledge on the target words were excluded from the experiment.

The remaining of the forty-five participants were finally divided into three groups (n = 15) for the purpose of making them watch movies with different subtitling types. Group A (non-subtitling) included those participants who watched the movie with original sound track and without the subtitles, Group B (standard subtitling) watched the movie in a foreign language (English) in sound track and native language (Persian) in subtitles, and Group C (reversed subtitling) watched the movie with foreign language (English) in subtitles and native language (Persian) in

sound track. The experiment was conducted in the same room using a Sony CD player and a Philips TV. Each group was shown one version of the movie according to the experimental condition and were tested immediately afterwards. According to Koolstra and Beentjes (1999), in order not to reduce the chance of acquisition effects in comparison to the normal viewing situation in which people watch subtitled television programs at home for longer periods of time, and also taking into account the fact that learners need to meet an unknown word many times before it is learned (Nation, 2001), the movie was shown twice in one session. In order to avoid participants' paying special attention to subtitles, all of them were told to "just watch" the movie and that afterwards they would be asked to give their opinion about the movie and answer a few questions. Immediately after viewing the program, all the participants completed three types of vocabulary test.

Knowing/learning lexical items, according to Wesche and Paribakht (1996) includes three levels: (a) initial recognition (oral or written), (b) comprehension of common connotations and denotations of the word in context, and (c) the ability to produce the word quickly and correctly in a variety of contexts.

To this end, three tests were adopted from Waring and Takaki (2001). The tests include: 1) a word-form recognition test; 2) a multiple-choice (prompted recognition) test; and, 3) a meaning by translation (unprompted recognition) test. The form recognition test required the participants to circle any words they recognized from the soundtrack or the subtitles. The test contained the target words to be tested with some distractors to let the researchers know the level of guessing. Data were collected for the number of correct recognitions as well as false ones (i.e. when they circled a distractor that did not appear in the soundtrack or subtitles, it was considered as false).

The multiple-choice recognition test is a standard prompted recognition four-choice test with the correct meaning and three distractors. An *"I do not know"* option was added to allow participants to indicate when they did not know an item so as to reduce the effect of

guessing. The participants were asked to circle the words they thought were nearest to these words in meaning. Care was taken to ensure that the distractors were pertaining to similar semantic sets in order to reduce the possibility of errant guessing. Besides, the same part of speech as that of the target words was considered for one-word distractors. The meaning (translation) test presented the target words in a list. The participants were asked "What do these words mean? Write the meaning in Persian."

4. Data Analysis and Results

At first, the results of the experiments are presented. This includes the descriptive statistics, One-way ANOVA results, and posteriori Tukey test results of the tests administered after the movie watching sessions, namely form recognition, meaning translation and multiple-choice. Then justifications regarding the results obtained from these tests are argued.

4.1 Results of the form-recognition test

The form recognition test had been included to see how much the participants of our study had taken notice of the target words at the spelling level and, if so, whether the mode of subtitling had played a role in this process. In fact, the ability to recognize new lexical items is assumed to be an initial stage in the process of acquiring new vocabulary (Read, 2004). Each correct answer on the form recognition test was counted as one point while the wrong answers which were considered as 'false recognitions' were assigned one negative point. In order to avoid too many negative points, the participants were told to circle only eight words that they met in the movie. The mean scores of the participants from the three groups on the word-form recognition test are shown in Table 1. The descriptive statistics of the Form recognition test of the three movie watching sessions suggest an adequate number of the target words recognized. The results which are presented in Table 1 indicate that scores in the reversed subtitled (C) condition were higher than in the standard subtitled condition (B), and scores those in the standard subtitled condition (B) were relatively higher than in the non-subtitled

condition (A). The scores of the three groups in the Form-recognition test were higher than those of the Meaning translation and Multiple-choice tests.

Table1: Descriptive statistics of the form recognition test

	N	Mean	Std. Deviation	Minimum	Maximum
A	15	6.0000	.84515	5.00	8.00
B	15	6.0667	.59362	5.00	7.00
C	15	6.6667	1.04654	5.00	8.00
Total	45	6.2444	.88306	5.00	8.00

4.2 Results of the meaning translation test

The meaning translation test shows that the participants are not only capable of recognizing the word, but can also assign a meaning to it without being prompted. To measure the participants' ability to produce translation equivalents, they were asked to supply a translation, definition, or an explanation of the target words in their L1 (i.e. Persian). Although this test involves production, it taps only the receptive L2 word knowledge of the participants. Based on the scoring method of this test in Waring and Takaki (2001), the correct answers (equivalents in Persian) in our study were given one point. The descriptive statistics of meaning translation test of the three movie watching sessions which are presented in Table 2 suggest that the participants in the reversed subtitled condition (C) outperformed those in the standard subtitled condition (B), and the participants in the standard subtitled condition (B) outperformed those in the non-subtitled condition (A). The scores obtained by the participants of the three groups in meaning translation test were lower than those of form-recognition and multiple-choice tests.

Table 2: Descriptive statistics of the meaning translation test

	N	Mean	Std. Deviation	Minimum	Maximum

A	15	3.6000	.98561	2.00	5.00
B	15	4.667	.61721	3.00	5.00
C	15	5.6000	1.18322	3.00	7.00
Total	45	4.6222	1.24843	2.00	7.00

4.3 Results of the multiple-choice test

The multiple-choice test was employed in this study to measure the receptive lexical gains of the participants. The descriptive statistics of this test from the three movie watching sessions are presented in Table 3. As can be observed, the results indicate that lexical gains in the reversed subtitled condition (C) were higher than those in the standard subtitled condition (B), and lexical gains in the standard subtitled condition (B) were higher than those in the non-subtitled condition (A). Interestingly enough, the scores of the three groups in multiple-choice test were higher than those of meaning translation test, but lower than those of form-recognition test.

Table 3: Descriptive statistics of multiple-choice test

	N	Mean	Std. Deviation	Minimum	Maximum
A	15	4.6667	1.04654	3.00	6.00
B	15	5.667	.97590	4.00	7.00
C	15	6.6000	1.12122	5.00	8.00
Total	45	5.6444	1.29957	3.00	8.00

4.4 Analysis of the differences between test types

The tables of this section display the results of the analyses of differences between the test types with regard to each group and each test. The aim here is to determine if there are significant differences between the scores obtained from different test types, which in turn can reveal if one type of test is more 'difficult' than other test types. This has considerable implications for the type of test used in this type of research. As shown by the data in Table 4, the results of one-way ANOVA conducted on the scores of the Form recognition test showed no significant difference

between the groups $F(2,42)= 2.80$, $P=.072$. The significance value is higher than $P<.05$ as set for the study.

Table 4: The ANOVA results of the form-recognition test

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.044	2	2.022	2.806	.072
Within Groups	30.267	42	.721		
Total	34.311	44			

*The mean difference is not significant at .05 level

The results of a one-way ANOVA performed on the scores of the Meaning translation test as shown in Table 5, revealed a significant difference between the groups, $F (2, 42) = 16.37$ $P=0.000$ indicating that the groups exposed to different modes of presentations have done differently on the test.

Table 5: The ANOVA results of the meaning translation test

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	30.044	2	15.022	16.374	.000
Within Groups	38.533	42	.917		
Total	68.578	44			

*The mean difference is significant at .05 level

In addition, with respect to Table 6, the results of one-way ANOVA performed on the scores of Multiple-choice test was statistically significant, $F (2, 42) = 12.72$, $P=.000$ showing the groups' different performance on the test.

Table 6: The ANOVA results of the multiple-choice test

	Sum of Squares	Df	Mean Square	F	Sig.
Between	28.044	2	14.022	12.729	.000

Groups					
Within Groups	46.267	42	1.102		
Total	74.311	44			

*The mean difference is significant at .05 level

The results from Tables 4, and 5, 6 show that there were significant differences between the groups in the Meaning translation and Multiple-choice test, except in the Form recognition test, in which scores of the reversed subtitled (C) condition were higher than those of the standard subtitled condition (B), and scores in the standard subtitled condition (B) were relatively higher than those in the non-subtitled condition (A), but there was not a significant difference between the test scores of the three experimental groups in the form recognition test. The participants in the reversed subtitled group had higher scores than those of the standard subtitled and non-subtitled groups because they were able to see the word forms in the subtitles.

4.5 Results of the posteriori Tukey test

Even though there was a significant difference between the performances of the three groups in the Meaning translation and Muliple-choice tests, it is to be determined whether there are significant differences between the mean scores of the groups with each other. To explore this issue, three posteriori Tukey tests were carried out, the results of which are presented in the following tables. Table 7 below indicates that the performance of the participants did not differ in any of the three conditions.

Table 7: Tukey test results of the form-recognition test

(I) G	(J) G	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A	B	-.0667	.30998	.975	-.8197	.6864
	C	-.6667	.30998	.092	-1.4197	.0864
B	A	.0667	.30998	.975	-.6864	.8197

	C	-.6000	.30998	.141	-1.3531	.1531
C	A	.6667	.30998	.092	-.0864	1.4197
	B	.6000	.30998	0141	-.1531	1.3531

*. The mean difference is significant at the. 05 level.

Since there was not a significant difference between the performances of the three groups in the Form recognition test, the posteriori Tukey test results for this type of test cannot be significant at the .05 level.

As far as the performance of the participants with regards to the Meaning translation test, indicate. There is a statistically significant difference between the three groups. (Table 8).

Table 8: Tukey test results of the meaning translation test

(I) G	(J) G	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A	B	-1.0667*	.34975	.011	-1.9164	-.2169
	C	-2. 0000*	.34975	.000	-2.8497	-1.1503
B	A	1.0667*	.34975	.011	.2169	1.9164
	C	-.9333*	.34975	.028	-1.7831	-.0836
C	A	2. 0000*	.34975	.000	1.1503	2.8497
	B	.9333*	.34975	.028	.0836	1.7831

*. The mean difference is significant at the. 05 level.

Furthermore, with regard to the Multiple-choice test, there was a significant difference between the three groups, indicating the significant difference in the participants' performance under different conditions (Table 9).

Table 9: Tukey test results of the multiple-choice test

(I) G	(J) G	Mean Difference (I-J)	Std. Error	Sig.	95%Confidence Interval	
					Lower Bound	Upper Bound
A	B	-1.0000*	.38325	.033	-1.9311	-.0689
	C	-1.9333*	.38325	.000	-2.8644	-1.0022
B	A	1.0000*	.38325	.033	.0689	1.9311

	C	-.9333*	.38325	.049	-1.8644	-.0022
C	A	1.9333*	.38325	.000	1.0022	2.8644
	B	.9333*	.38325	.049	.0022	1.8644

*. The mean difference is significant at the. 05 level.

In sum, the results in Tables 7, 8, and 9 demonstrate that there are significant differences between the mean scores of the three groups in the Meaning Translation and Multiple-choice test at the .05 level.

5. Discussion

The findings indicate that the participants can acquire elements of a foreign language through watching subtitled television programs. Comparing the overall results of test scores in three different conditions suggests the relative superiority of the test scores obtained in the reversed subtitled group (C) over those of standard subtitled (B) and non-subtitled (A) groups. In other words, the participants in the reversed subtitled condition had higher English vocabulary scores than those of standard subtitled and non-subtitled groups. Therefore, it may be concluded that story information in reversed subtitled movies consisting of subtitles in the foreign language and the sound track in the native language constitute a context from which Iranian EFL learners are able to pick up the meaning of some of the English words.

Although language learning was stronger in the condition in which the participants watched a movie in reversed subtitling mode, vocabulary acquisition was also found in the two other conditions, with vocabulary acquisition being higher in the standard subtitled condition than the non-subtitled condition. The fact that standard subtitling mode results in more vocabulary acquisition than does the non-subtitled mode is because the participants in the standard subtitling mode were exposed to more channels of information than those of the non-subtitled condition, namely the Persian translation of the words that can be read and the word meanings supported by the visual images. As stated above, the results indicate that vocabulary acquisition was also found in the condition in which learners watched the non-subtitled English spoken program.

Apparently, the participants learned some English words from watching the English-spoken film, even though the words were not translated into Persian. In practical terms, this means that vocabulary acquisition may occur when, for instance, Iranian learners are watching authentic television programs.

In Zarei's (2009) study, it was found that with regard to vocabulary recognition and recall, the reversed subtitling mode was the least effective. On the other hand, in the current study, it has been found that the reversed subtitling was the most effective with regard to L2 vocabulary learning. This difference in performances of the participants in the two studies could be due to the reason that the participants in Zarei's study were said to be homogenous only on the basis of the multiple-choice vocabulary tests, i.e. a listening test to ensure the participants' homogeneity with regard to listening comprehension was not carried out. Hence, the present study used a listening test to ensure that the participants' listening comprehension was almost at the same level. Furthermore, the present study used a word-recognition and meaning translation test in addition to the multiple-choice one for the purpose of obtaining more reliable data.

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) (as mentioned previously) 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.

Reading the subtitles might distract the learners from hearing the English words. Therefore, learners' recognition of English words was compared between the standard subtitled and non-subtitled groups. The results indicate that word-form recognition in the standard subtitled condition was relatively higher than that in the non-subtitled condition, although the mean difference was not significant. Therefore, it may be

concluded that reading the subtitles did not distract the learners from hearing the English words. Eye-movement research suggests that viewers are able to switch effortlessly between the visual image and the subtitle (d'Ydwalle, Praet, Verfaillie, & van Rensbrgen, 1991). Our study is consistent with these findings and suggests that Iranian EFL learners have no problem with switching between reading subtitles and listening to the English words spoken in the soundtrack. In fact, the results of our experiment indicate that word-form recognition is even better in the standard and reversed subtitled modes than in the non-subtitled mode. The experimental conditions created in the present study apparently show that English words are better recognized when their translations can be read in the subtitles as in the standard subtitled mode or when the English words are presented in the subtitles and their translations can be heard in the sound track as in the reversed subtitled mode because recognition of words on the basis of a two-channel input (listening and reading) is easier than that of one-channel input (listening).

6. Conclusion

The present study shows foreign language acquisition by EFL learners watching a subtitled movie, despite the short exposure time (15 min). For the practical purpose of language learning with subtitles, further studies need to use longitudinal exposures in order to assess cumulative effects. Moreover, it is also important to delay the time of the language acquisition assessment; in the present study, the assessment followed immediately after watching the movie.

In addition, investigation of the benefits derived from the use of foreign television programs in language instruction would seem an appropriate field for further research. Until now, only non-subtitled foreign television programs have been used in our country as an instructional tool. As our study suggests, more is learned from watching subtitled programs than from non-subtitled programs. Therefore, the use of foreign television programs with interlingual subtitles may also be considered in instructional settings. In a language class situation, when

learners watch subtitled television programs that have been selected by their teacher on the basis of clear and grammatically correct language, visual aids for comprehension of word meanings, and participants that inspire the learner's interest, the effects on foreign language acquisition may be stronger than the effects observed in our experiment. In addition, instead of "just watching" the television program as the participants in our experiment did, learning effects may be stronger when teachers play the broadcasts more than once and analyze with the learners parts of the material being viewed. When used correctly, subtitled television programs, through their unique combination of multisensory presentation of information, may add to the variety and effectiveness of educational activities when learning a foreign language.

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