

## Effects of Closed-Caption Programs on EFL Learners' Listening Comprehension and Vocabulary Learning

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### Abstract

This study investigated the effects of closed-captioning on vocabulary learning and listening comprehension of English-language movies. Captioning is thus an effective language-learning tool for persons learning English as a second language. Because students may learn a foreign language "passively," utilizing subtitles on television could make learning English enjoyable for them. Closed captioning is an electrical technique that converts spoken words from a television program's audio into written text that mimics subtitles in another language. The findings showed the importance of using closed-captioning software when learning a foreign language. As a result, these must be considered when teaching EFL/ESL. The influence of watching movies with closed captions on vocabulary and hearing is compared in this study. This goal can be reached by employing a closed-captioned movie as a teaching tool in the classroom. This research was critical because it demonstrates the advantages of closed-captioning programs in EFL classrooms for both teachers and students. The study's findings assisted teachers in better understanding how to employ closed captioning as a teaching tool in the classroom. The effects will be seen as even more significant for language learners who used the method.

**Keywords:** Closed-caption program, listening comprehension, vocabulary learning

## 1. Introduction

Listening is a critical language ability that plays an important part in language learning, and its development is a top priority for language teachers (Rubin, 1994). As a result, it has served as a foundation for numerous theories of second language learning. In a nutshell, these ideas contend that exposure to real hearing and reading texts promotes an implicit process through which new language and linguistic norms become internalized and may subsequently be automatically reproduced (Brett, 1997; Basaran & Kose, 2013).

Many instructors and researchers take the use of captions and/or subtitles to aid comprehension of video content for granted. Many instructors feel that captioned television shows provide a rich environment for foreign language education. It is also believed that when captions are offered, viewers are more motivated to grasp what is seen and stated on television (Danan, 2004). Many instructors advise their students to watch TV and movies with captions, believing that this exposure to the target language will improve their students' language skills. However, in comparison to the prevalence of the assumption regarding the efficiency of captioned movies in language development, the number of research that particularly studied the functions of captioned movies in second/foreign language learning is few. This study evaluated the effects of closed-captioning on accidental vocabulary learning to fill a gap in the literature (Tuksel and Tanriverdi 2009, p.48)

According to King (2002), "films are invaluable teaching resources for many reasons; they present colloquial English in real-life contexts rather than artificial situations, and they expose students to a wide range of native speakers, each with their slang, reduced speech, stress, accents, and dialects (p.2).

In addition to exposure, motivation is a strongly recommended condition for language learning. Thus, audiovisual resources supplemented with captions are potent teaching tools that are thought to aid in the improvement of L2 listening and reading comprehension abilities (Borras & Lafayette, 1994; Danan, 2004; Markham & Peter, 2003).

Baltova (1994); Chung (1999). The usage of subtitled movies is rising, primarily to improve students' listening comprehension, and in general to help to learn about new cultures and other

languages. Videos are utilized as authentic source materials to improve listening and reading abilities, acquire culture, encourage learning and education, and listen to native speakers.

## 2. Review of Related Literature

### 2.1. Closed-Captioning program

Closed captions are texts that are presented on the screen to transcribe the conversation of the movie's speakers. Closed captions also include any additional noises, such as music, lyrics, or phone rings. Closed captions incorporate any noises, whereas subtitles only carry the words pronounced by the speakers.

According to Zanon (2006), utilizing subtitles in foreign language teaching places too much emphasis on reading, causing conversations to be neglected or forgotten. Zanon (2006) said that it is also difficult to change the habit of reading after students have been accustomed to doing so. Closed captions were initially designed to assist the deaf. Closed-captioned videos were also commonly utilized to help English as a second language learner

Closed captions increase English language learners' hearing and reading comprehension abilities (Markham & Peter, 2003), students' attention and motivation, and lower students' anxiety, according to prior studies (Vanderplank, 1988). Language learners performed significantly better in objective vocabulary testing when they watched closed caption videos versus no caption videos, and they reported being able to integrate prior knowledge and process presented information much more effectively when they watched closed caption videos (Winke, Gass, Sydorenko, 2010).

Using "captions" and "subtitles" – on-screen textual information with audiovisual resources – can assist L2 learners in developing listening skills using genuine materials without changing the material's pace or linguistic qualities like syntax and vocabulary. "Captions" are commonly described as L2 on-screen text accompanied by a soundtrack in the same language, whereas "subtitles" are on-screen text in the viewers' native language (L1) accompanied by a soundtrack in their L2

Several studies have investigated the use of captions and subtitles in conjunction with audiovisual materials and found that they have a positive effect on L2 learning in the following ways: improving listening comprehension, fostering vocabulary learning, developing oral

production skills, and lowering learners' anxiety (Danan,2004; Perez, Noortgate,&Desmet,2013) (Hosogoshi,2016,p.154).

### 2.3. Listening comprehension

Listening comprehension is difficult for EFL learners because they cannot translate word for word as they listen to EFL content. As previously stated, listening comprehension needs complicated learning processes such as increased material comprehension. Teachers should assist students in understanding genuine speech so that they can deal with real-life talks and listening situations. As a result, in English listening lessons, selecting practical learning materials is crucial for improving practical listening skills. Because video resources provide a wide range of words and expressions used by English speakers in regular speech, they may be used as an alternative method for teaching practical listening. (Rudd, 2014).

## 3.Method

### 3.1. Participants

The research included 50 EFL students. In actuality, they are all participants who speak Arabic as their mother language. Male and female volunteers aged 14 to 16 were among those who took part. We will assess learners' homogeneity using a proficiency exam based on the Nelson English Language Proficiency Test. In addition to paired-sample t test and independent sample t test, two other methods were used: Wilcoxon and Mann-whitney. They will then be randomly separated into two groups: experimental which are about 20 and control about 30.

### 3.2. Instruments

Three tests will be utilized in this survey: 1) a homogeneity test (Nelson English Language Proficiency Test) to determine the learners' proficiency level and divide the sample population into two groups, 2) a pre-test to determine the learners' listening and vocabulary levels at the start of the research period, and 3) a post-test to determine the effects of closed-caption programs on listening comprehension and vocabulary learning. Vocabulary and Reading Comprehension are

the two sections of the exam. Each of the 80 multiple-choice questions in the vocabulary part of the test offers test-takers an option between five alternative solutions. The test-taker will read five brief passages from high school and college textbooks for the Reading Comprehension part. They will then respond to 38 multiple-choice questions that assess their ability to form inferences from what they have read as well as their direct comprehension abilities. The whole exam lasts for around 45 minutes, and it's often conducted in a classroom environment. (An expanded version is also available.)

### 3.3. Procedures

B. B. C documentary, (one with closed -caption and the second time without closed -caption) was selected for this investigation. The film was (Planet Earth from Pole to pole) by David Attenborough about the animals. The duration of this film was twenty minutes. To select the appropriate movie, the researcher had to take into consideration the content, the language and the duration of the film. The movie was selected based on the content to be interesting for the students. In the case of the language, both the accent and the difficulty of the language had to be observed. Both groups watched the same movie.

The experimental group watched the film with closed-caption and the control group watched the film without closed-caption. The movie was presented in one session. Because of the effect of time, the film and the tests were divided into two parts. Participants watched the first part (the duration of the first part was ten minutes and then they answered the questions of listening comprehension and vocabulary tests. Afterwards, the participants watched the second part (ten minutes) and then, they answered the next questions of the listening comprehension and vocabulary tests. A pre-test will be administered to discover the learners' levels of listening comprehension and vocabulary development at the beginning of research period. Finally, after the treatment period, a post-test of listening and vocabulary will be administered to two groups.

### 3.4. Data analysis

Independent and paired sample t-tests will be used to examine the impact of closed-caption programs on the listening and vocabulary development of EFL learners as well as the role that gender plays in these outcomes. As a result, for persons learning English as a second language,

captioning is an effective language learning tool. Because students may "passively" learn a foreign language, viewing television with subtitles may help them enjoy English learning. Close captioning is an electrical technique that converts spoken words from a television broadcast's audio into written text that looks like subtitles in another language.

## 4. Result

### 4.3. Pre-test and Posttest

The main study has been conducted with 60 participants divided into two groups; 30 (15 male and 15 female) have been received the intervention which was the program with closed-captions and 30 (15 male and 15 female) without closed-caption. Pre-test exams were used to make sure equal variances are assumed between two groups, normality of distribution, and each groups' score for comparison to answer research questions posed in the current study. Accordingly, each of the above-mentioned assumptions will be demonstrated via tables.

**Table 4.3**

The Test of Homogeneity of Variances for Pre-tests

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
preLCTOTAL	.059	1	58	.810
preVLQTOTAL	.425	1	58	.517

As shown In Table 4.3, the *P*-value of the listening comprehension pre-test is 0.810 ( $P > .05$ ) and the *P*-value of the vocabulary pre-test is 0.517 ( $P > .05$ ) indicating both groups in both tests had equal variances before the intervention. The other assumption of using proper statistical procedure investigates the probable normality of distribution between two groups as following.

**Table 4.4**

The Test of Normality for Listening Comprehension of Post-Test Scores

Tests of Normality

Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
Statistic	Df	Sig.	Statistic	df	Sig.

POSTLCap	.190	30	.007	.870	30	.002
PostLNoc	.154	30	.067	.952	30	.191

a. Lilliefors Significance Correction

As displayed in table 4.4, the P-value for listening comprehension post-test with closed-caption is .002 ( $P < .05$ ) which is lower than the significance level. Therefore, the assumption of normality distribution is violated. However, the P-value for post-test listening comprehension without caption is .191 which is higher than the significance level.

After considering the assumptions required for implementing proper statistical procedure, Wilcoxon Signed Rank Test and Paired-Sample T-Test were used to measure the possible differences between two groups after intervention.

As displayed in Table 4.6, P-value is .103 which is higher than significance level ( $P > .05$ ) establishing the lack of significant differences between two sets of scores for control group. In other words, although watching the documentary with no closed-caption increased the scores of listening comprehensions, no significant improvement was found between two sets of scores.

To answer the first Research Question, (Does closed-caption program significantly affect EFL learners' listening comprehension?) descriptive statistics and Wilcoxon Signed Rank Test were applied to spot the differences between two sets of scores.

Table 4.7

The Descriptive Statistics Report

	PreLWCap	POSTLCap
N	30	30
Median	6.00	14.00

The table 4.7 illustrates the Median of listening comprehension pre-test with closed-caption as MD= 6.00 and MD= 14.00 for listening comprehension post-test with closed-caption. In other words, post-test had higher median scores than the pre-test. The next table investigates if this difference is significant.



Table 4.8:

The Wilcoxon Signed Rank Test Statistics<sup>a</sup>

	POSTLCCap - PreLWCap
Z	-4.812 <sup>b</sup>
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

As displayed in Table 4.8, P-value is .000 which is lower than significance level ( $P < .05$ ) establishing the presence of significant differences between two sets of scores for experimental group. In other words, watching the documentary with closed-caption improved the scores of listening comprehensions and testified significant differences between two sets of scores for experimental group by rejecting the  $H_0$  posed in Chapter 3.

#### 4.4. Research Questions

To answer the second Research Question (Does closed-caption program affect EFL learners' vocabulary?), the assumptions of using proper statistical procedure were investigated.

**Table 4.9**

The Test of Normality for post-test scores

Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
PostVNoC	.151	30	.078	.945	30	.123
POSTVCCap	.190	30	.007	.873	30	.002



a. Lilliefors Significance Correction

As displayed in table 4.9, the P-value for vocabulary learning post-test without caption is .123 ( $P > .05$ ) which is higher than the significance level. Therefore, the assumption of normality distribution is not violated. However, the P-value for vocabulary learning post-test with caption is .002 ( $P < .05$ ) which is lower than the significance level and the assumption of normality is violated.

After considering the assumptions required for implementing proper statistical procedure, Wilcoxon Signed Rank Test and Paired Sample T-Test were used to measure the possible differences between two groups after intervention.

Table 4.13 The Descriptive Statistics Report

	PREVWCap	POSTVCap
N	30	30
Median	12.00	23.50

The table 4.13 tabulates the Median of vocabulary learning pre-test with closed-caption as MD= 12.00 and MD= 23.50 for vocabulary learning post-test with closed-caption. In other words, participants in post-test had higher median scores than the pre-test. The next table illustrates if this difference is significant.

Table 4.14

*The Wilcoxon Signed Rank Test*

	POSTVCap - PREVWCap
Z	-4.800 <sup>b</sup>
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

As displayed in Table 4.14, P-value is .000 which is lower than significance level ( $P < .05$ ) establishing the presence of significant differences between two sets of scores for experimental group. In other words, watching the documentary with closed-caption improved the scores of

vocabularies learning and testified significant differences between two sets of scores for experimental group by rejecting the HO2 posed in Chapter 3.

### 4.3.2 The Third Research Question

The third Research Question concerned with possible difference between the performance of male and female in listening comprehension with closed-caption program. As already mentioned in Table 4.4, the post-test of listening comprehension scores for with-caption group was not normally distributed, the proper statistical procedure used in this section was Mann-Whitney U Test. Thus, the results are presented as the following.

Table 4.14

The Descriptive Statistics Report

POSTLCap

Gender2	N	Median
Male	15	14.00
Female	15	13.00
Total	30	14.00

The table 4.14 displays the Median of listening comprehension post-test of male participants as MD= 14.00 and MD= 13.00 for listening comprehension post-test of female ones. The next table demonstrates if this difference is significant.

Table 4.15

The Mann-Whitney U Test

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of POSTLCap is the same across categories of Gender2.	Independent-Samples Mann-Whitney U Test	.001 <sup>1</sup>	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

<sup>1</sup>Exact significance is displayed for this test.

As shown in Table 4.15, the P-value is .001 which is lower than the significance level ( $P < .05$ ) stating the fact that the difference between the performance of male and female participants is significant and male learners outperformed the other group in terms of showing progress in listening comprehension. Thus, the HO3 posed in Chapter 3 is being rejected.

#### 4.3.2 The Fourth Research Question

The fourth Research Question tried to investigate possible differences between the performance of male and female in vocabulary learning of male and female participants in with-caption group. As already mentioned in Table 4.9, the post-test of vocabulary learning scores for with-caption group was not normally distributed, the proper statistical procedure used in this section was Mann-Whitney U Test. Thus, the results are presented as the following.

Table 4.17 *The Mann-Whitney U Test*

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of POSTVCap is the same across categories of Gender2.	Independent-Samples Mann-Whitney U Test	.345 <sup>1</sup>	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

<sup>1</sup>Exact significance is displayed for this test.

As represented in Table 4.17, the P-value is .345 which is higher than the significance level ( $P > .05$ ) stating non-significant difference between the performance of male and female participants. In other words, neither of the groups outperformed the other in terms of showing progress in vocabulary learning. Thus, the HO4 posed in Chapter 3 is being accepted.

## 7. Discussion

The research questions will be brought up again here and based on the results obtained; the main issues will be discussed:

Does the closed-caption program significantly affect EFL learners' listening comprehension?

To answer this question, on which the present study has concentrated, the tests result will be statistically discussed in the following section:

The descriptive statistics and Wilcoxon Signed Rank Test were applied to spot the differences between two sets of scores.

The table 4.7 illustrates the Median of listening comprehension pre-test with closed-caption as MD= 6.00 and MD= 14.00 for listening comprehension post-test with closed-caption. In other words, post-test had higher median scores than the pre-test. The next table investigates if this difference is significant.

As displayed in Table 4.8, P-value is .000 which is lower than significance level ( $P < .05$ ) establishing the presence of significant differences between two sets of scores for experimental group. In other words, watching the documentary with closed-caption improved the scores of listening comprehensions and testified significant differences between two sets of scores for experimental group by rejecting the HO1 posed in Chapter 3.

To answer the second Research Question, (Does closed-caption program significantly affect EF;L learners' vocabulary learning?) descriptive statistics and Wilcoxon Signed Rank Test were applied to spot the differences between two sets of scores.

The table 4.13 tabulates the Median of vocabulary learning pre-test with closed-caption as MD= 12.00 and MD= 23.50 for vocabulary learning post-test with closed-caption. In other words, participants in post-test had higher median scores than the pre-test. The next table illustrates if this difference is significant.

As displayed in Table 4.14, P-value is .000 which is lower than significance level ( $P < .05$ ) establishing the presence of significant differences between two sets of scores for experimental group. In other words, watching the documentary with closed-caption improved the scores of vocabulary learning and testified significant differences between two sets of scores for experimental group by rejecting the HO2 posed in Chapter 3.

### 4.3.2 The Third Research Question

The third Research Question concerned with possible difference between the performance of male and female in listening comprehension with closed-caption program. As already mentioned in Table 4.4, the post-test of listening comprehension scores for with-caption group was not normally distributed, the proper statistical procedure used in this section was Mann-Whitney U Test. Thus, the results are presented as the following.

The table 4.14 displays the Median of listening comprehension post-test of male participants as MD= 14.00 and MD= 13.00 for listening comprehension post-test of female ones. The next table demonstrates if this difference is significant. As shown in Table 4.15, the P-value is .001 which is

lower than the significance level ( $P < .05$ ) stating the fact that the difference between the performance of male and female participants is significant and male learners outperformed the other group in terms of showing progress in listening comprehension. Thus, the HO3 posed in Chapter 3 is being rejected.

#### 4.3.2 The Fourth Research Question

The fourth Research Question tried to investigate possible differences between the performance of male and female in vocabulary learning of male and female participants in with-caption group. As already mentioned in Table 4.9, the post-test of vocabulary learning scores for with-caption group was not normally distributed, the proper statistical procedure used in this section was Mann-Whitney U Test. Thus, the results are presented as the following. The table 4.16 illustrates the Median of vocabulary learning post-test of male participants as MD= 24.00 and MD=23.00 vocabulary learning post-test of female ones. The next table explains if this difference is significant.

As represented in Table 4.17, the P-value is .345 which is higher than the significance level ( $P > .05$ ) stating non-significant difference between the performance of male and female participants. In other words, neither of the groups outperformed the other in terms of showing progress in vocabulary learning. Thus, the HO4 posed in Chapter 3 is being accepted.

### 5.3 Conclusion

The present study investigated the impact of closed captioning on word acquisition and movie listening comprehension was investigated in this study. So for people learning English as a second language, captioning is a helpful language-learning tool. Using subtitles on television may make learning English for students rather enjoyable since students may learn a new language "passively." The spoken words from a television program's audio are converted into written text that mimics subtitles in another language using an electrical process known as closed captioning. the result was The listening comprehension pre-test in Table 4.3 has a P-value of 0.810 ( $P > .05$ ), and the vocabulary pre-test has a P-value of 0.517 ( $P > .05$ ), showing that both groups in both tests had identical variances before to the intervention. The second presumption of applying appropriate

statistical methods examines the likelihood that the distribution between two groups is normal. displayed the means of the listening comprehension pre-test and post-test without a caption as M= 5.97 and M= 6.23, respectively. In other words, post-test subjects scored marginally better than pre-test people. The next table showed whether or not this difference was significant.

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