

The effects of synchronous and asynchronous interlingual and intralingual transcript presentation on L2 vocabulary comprehension and production

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Abstract

To investigate the effects of synchronous and asynchronous interlingual and intralingual transcript presentation on L2 vocabulary comprehension and production, 120 first-year B.A students of English translation at IKIU (Imam Khomeini International) University in Qazvin and Islamic Azad university of Karaj were randomly assigned to 4 groups. Each group was presented with 50 minutes of a film with different transcript conditions – synchronous interlingual, asynchronous interlingual, synchronous intralingual, and asynchronous intralingual transcripts. The participants' vocabulary comprehension was tested using a multiple-choice test and their ability to produce the new words was assessed by utilizing a fill-in-the-blank test. The results of the comprehension test suggested that transcript presentation had no significant effect on the learners' comprehension, although descriptive statistics showed that the participants of the intralingual group performed

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better than the interlingual group participants, and in both groups, the students got better scores while transcript was presented asynchronously. In addition, the results of the production test indicated that neither the language of the transcript nor the time of transcript presentation had any significant effect on vocabulary production of the students.

Keywords: intralingual transcript, interlingual transcript, synchronous transcript, asynchronous transcript, vocabulary comprehension, vocabulary production

1. Introduction

The unprecedented expansion of communication in recent years has given English a crucial role as an international language. Based on this reality, many ESL/EFL teachers yearn, more than ever before, to find more effective ways of language teaching/learning. To this end, with the advent of computer visualization technologies, instructors have combined the verbal modes of instruction with pictorial modes, giving popularity to the use of instructional movies as a learning medium in language classes.

In educational settings, movies and films can be presented in different ways. They can be shown in the target language, or dubbed in the mother tongue of the learners. They can also be presented along with synchronous on-screen text (subtitle) or asynchronous transcript. By the latter, it is meant that students read the film script as a written text, after or before watching the film. Moreover, the language of the subtitle or transcript can be the second/foreign language or the mother tongue of the viewers.

Mayer (2005) defines multimedia as several media devices that present both words (such as spoken and printed text) and pictures (such as animation, video, photos and illustrations). In fact, by using multimedia devices, the instructor uses more than one presentation medium. Multimedia learning occurs when students use information and inputs that have been presented in more than one format, such as verbal information that can be presented as narration or printed text and non-verbal information that can be presented as pictures and

animations. So, multimedia learning is learning from words and pictures (Mayer & Sims, 1994).

Based on the above explanations, captioned or subtitled movies can be considered as a multimedia medium that can be used by ESL teachers in language learning classes. According to Karamitroglou (2000), subtitling is a translated version of spoken language of an audiovisual program that is presented as on-screen-text by the pictures. Of the different kinds of subtitled movies, interlingually and intralingually subtitled movies are relevant to the present study. Interlingual (diagonal) subtitling is used when the sound track of the movie is in the second language and the subtitle is presented in the native language of the viewers. But in the intralingual (vertical, bimodal, same-language or unilingual) subtitling, the sound track and subtitles are both presented in the foreign language (Karamitroglou, 2000).

While a number of studies support the usability of subtitled movies in the learning of a second language, there are others suggesting that using subtitled movies can distract the learning process. According to Vanderplank (1993), subtitled movies help learners to watch movies as native speakers do. Such programs give learners the opportunity to listen to the second language at the natural speed just like in every day life (Burt, 1999; Wang & Shen, 2007). Ya-Ting Chang (2004) holds that captioned movies help learners to improve their second language vocabulary acquisition. Learners also become aware of the idioms, colloquialism, and slangs of that language and get used to different accents and pronunciations of words in the second language (Beentjes & Koolstra, 1999). It is also believed that learning via subtitled movies is not affected by different kinds of accents, but these sound differences can affect largely the aural comprehension (Ogasawara, 1994; Vanderplank, 1993).

According to many researchers including Friedman (2001) and Ogasawara (1994), captioned movies motivate students in the learning of a second language. They provide a relaxing and interesting environment for students during the learning process and decrease the affective filter effect. In addition, Wang and Shen (2007) are of the opinion that using subtitled movies is more efficient in transmitting information to language learners than the traditional ways of using

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language books or printed pictures. The moving pictures are more comprehensible than the still images of the book. Meanwhile, Beentjes and Koolstra (1999) and Danan (2004) avow that a combination of film and transcript presentation provides an authentic and rich context for learners and can help learners to understand the second language more easily.

In subtitled movies, information is usually presented in three ways: by L2 sound track (auditory input), on-screen text that is presented in L1 or L2 (textual input), and visual cues of the film. These three modes of presentation can facilitate language comprehension of the learners as each of them can support the other in necessary situations. By using subtitled movies, information can be presented in these three systems, and each source provides additional and complementary information for the learners, hence improving the learner's comprehension (Kozma, 1991). Similarly, D'Ydewalle and Van de Poel (1999) consider subtitled movies as an informative medium, because they present pictorial, aural and textual information together. In addition, Baltova (1999) believes that a combination of visual, aural, and textual inputs can be more effective and useful in comprehending and understanding of the second language than a combination of sound and picture.

Opposed to the above-said viewpoints, some researchers maintain that movies and transcripts can act as a barrier and prevent effective learning. These researchers reject the usability of multimedia and subtitled movies in second language learning for reasons including the following:

Baltova (1999) and Danan (2004) believe that subtitled movies cannot be used for every student at any proficiency level. They may be useful for advanced or intermediate learners, but they can only be useful for beginners if the content of the movie is adapted to their level and contains many familiar phrases that can be reinforced by the audiovisual cues. A related problem with subtitled films is that their usefulness is heavily dependant on the learners' reading ability. In fact, those students who have a good reading skill can understand the movie well, even without following the spoken dialogue, but subtitles cannot be useful for poor readers, especially those who are weak in the reading of L2 texts (Beentjes & Koolstra, 1999; Bird & Williams, 2002).

Another disadvantage of subtitled films is that in subtitled movies, the speed of the written text is not controlled by the reader. In fact, the

words appear on the screen and disappear rapidly and the learners do not have the chance to go back and re-read some parts of the text, and may miss some parts of subtitles because of their fast appearance (Neuman & Koskinen, 1992). Also, in some movies, the sound track of the movie and the written forms of the words, which appear as subtitle on the screen, are not well synchronized and some parts of the spoken words may be omitted in written format because of the fast dialogues (Friedman, 2001).

Some researchers believe that the modality system of the subtitled movies can cause difficulty in students' understanding. Students have to watch the pictures of the film, and at the same time, read the written texts on the screen and this causes difficulty for learners. They cannot pay full attention to the pictures because part of their attention should be directed toward the reading of the text and they may lose parts of the text if they try to pay attention to the pictures and animations of the film (Neuman & Koskinen, 1992).

Moreover, researchers such as Yoshino, Kano, and Akahori (2000) believe that using subtitled movies may be useful for a short period of time, but they can make the students lazy if they are used for a long time.

There is also controversy with regard to how the time of transcript presentation can affect language learning. While the proponents of the dual-coding theory clearly advocate synchronous transcripts (subtitles), Cotton (2004) suggests that asynchronous transcripts are more effective. He believes that when the subtitles are presented synchronously on the screen, the viewer cannot stop the reading, because the words appear on the screen and rapidly disappear. But when the text is presented asynchronously, the learner has enough time to read the text and can review some parts more than once.

2. Background

2.1 Theoretical Bases of using multimedia and subtitled movies

There are theoretical explanations for supporting or rejecting the usability of subtitled movies and multimedia in language learning process, some of which are briefly reviewed below:

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According to the 'Input Hypothesis' of Krashen, learners can acquire language if they receive comprehensible input. Based on this hypothesis, Danan (2004) suggests that interlingually subtitled movies can be considered as comprehensible input for language learners and change incomprehensible visual messages to comprehensible input. Similarly, Ogasawara (1994) suggests that videos can be a good source of comprehensible input in language classrooms because they include full visual cues.

Another theoretical basis is the so-called Dual Coding Theory (DCT). According to Clark and Pavio (1991), human mind has two separate processing channels; one for visual/pictorial and the other for auditory/verbal information. Although these two channels process separately and independently, they are still connected via referential connections. Danan (2004) uses the DCT of Pavio to show the beneficial effects of interlingually subtitled movies on language learning. He explains that in interlingually subtitled movies, viewers receive information in three separate systems: motion pictures, spoken words, and written text. These systems are functionally independent, but connected to each other by triple associations between image and sound in one language and text in another language. It means that interlingual subtitles connect the L1 and L2 verbal systems, so learners can benefit from visual traces as well as from two distinct sets of verbal traces (Wang, 1994).

Still another closely related theoretical basis of multimedia learning and subtitled films is the Cognitive Theory of Multimedia Learning. According to Mayer (2005), the proposed cognitive theory of multimedia learning offers three theory-based assumptions: the '*Dual Channel Assumption*', which was described above, the '*Limited Capacity Assumption*', which shows that working memory has limited capacity for storing and manipulating information and it can be overloaded if a lot of information is presented at the same time to one channel (Atkinson & Shiffrin, 1968), and the '*Active Processing Assumption*', according to which meaningful learning occurs when the learner is able to simultaneously retain the visually presented material in visual working memory and the verbally presented material in verbal working memory and is also able to organize them into a coherent mental structure, and integrate them into relevant prior knowledge (Sorden, 2005).

There are several principles of multimedia learning that are based on the cognitive theory of multimedia learning. Based on the 'Split Attention Principle', in subtitled films, the written text can be considered as extraneous visual information that may deviate the viewers from the animated pictures of the movie. In these situations, the viewer has to split his/her visual and auditory attention appropriately among the multiple sources of information, which are all necessary for understanding (Mousavi, Low & Sweller, 1995). Based on the split-attention principle, as described by Ayres and Sweller (2005), the important matter in designing multimedia instruction is to avoid formats that force learners to divide their attention between, and mentally integrate, multiple sources of information. It is in line with this principle that Kumar (2004) argues that students who watch a movie without subtitle can comprehend it better than those who watch the movie with subtitle.

'Contiguity Effect' holds that students will be better able to build referential connections when the verbal and visual materials are presented near each other rather than far from each other (Mayer & Sims, 1994). Based on this principle, better understanding occurs when the corresponding words and pictures are presented at the same time rather than separately (Sorden, 2005).

In 'Redundancy Principle', the learner deals with multiple sources of information of which one source is essential for understanding and the others only reiterate the information of the first source in other ways and are considered as redundant information (Sweller, 2005). Sorden (2005) suggests that the redundancy principle depends on the learner's experience and proficiency level. It means that written text may be useful for novice learners, and beginners may use subtitles for understanding the spoken words, but this information may be redundant for advanced learners.

The Modality Principle, described by Low and Sweller (2005), states that the effective working memory capacity and its processing can be expanded by presenting information in a mixed mode (auditory and visual mode), rather than using one or the other alone.

Based on the 'Coherence principle', as Mayer and Moreno (1998) note, better transfer occurs when the new information is presented in a coherent summary and by using relevant words and pictures than from a

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long version of the summary. Therefore, according to this principle, the instructional designers have to exclude irrelevant video, animation, narration, sounds or pictures from their instructional materials (Sorden, 2005).

The 'Personalization Principle' states that deeper learning occurs when words are presented in conversational style (first or second person) rather than formal style (third person); and this happens in movies. So, according to this principle, movies can be considered as useful means for learning a second language (Mayer, 2002).

2.2 Previous Studies

A number of studies have investigated the effects of various kinds of subtitled films on different aspects of second language learning. Some of the more relevant studies are briefly summarized below.

d'Ydewalle and Van de Poel (1999) presented a short subtitled cartoon to 327 (8-12 years old) children in the third, fourth, fifth and sixth grades of primary school in a Dutch-speaking class in Belgium. The film was presented in four different versions: Dutch subtitle with French sound track, French subtitle with Dutch sound track, Dutch subtitle with Danish sound track, and Danish subtitle with Dutch sound track. The results of the study showed that subtitled movies had real but limited effect on second language acquisition. It was also found that there was no significant difference between adults' and children's acquisition of second language through subtitled films.

Ya-Ting Chang (2004) examined the potential effects of entertaining captioned video on the incidental vocabulary learning, content comprehension, and enjoyment of students. The participants of this study were 80 international graduate students. The results indicated that captioned movies helped learners to improve their learning of second language vocabulary and phrases.

Another study was conducted with 246 children, in grades 4 and 6, by Beentjes and Koolstra (1999), examining the effectiveness of TV programs, containing English sound track and Dutch subtitle on the learning of English vocabulary. Analyses revealed that both vocabulary

acquisition and recognition in subtitled condition were better than those of non-subtitled condition.

In a similar study, Bird and Williams (2002) examined the effect of single modality (sound or text) and bimodal modality (sound and text) presentation on word learning of 16 native and 16 advanced non-native English speakers. The study was conducted in 2 phases. In the first one, auditory lexical decisions on familiar words were equally primed by prior bimodal and sound-only presentations, with no priming effects for non-words. In the second phase, a rhyme judgment task was employed on non-words. The results of both experiments revealed that students had better memory recognition in bimodal presentation than the single modality presentation.

Chun and Plass (1996) conducted a study to examine the effect of different types of multimedia annotations on incidental vocabulary learning of students. Participants were 160 second-year German university students who used CyberBunch program (a hyper media application that provides annotations through pictures, video, and printed texts). The analyses of data revealed that word annotations with both verbal and visual modes were learned better than words annotated only with verbal modes.

Yoshino and Kano (2000) investigated the best presentation timing of L1 and L2 captions on 110 Japanese junior college students. The students were instructed to watch the video twice with a thirty-second break. After watching the second presentation, the students were asked to recall the narration of the videos in both English and Japanese. Based on the results, the students recalled better when the captions were presented prior to the audio. In other words, asynchronous caption presentation was more effective than the synchronous one.

Moreno and Mayer (1999) investigated how the verbal and visual materials had to be synchronized in time for students to learn better from the animation. One group of students watched concurrent narration and animation. The second group watched large bites of narration and animation. And the third group watched small bites of narration and animation. The results showed that students learned better when verbal and visual materials were temporally synchronized rather than separated in time.

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Moreno and Mayer (2000) conducted another study on 137 college students who were asked to view the animation in one of the following six conditions:

- Viewing concurrently on-screen text while watching the animation
- Listening concurrently to a narration while watching the animation
- Listening to a narration preceding the corresponding portion of the animation
- Listening to a narration following the animation
- Reading the on-screen text preceding the animation
- Reading the on-screen text following the animation

Results showed that better learning occurred when verbal information was presented auditorily as speech rather than visually as on-screen text both for concurrent and sequential presentations.

Baltova (1999) conducted a study on six classes of French students in grade 11. The students were randomly assigned to the following three conditions: For the first group (reversed group), a brief video documentary with English audio and French subtitle was played. The second group (bimodal group) watched the same film by French audio and French subtitle. The third group was presented with the same film by French audio without any subtitle. Results showed that better comprehension and retention occurred in bimodal and reversed groups than the comparison group. In addition, the bimodal group (using intralingual subtitle) learned and memorized more target words than the reversed and the comparison groups.

In a similar study, Zarei (2009) investigated the effect of three modes of subtitling (standard, bimodal and reversed) on vocabulary recognition and recall of 97 Iranian EFL learners and concluded that although the difference between the bimodal and standard groups was not statistically significant, they were both significantly better than the reversed group in vocabulary recognition. As to vocabulary recall, analyses showed that bimodal subtitling was more effective than standard subtitling, which in turn, was more effective than reversed subtitling.

Finally, Baggett (1984) performed an experiment on 14 groups of college students to examine the role of overlapping in time of visual and auditory linguistic materials and the relationship between visual and

auditory materials in a dual media presentation (dual coding theory). A 30-minute film was played for students in seven different conditions. For some students the visual and narration information were presented synchronously, for some the visuals came early (21, 14, and 7 seconds earlier) and for some the visuals came later (7, 14, and 21 seconds later). The results showed that students performed better in synchronous and visuals seven seconds before narration conditions, because many auditory components were lost when auditory information came before visuals.

3. Purpose of the Study

The controversies among the findings of the above-mentioned studies as well as other studies in the relevant literature justify the present study.

The present study investigates the effect of interlingual and intralingual synchronous and asynchronous transcript presentation on vocabulary comprehension and production. It aims to answer the following research questions:

1. Are there any significant differences among the effects of synchronous and asynchronous interlingual and intralingual transcript presentation on vocabulary comprehension?
2. Are there any significant differences among the effects of synchronous and asynchronous interlingual and intralingual transcript presentation on vocabulary production?

4. Method

4.1 Participants

The participants of the study included 120 first-year B.A students at Imam Khomeini International University in Qazvin and Islamic Azad university of Karaj, majoring in English translation. They were divided into four homogenous groups of 30 students each. The distribution of the participants of the 4 groups is presented in Table 1.

Table 1: The distribution of the participants in the four groups

Content	Language	
	Interlingual	Intralingual
Synchronous	Group 1 (N=30)	Group 3 (N=30)
Asynchronous	Group 2 (N=30)	Group 4 (N=30)

4.2 Instrumentation

The materials and data collection instruments utilized in this study included the following:

1. A multiple-choice TOEFL proficiency test was used for determining the students' proficiency level. As the reading skill could affect the result, the participants' scores on the reading subtest were separately analyzed to make sure that the students were at the same level of reading proficiency.
2. The "Planet Earth" DVD, which was played for students in three separate sessions. The total duration of the film was 50 minutes. Therefore, the duration of film in each session was nearly 17 minutes.
3. A vocabulary comprehension pre-test, consisting of 217 items, was constructed based on the words that appeared in the content of the film and administered to ensure that the participants had no prior knowledge of the target words.
4. A vocabulary comprehension post test, a multiple-choice test consisting of 30 items, was administered to the students after watching the final part of the film in a separate session.
5. A vocabulary production posttest which consisted of 30 items in 'Fill-in-the-blank' format was also given to the participants to check their vocabulary production.

4.3 Procedures

Initially, to select homogenous groups of students, the TOEFL proficiency test was administered. The participants' scores on the

reading subtest were separately analyzed to make sure that the students were at the same level of reading proficiency. Next, the vocabulary comprehension pre-test was administered. The students were given a sentence in English with words or phrases underlined and were required to write the meaning of the underlined words in Persian. The multiple-choice test was not used for this purpose to prevent the guessing effect. Students were also asked to write the meaning in Persian because it was important to select words which were unfamiliar to students. The items to which all or most of the students did not respond correctly were selected for inclusion in the posttests.

Having randomly assigned the participants to one of the experimental conditions, the 'Planet Earth' instructional DVD was presented to the participants of each group during 3 separate sessions. The first group read the transcript of the film in English before watching the film. They were given 10 minutes to read the transcript completely. After the reading was over, they watched the film. The same procedure was gone through for the second group, but in this group the transcript was presented synchronically on the screen as English subtitle.

The third group watched the movie in English, and the transcript of the spoken language was presented synchronically on the screen as Persian subtitle. The participants of the fourth group went through the same procedure, but they read the transcript of the film in Persian before watching the film. The same process was repeated in the second and third sessions.

At the end of the experimental period, to see the effect of the treatments on vocabulary comprehension, the vocabulary comprehension posttest was given to all students. To measure vocabulary production, the vocabulary production posttest was given to the participants in fill-in-the-blank format in which sentences containing a blank were given to the participants to fill in the blanks. To ensure that they got the purpose of the item, the Persian equivalent of the target words were given in parentheses in front of each sentence. Having collected the required data, to answer the research questions, two independent two-way ANOVA procedures were used.

5. Results and Discussion

5.1 Investigation of the First Research Question

The first research question sought to investigate the effects of interlingual and intralingual synchronous and asynchronous transcript presentation on vocabulary comprehension of the learners. To answer this question, a two-way ANOVA procedure was used. The summary of the descriptive statistics is given in table 2.

Table 2: Descriptive statistics for the comprehension test scores

Language	Time	Mean	Std. Deviation	N
Interlingual	Synchronous	6.90	2.975	30
	Asynchronous	7.60	4.966	30
	Total	7.25	4.074	60
Intralingual	Synchronous	8.60	5.096	30
	Asynchronous	10.83	3.640	30
	Total	9.72	4.533	60

The graphic representation of the participants' performance on the vocabulary comprehension test is also given in Figure 1.

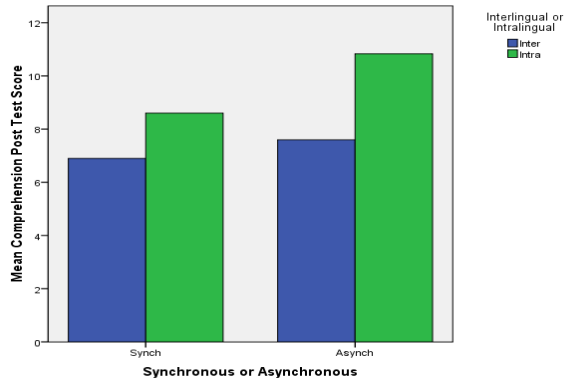


Figure 1: The means of the groups on the comprehension test

To see whether or not the observed differences among the groups are statistically significant, a two-way ANOVA procedure was utilized, yielding the results shown in Table 3.

Table 3: Results of the two-way ANOVA on vocabulary comprehension

Source	Type III Sum of Square	Mean Square	F	Sig.
Language	182.53	182.53	10.35	0.19
Time	64.53	64.53	3.66	0.30
Language * time	17.63	17.63	0.97	0.32

Based on Table 3, there is no significant difference between the effects of the interlingual and intralingual transcripts on the vocabulary comprehension of the students ($F=10.352$, $sig>0.05$). Therefore it can be concluded that although the intralingual group performed better than the interlingual group on the vocabulary comprehension test, the difference between them is not statistically meaningful.

In addition, there is no significant difference between the effects of synchronous and asynchronous transcript presentation on vocabulary comprehension of the students ($F= 3.660$, $sig> 0.05$). This means that synchronous or asynchronous presentation of transcript does not influence vocabulary comprehension, although the students who received asynchronous presentation obtained better scores than those who received synchronous presentation.

The results are also indicative of no interaction effect between language and time of transcript presentation. In other words, there is no significant difference in the vocabulary comprehension of synchronous and asynchronous presentation of interlingual and intralingual transcripts ($F=0.970$, $sig>0.05$). The graphic representation of the result makes the differences among the groups more noticeable.

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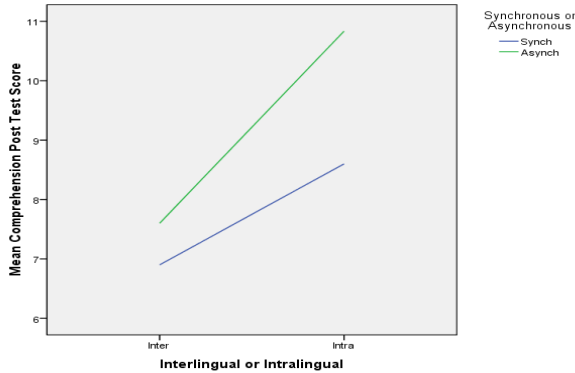


Figure 2: The performance of the participants on vocabulary comprehension test

5.2. Investigation of the Second Research Question

The second research question attempted to investigate the effects of interlingual and intralingual synchronous and asynchronous transcript presentation on vocabulary production of the learners. Another two-way ANOVA procedure was utilized to analyze the data. Before running the two-way ANOVA, the mean and standard deviation of the participants' scores were calculated. Table 4 presets the summary of the descriptive statistics.

Table 4: Descriptive statistics for the production ANOVA

Language	Time	Mean	Std. Deviation	N
Interlingual	Synchronous	1.40	1.476	30
	Asynchronous	.70	1.022	30
	Total	1.05	1.307	60
Intralingual	Synchronous	2.43	2.128	30
	Asynchronous	2.17	1.262	30
	Total	2.30	1.740	60

Table 4 shows that the mean score of the intralingual group is higher than the interlingual group. In addition, the students who

received synchronous presentation obtained better scores than the asynchronous group participants. The graphic representation of the participants' performance on the vocabulary production test is given in Figure 3.

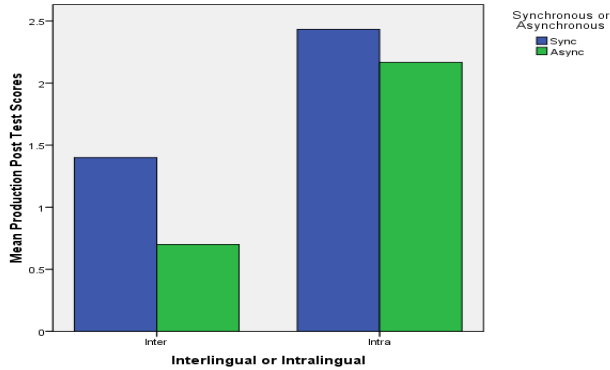


Figure 3: The means of the groups on the production test

To see whether or not the observed differences in the performance of the different groups on the vocabulary production posttest were statistically significant, another two-way ANOVA procedure was utilized, yielding the results summarized in table 5.

Table 5: Results of the two-way ANOVA on vocabulary production

Source	Type II Sum of Squares	Mean Square	F	Sig.
Language	46.87	46.87	33.28	0.10
Time	7.00	7.00	4.97	0.26
language * time	1.40	1.40	0.60	0.43

Based on the results of Table 5, neither the language of transcript nor the time of transcript presentation has any meaningful effect on vocabulary production of the students. Moreover, no interaction effect can be seen between the two factors. The graphic representation of the result is presented in Figure 4.

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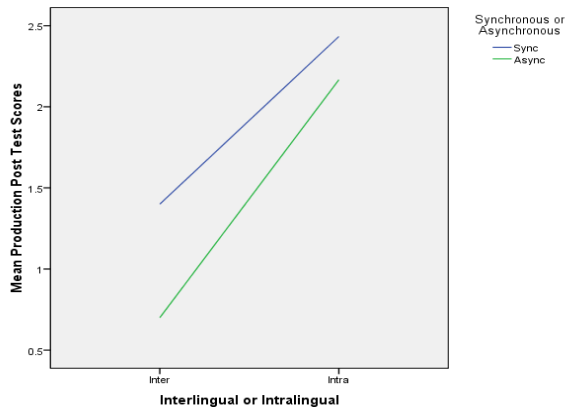


Figure 4: The performance of the participants on vocabulary production

The results of this study are different from a number of studies that were reviewed earlier, and share certain aspects with others. For example, according to the study conducted by Yashino, Kano, and Akahori (2000), both interlingual and intralingual captions had positive effect on learners' comprehension, but intralingual subtitles were more effective than the interlingual subtitles. In this study, there is a trend that students gain better comprehension and production scores when they are exposed to intralingual subtitles, although the gain in scores is not statistically significant. On the other hand, Stewart and Pertusa (2004) concluded that better comprehension occurred for students who watched interlingually subtitled films rather than those who watched the movies by intralingual subtitles, thus contradicting the trend observed in this study.

Yoshino and Kano (2000) examined the effect of synchronous and asynchronous caption presentation on vocabulary comprehension and concluded that students comprehend better with asynchronous caption presentation. There was a similar trend in this study regarding vocabulary comprehension, but on the vocabulary production test, students performed better in synchronous condition compared to asynchronous transcript presentation, reminding one of the result Moreno and Mayer (1999) obtained in their study.

A number of factors might have contributed to the results obtained in this study. For one thing, the participants of this study had a low level

of reading comprehension ability, which might have influenced the outcome. Because as it was reviewed in chapter two, Ogasawara (1994) believes that subtitled movies can be useful for advanced language learners and those who have good reading ability not for intermediate or novice students.

Another possible reason for these results may be the background knowledge of the students. The participants of this study had no or little background knowledge about the subject of the presented film and this was in contrast with many studies. Such a possibility is confirmed by a study conducted by Kirkland, Byrom, Corcoran, and MacDougall (1995), which indicated that the comprehension of captioned videos was affected by background knowledge of the students.

6. Conclusion

To summarize, based on the results of the comprehension test, transcript presentation had no significant role in the learners' vocabulary comprehension, although descriptive statistics showed that students performed better in the intralingual group compared with the interlingual group. At the same time, although the students got better scores on the comprehension test in both interlingual and intralingual groups when the transcript was presented to them asynchronously, the difference was not statistically significant. Therefore, it can be concluded that synchronous and asynchronous interlingual and intralingual transcript presentation has no significant effect on vocabulary comprehension of the students.

In addition, the results of the production test indicated that neither the language of the transcript (interlingual or intralingual) nor the time of transcript presentation (synchronous or asynchronous) had any significant effect on vocabulary production of the students.

The findings of this study might have further fanned the flames of controversy surrounding the issue of the effects of various kinds of subtitling on vocabulary learning. Probably, further research is needed to resolve part of this controversy.

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