

## **Effects of Captioning Order on EFL Listening and Reading: Should Captions Be First or Second?**

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**Kim, Na-Young (2019). Effects of captioning order on EFL listening and reading: Should captions be first or second? *English Language & Literature Teaching*, 25(4), 1-22.**

This study examines the effects of captioning order on EFL listening and reading comprehension skills. The experiment was conducted over a period of 16 weeks in 2019. Participants were 128 beginner-level freshmen students majoring in aviation at a university in Korea. They were randomly assigned into two groups and watched an American television program in class once every two weeks. Caption first group (n = 60) was provided with captions first while caption second group (n = 68) was with captions second. To explore the effectiveness of captioning order, there were TOEIC-based listening and reading pre- and post-tests. The main findings are as follows: First, in terms of the captioning effects, there was no significant improvement in listening, but a significant difference was observed between pre- and post-tests in reading. Furthermore, there was a significant difference in the improvement between listening and reading comprehension on the post-test. About the captioning order, there was no statistically significant difference between pre- and post-tests in listening for both caption first and caption second groups, but significant differences were found in reading for both groups. For differential effects of captioning order, a significant group difference existed only in listening comprehension. Based on these findings, pedagogical implications are made.

**[captions/captioning order/EFL/listening/reading]**

### **I. INTRODUCTION**

With the development of technology, EFL teachers can make use of television programs and movies in their class, constructing a meaningful platform for their students' contact with English both inside and outside the classroom (Kuppens, 2010). Using these audiovisual materials as a foreign language learning resource has drawn a great deal of

attention and has been applied to various educational applications. Previous studies have also emphasized the pedagogical value of integrating audiovisual input into EFL learning (Bahrani & Sim, 2013).

Most audiovisual materials come with extra information including captions. Particularly, as English has been perceived as the most common source language for television programs and movies, learners of English around the world have preferred audiovisual materials with English captions to learn, practice, and improve their English (Tănase, 2014). For example, with the development of video technology, it has been possible for the learners to choose caption language. According to Mitterer and McQueen (2009), if Korean learners of American English want to improve their understanding of American English, they watch some videos of American English films with American English captions. EFL learners have also benefitted from audiovisual materials with English captions because they give the learners the ability to increase their knowledge and skills related to the English language (Tănase, 2014). According to Pavio's dual coding theory (1991), captioned videos consist of verbal information and nonverbal images, and thus, can enhance information processing and language learning. In particular, Koolstra and Beentjes (1999) added that captioned television programs provide a rich context for foreign language learning.

As mentioned above, captioned videos are considered useful for language learning. However, they should be carefully used because they can be overused. Pujola (2002) argued that videos should be played once with captions and once without to avoid their overuse. Therefore, according to him, it is important to see whether captions should be displayed first or second. In this vein, several researchers have raised a pedagogical question related to the ordering effects of captions (Winke, Gass, & Sydorenko, 2010; Ghorbani, 2011; Roohani & Domakani, 2013). For example, Winke, Gass, and Sydorenko (2010) reported that viewing the same video twice, first with and then without captions, can relieve foreign language learners' anxiety. According to them, this can enhance the learners' auditory process by stimulating their selective and comprehensive listening strategies. Ghorbani (2011), however, argued that EFL learners prefer non-captioned videos first to be watched and find captions distracting on the first exposure. Interestingly, according to Roohani and Domakani (2013), there is no significant effect of captioning order on listening and vocabulary performance.

Videos presented with captions are limited in EFL environments, and even so, they have not been designed to facilitate EFL learning (Ghorbani, 2011). In EFL contexts, there has been little empirical research about the role of captioning (Roohani & Domakani, 2013). The advantages of caption use for EFL learning have not been reported a lot. Furthermore, very few studies have been conducted regarding the order of captioning (Winke et al., 2010). Their findings on caption ordering have even revealed

inconclusive results, as mentioned above. In this light, it is necessary to determine the effectiveness of captioning order in EFL contexts. Therefore, this study aims to investigate the effects of the order of captions on Korean EFL learners' language performance.

According to Perez, Van den Noortgate, and Desmet (2013), most caption studies have examined its effects on listening comprehension. Koh (2012) also pointed out that many research studies have shown the positive effects of captions in the area of listening comprehension, but only several research studies have demonstrated their significant improvement in terms of reading comprehension (Caimi, 2006; Garza, 1991; Markham & Peter, 2003). Through the action of reading the text input, learners can easily associate spoken forms of words with their written forms (Caimi, 2006). As Garza (1991) pointed out, these textually enhanced materials can lead to the improvement in foreign language reading skills. Given that EFL listening and reading comprehension skills are both important in university contexts (Daller & Phelan, 2006), the current study also investigates the effects of captioning on Korean EFL learners' both listening and reading comprehension skills. The following research questions are developed:

1. Are there any effects of captions on EFL listening and reading comprehension?
2. When watching the captioned program twice, does captioning order affect EFL listening and reading comprehension?

## II. LITERATURE REVIEW

### 1. Captions

Captions can be defined as "on-screen text in a given language combined with a soundtrack in the same language" (Markham & Peter, 2003, p. 332). According to Roohani and Domakani (2013), captioning – converting the audio input into a text input on a screen – is a bonus in language learning. Through the action of listening to the audio input and simultaneously reading the text input, learners can associate spoken forms of words with their written forms more easily. Consequently, this can facilitate language learning (Caimi, 2006).

Especially for those who have a certain command of a foreign language and want to develop foreign language listening and reading skills, captions can be of great help (Tănase, 2014). Many previous studies have reported the positive effects of captions on improving EFL learners' listening and reading comprehension skills (Bird & Williams, 2002; Caimi, 2006; Danan, 2004; Garza, 1991; Hsu, Hwang, Chang, & Chang, 2013;

Markham, 1989; Markham & Peter, 2003; Mitterer & McQueen, 2009). After examining the effects of captioned videos upon the listening comprehension of EFL learners, Markham (1989) revealed that the learners increase their listening skills when captions are provided. Danan (2004) also insisted that captions can assist learners of English as a foreign language. According to her, captioned videos facilitates language learning by helping EFL learners visualize what they listen to, especially when the input is slightly beyond their linguistic ability.

According to Garza (1991), videos with captions can also improve foreign language reading comprehension skills. The author conducted a study to evaluate the use of captions as a pedagogical aid to enhance the use of authentic video materials in the foreign language classes. He compared Russian foreign language learners' comprehension of video segments with captions to that without captions, focusing on how the learners integrate verbal and visual information. The data collected in his paper supported a positive correlation between captions and increased comprehension of the video material. In his conclusion, Garza demonstrated that this textually enhanced visual channel facilitates the foreign language learners' reading comprehension. In line with him, Markham and Peter (2003) also reported that captioned videos are beneficial for improving foreign language reading comprehension skills.

According to Caimi (2006), captions allow foreign language learners not only to enhance listening and reading comprehension, but also to increase word recognition and vocabulary acquisition by finding novel words and checking or fixing their spelling. Neuman and Koskinen (1992), for example, suggested that captioned television programs are an important instructional resource in foreign language vocabulary learning. The combination of sounds and images can help learners to establish the relationship between words and meanings. By reading the written form of spoken text, the learners can link the sounds and their associated images with the words. Their retention is enhanced by this visual association of images with sounds and texts. In this vein, they emphasized the potential usefulness of captioned videos for vocabulary learning.

Scholars have proved that captions are beneficial for language learning, and many of them have emphasized their positive effects on improving EFL listening and reading skills (Caimi, 2006; Danan, 2004; Garza, 1991; Markham & Peter, 2003; Tănase, 2014). However, the problem is when the language learners should be exposed to such captions has not been widely investigated. In order to avoid the overuse of captions, some researchers have suggested that videos should be played once with captions and once without captions (Winke, Gass, & Sydorenko, 2010). Pujola (2002) also pointed out that captions should be carefully utilized in foreign language classes because they can be

overused. Nonetheless, the ordering effects of captions have not been widely explored, and even so, previous studies have yielded conflicting results.

For example, Ghorbani (2011) carried out a longitudinal case study to provide evidence about whether captions are effective for EFL learners. Results from the vocabulary, pronunciation, and listening comprehension tests indicate that captions are beneficial for EFL learners to enhance their target language performance. In relation to captioning order, watching videos without captions first is suggested because EFL learners find captions distracting on the first exposure. Captioned videos are suggested as a crutch on the second exposure.

Beyond the comparison of captioned videos versus non-captioned videos, Winke, Gass, and Sydorenko (2010) also investigated the effects of captioning order during video-based listening activities. All their participants watched the same video materials twice. However, their findings are inconsistent with Ghorbani's (2011). The authors reported that captioning during the first viewing of the videos is more beneficial for foreign language listening comprehension and vocabulary.

Another recent study has shown that there is no ordering effect of captions. Roohani and Domakani (2013) investigated the effects of captioning order on listening comprehension and vocabulary gains. With 200 EFL learners, they examined captions displayed on the first or second exposure. Their findings indicate that the captioned materials can be more effective than non-captioned ones. However, captioning order has no significant effect on listening and vocabulary performance.

Since captions can be overused (Pujola, 2002), it is necessary to know when the learners should be exposed to captions in videos to avoid the overuse of captions. Given that little research has addressed the aforementioned issues in EFL settings (Ghorbani, 2011; Roohani & Domakani, 2013; Winke, Gass, & Sydorenko, 2010), the present study focuses on the effectiveness of captioning order in Korean EFL contexts.

## 2. Captioned Television Program

The best way to study the features of conversation is through analyzing the naturally-occurring spoken data (Quaglio & Biber, 2006). However, there are not many publicly-available corpora of naturally-occurring conversation. According to Cameron (2001), television can be a convenient source for spoken language data. The general similarities between face-to-face conversations and television dialogues indicate that television programs have the potential to provide a convenient source of spoken data (Quaglio 2008). In this vein, the use of television language can be suggested for authentic language learning.

Particularly, for the purpose of English learning, Washburn (2001) suggested the use of American television programs. Ghia (2012) emphasized the importance of considering their genres when they are applied in the language classroom as didactic tools. Linguistic usage in the dialogues in television series and dramas is closer to spontaneous conversations, while those in documentaries and news broadcasts are perceived as having low compliance to real orality (Forchini, 2009).

For example, Quaglio (2009) recommended the situation comedy 'Friends' because this series contains typical and natural linguistic features of face-to-face conversation. He compared the language of the sitcom with the real conversation using a corpus of the sitcom's transcripts and the American conversation subcorpus. In this television series, there is a high percentage of grammatical and lexical features in spontaneous conversations. Frequency-based analysis revealed that this television sitcom includes the core linguistic features of natural conversation and constitutes an accurate representation of face-to-face conversations.

As foreign language programs begin to integrate authentic materials into their curricula, more attention is being paid to ways and means to optimize learners' comprehension of the language of the television segment (Garza, 1991). Particularly, for foreign language learners, added captions are of great interest as they allow them to read what they hear in their target language. According to Mitterer and McQueen (2009), for example, Korean learners who want to improve their understanding of American English watch American English films with American English captions.

English has been perceived as the most common source language for audiovisual materials such as movies and television programs (Tănase, 2014). In particular, the increasing availability of captioned television programs has provided accurate examples of the relation between structural forms and their functional correlates (Quaglio 2009). Immersing themselves in television series rich in authentic and functional English language use, learners of English can acquire knowledge and skills both implicitly and explicitly. According to Tănase (2014), EFL learners around the world have preferred English-captioned audiovisual materials to learn, practice, and improve their English.

The extensive exposure to foreign language input can develop their competence without conscious awareness. According to Dörnyei (2007), EFL learners can identify the significant parts that they personally want to learn or strengthen with the benefit of input flooding. The learners can pay close attention to pronunciation and intonation, gestures and facial expressions in certain situations, and semantics of words in particular contexts, which are less frequently taught and difficult to teach in EFL classrooms (Dörnyei, 2007).

As captioned television programs have become increasingly popular, foreign language learners have been exposed to authentic television series with captions (Danan,

2004; Low & Chia-Tzu, 2012; Markham & Peter, 2003; Taylor, 2005). In addition, the Internet has made foreign language learning from captioned television series more accessible. Many scholars have proved that captions are beneficial for language learning, emphasizing their positive effects on improving EFL vocabulary and comprehension skills (Caimi, 2006; Danan, 2004; Garza, 1991; Markham & Peter, 2003; Neuman & Koskinen, 1992; Roohani & Domakani, 2013; Tánase, 2014).

However, several researchers have expressed concerns about the effects of captions. Markham (1989) pointed out that even if captions can significantly improve language learners' vocabulary knowledge, improved comprehension resulting from the specific context of a captioned audiovisual program does not always prove the learners' ability to better comprehend new scenes without captions. Winke, Gass, and Sydorenko (2010) questioned about what learners actually do with captions when they are presented with them. According to Hayati and Mohmedi (2011), the link between the availability of captions and comprehension seems to be missing in the instructional setting and it needs to be searched for by a systematic study. Accordingly, Robin (2007) also mentioned that previous studies on captions have not been well-tested.

Although many universities in EFL settings have used American television series and movies in English listening and audiovisual classes, how to implement English language television programs effectively in class has not been fully investigated (Wang, 2014). Moreover, scholars have not reached consensus on the effects of captions on foreign language learning, as mentioned above. Therefore, there is a need to explore how to use captioned television programs for improving the listening and reading comprehension skills of EFL learners to provide important information on the implementation of captioned television programs in class.

### **III. RESEARCH DESIGN**

#### **1. Participants**

Participants for this study were 128 Korean college students learning English as a foreign language. The participants were beginner-level EFL learners students selected from two intact homogeneous classrooms. All of them were freshmen students majoring in aviation at a university in Korea. In order to determine their English proficiency, the university required all freshmen students to take an English placement test before registering for their first-semester course.

The participants in the current study were regarded as beginner-level EFL learners who scored about 340 on average out of 990 on the TOEIC-based placement test. This is

within a TOEIC 324-350 range, which can be interpreted as beginning proficiency level (Chujo, Oghigian, & Uchibori, 2013). All participants were homogenized by the placement test. According to Wall, Clapham, and Alderson (1994), the TOEIC can be used to create a group of homogeneous language abilities. The participants' age ranged from 19 to 25. Female participants consisted of 71, while male participants 57. No one had any experience in studying English abroad.

All participants of the current study were taking compulsory TOEIC listening and reading course once a week to improve their English proficiency and to get a job in the future. The language used for international aviation communication is definitely English (Alderson, 2009), and English acts a crucial role in the airline business as a working language (Sittattrakul & Laovoravit, 2018). According to Hsu (2014), English has been considered as the language of opportunity because it is one of the most important skills for employability. However, Poorahmadi (2017) pointed out that aviation students have difficulty in English learning. In this vein, it is required to find an effective way to help improve the participants' English learning.

The purpose of this study was to determine the effectiveness of captions in EFL contexts. Specifically, the present study aims to investigate the effects of captioning order on Korean EFL learners' listening and reading comprehension skills. For the experiment, participants were divided into two groups: Caption first group ( $n = 60$ ) and caption second group ( $n = 68$ ). Participants in the caption first group watched the video first with captions and then without while those in the caption second group watched it first without captions and then with.

## 2. Materials

For the current study, participants watched the captioned television program in a randomized order. Previous scholars (e.g. Washburn, 2001) have suggested the use of American television programs for English learning, and particularly, they have recommended the American television sitcom *Friends* as the sitcom fairly represents spoken English conversation (Quaglio, 2009). Frumuselu, De Maeyer, Donche, and Plana (2015) added that their language is very similar to real-life conversations, showing authentic cultural aspects of an English speaking country.

Given that teaching materials in EFL settings are often textbook-oriented and test-driven and lack an authentic and meaningful context, it is important for EFL learners to have opportunities to learn their target language through real-life communication beyond classrooms (Wang, 2012). From this point of view, the television sitcom *Friends* was chosen for this study. According to Frumuselu, De Maeyer, Donche, and Plana (2015), this program presents communicative and real-life situations. In addition, considering



that its main characters are a group of six friends in the 20s, it is highly relevant for the age of the participants in this study.

There were 236 episodes with ten seasons in this television series. Among the ten most-watched episodes, seven episodes were randomly selected. Their running time was approximately 22-24 minutes each, which stands for about 154-168 minutes in total. All participants watched one episode once every two weeks in their language classroom. According to their experimental condition, the caption first group watched the episode with captions first while the caption second group watched it with captions second.

In order to investigate the effects of captioning order on participants' EFL listening and reading, TOEIC-based pre- and post-tests were administered. Adequate English competence is mandatory to get a job or to be promoted (Jeon, 2010). As Hsu (2014) pointed out, English is one of the most important skills for employability. This makes job applicants in Korea prove their English proficiency by submitting their official English test scores (Kim, 2019). TOEIC and TOEFL are such high stakes official tests in Korea, having a crucial effect on the test taker's future (Kim, 2009). Particularly, given that TOEIC is considered as effective means to recruit flight attendants in EFL settings (Sirikanjanawong & Wasanasomsithi, 2018), the current study employed TOEIC listening and reading tests to meet the participants' needs.

Reflecting real-world tasks, TOEIC provides a common standard of measurement for English language skills of EFL learners (Kim, 2018). The test is a paper-and-pencil and multiple-choice assessment. TOEIC listening and reading tests consist of two timed sections and there are 100 questions in each section. 45 minutes are given for the listening section while 75 minutes for reading. Test scores are determined by the number of correct answers. The scores are then converted to scaled scores. These test scores represent how well the test taker can listen and read in English language in real-life situations. All participants in the study took TOEIC-based pre- and post- listening and reading tests both before and after the treatment.

### 3. Procedures

128 beginner-level Korean college students joined this study. In order to determine their English proficiency, the university required its freshmen students to take a TOEIC-based placement test before registering for their first-semester course. All participants in the current study were beginner-level EFL learners who were homogenized by the placement test. They were aviation students in their first year taking TOEIC listening and reading course once a week. The weekly class the participants were taking was an introductory course for the TOEIC test. It was two hours in length and a credit-bearing compulsory course taught by the same instructor.

This study was conducted over a period of 16 weeks in 2019. Except for the first and last week of the experimental period, all participants watched one episode of approximately 22-24 minutes from the American television program once every two weeks. In total, the participants were exposed to seven captioned episodes of the television sitcom. All viewing sessions were held in the language classroom under the teacher's control. Divided into two groups, all participants watched the same episode twice with and without captions in a randomized order. The caption first group (n = 60) watched the episode with captions first and then without captions second while the caption second group (n = 68) watched it without captions first and then with captions second.

In order to explore the effectiveness of captioning order, there were TOEIC-based listening and reading pre- and post-tests before and after the experiment. The test was a paper-and-pencil and multiple-choice assessment, consisting of timed sections and 100 questions in each section. For the listening section, 45 minutes were given while for the reading section, 75 minutes. The number of correct answers determined the participants' test scores. The score ranged from 0 to 100 for each section.

#### 4. Data Analysis

Data gathered from this study were computed and analyzed using the SPSS Statistics program version 21. For all analyses, carried out were descriptive statistics. Paired samples t-tests were first conducted to compare any changes in mean scores of listening and reading pre- and post-tests of the two caption groups. Independent samples t-tests were then employed to investigate whether there are any differential effects of captioning order on EFL listening and reading. The alpha level was set at .05.

## IV. RESULTS AND DISCUSSION

### 1. Effects of Captioning on EFL Listening and Reading

One of the purposes of the present study was to investigate whether watching captioned television programs affects the improvement of EFL listening and reading comprehension. To this end, the mean scores of listening and reading pre- and post-tests were compared. Descriptive statistics and paired samples t-tests were computed. Table 1 below shows their results.

**TABLE 1**  
**Improvement in EFL Listening and Reading**

	Pre-test (n = 128)		Post-test (n = 128)		<i>t</i>	<i>p</i>
	M	SD	M	SD		
Listening	54.38	12.72	55.78	18.85	1.069	.287
Reading	56.09	17.53	61.95	19.84	4.696	.000

As can be shown from Table 1 above, descriptive data reveal that participants improve their listening comprehension skills from the pre-test to the post-test. However, there was no statistically significant difference between pre- and post-tests in the case of listening comprehension skills ( $p > .05$ ). That is, participants in the current study were not able to benefit from captioning in regards to the improvement in EFL listening comprehension. Although the additional text aids – captions – were provided while watching the video, participants' listening comprehension skills did not make any progress significantly.

On the other hand, statistically significant differences were witnessed in the area of reading comprehension skills ( $t = 4.696$ ,  $p = .000$ ), suggesting that captions played a beneficial role in increasing EFL reading comprehension. Specifically, the mean score on the reading pre-test was 56.09 and it increased to 61.95 on the reading post-test. These findings indicate that watching the captioned television program can help EFL learners to increase their reading comprehension skills.

This study supports the positive results obtained in the previous research on the use of captioning as an effective pedagogical tool in EFL class (Bird & Williams, 2002; Caimi, 2006; Danan, 2004; Garza, 1991; Markham, 1989; Markham & Peter, 2003; Mitterer & McQueen, 2009; Tănase, 2014). By converting the audio input into the text input, captioning can be a bonus in language learning (Roohani & Domakani, 2013). According to Tănase (2014), captions can be of great help especially for those who want to develop reading comprehension skills. Chun and Plass (1997) revealed that videos embedded with captions are helpful for learners in learning foreign language reading. The findings of the current study are in accordance with these previous studies, reporting the positive effects of captions on reading comprehension (Lwo & Chia-Tzu Lin, 2012).

In order to verify the differential effects of captioning on Korean EFL learners' listening and reading, descriptive statistics and independent samples t-tests were computed for both pre- and post-tests. The t-test results are shown in Table 2 below.

**TABLE 2**  
**Differences in EFL Listening and Reading**

	Listening		Reading		<i>t</i>	<i>p</i>
	M	SD	M	SD		
Pre-test	54.38	12.72	56.09	17.53	.898	.370
Post-test	55.78	18.85	61.95	19.84	2.551	.011

In the case of pre-tests, there was no statistically significant difference between the participants' listening and reading comprehension skills ( $p > .05$ ). However, the difference appeared to be significant on the post-tests, suggesting that their reading comprehension skills became much better than their listening comprehension skills. That is, after watching the captioned television program, participants were able to perform their reading comprehension skills better than listening comprehension skills. This suggests that captioning can play a more beneficial role in improving EFL reading skills compared to listening skills. As Caimi (2006) reported, through the action of reading the text input while listening to the audio input at the same time, learners can easily associate the spoken forms of words with their written forms, positively resulting in improvement in reading comprehension.

Interestingly, the findings of the present study can be explained by the shortcomings of captioned videos. According to Garza (1991) and Hernandez (2004), many learners rely too much on reading captions, and consequently, it results in a weakening in the development of listening skills. The learners' overdependence on captions can cause them to forget to pay attention to the audio input. Because of this, the learners tend to practice and develop their readings skills only, instead of their listening skills (Tsai, 2010). Wang (2014) also reported that EFL learners prefer not to use captions to practice their listening because when they are exposed to captions, they are reading captions not listening to the dialogue. Although captions can provide the learners with opportunities to learn new words and expressions, no captions make them more active listeners.

Danan (2004) suggested that captioning is a particularly powerful pedagogical tool for foreign language learners to improve their listening comprehension skills. However, Caimi (2006) found that learners' concentration on listening comprehension is second to reading comprehension when they are watching captioned videos. Learners can better comprehend the videos with captions and this improved comprehension can be credited to good reading comprehension rather than to listening comprehension. Furthermore, college students are considered to have better reading comprehension skills than listening (Markham, Peter, & McCarthy, 2001). This can lead to better performance in reading comprehension

## 2. Effects of Captioning Order on EFL Listening and Reading

The present study also aimed to investigate whether captioning order affects the improvement in EFL listening and reading comprehension. For the experiment, participants were divided into two groups according to the captioning order. To this end, the mean scores of listening and reading pre- and post-tests for both groups – caption first group and caption second group – were compared. Descriptive statistics and paired samples t-tests were computed. Table 3 below shows their results

**TABLE 3**  
**Improvement in EFL Listening and Reading – Within Groups**

		Pre-test (n = 128)		Post-test (n = 128)		<i>t</i>	<i>p</i>
		M	SD	M	SD		
Caption First	Listening	52.17	11.80	51.33	17.80	.444	.659
	Reading	57.00	20.61	63.83	22.48	3.331	.001
Caption Second	Listening	56.32	13.26	59.71	19.00	1.857	.068
	Reading	52.29	14.40	60.29	17.19	3.325	.001

As can be seen from Table 3 above, there was no statistically significant difference between pre- and post-tests in the case of listening comprehension skills for both groups ( $p > .05$ ). In other words, all participants in the current study did not benefit from watching the captioned television program regarding the improvement in EFL listening comprehension. Whether they watched the episode with captions first or without captions first, the participants' listening comprehension skills did not make any significant progress. Furthermore, scores from the caption first group even decreased slightly, from 52.17 on the pre-test to 51.33 on the post-test. This can be explained by the previous study reporting that EFL learners find captions distracting on the first exposure (Ghorbani, 2011). Although captions are beneficial for language learning, Pujola (2002) noted that captions can be overused.

On the other hand, significant differences were observed in reading comprehension skills for both caption first group ( $t = 3.331$ ,  $p = .001$ ) and caption second group ( $t = 3.325$ ,  $p = .001$ ), suggesting that captions played a beneficial role in improving EFL reading comprehension. To be specific, for the caption first group, the mean score on the reading pre-test was 57.00 and it jumped to 63.83 on the reading post-test. The caption second group also showed significant improvement, with the mean scores of 52.29 on the reading pre-test and 60.29 on the reading post-test. These findings indicate that

whether the EFL learners are exposed to captions first or second, watching the captioned television program can help them to increase their reading comprehension skills.

Findings of the current study prove the positive effects of captioning on the improvement in EFL reading comprehension. This supports the previous studies reporting the positive effects of captions on improving EFL learners' reading comprehension skills (Caimi, 2006; Garza, 1991; Markham & Peter, 2003). Through the action of reading the text input and simultaneously listening to the audio input, the learners can easily associate spoken forms of words with their written forms, which can positively result in foreign language learning (Caimi, 2006). In particular, according to Garza (1991), textually enhanced visual channel of captioned videos facilitates learners' reading comprehension and this can lead to the improvement in their foreign language reading skills.

Perez, Van den Noortgate, and Desmet (2013) pointed out that most caption studies so far have focused on the effects of captions on foreign language listening comprehension. Although many research studies have shown their positive effects in the area of listening comprehension, only a few have demonstrated their significant improvement in reading comprehension skills (Koh, 2012). Given that reading comprehension skills are also important in EFL contexts (Daller & Phelan, 2006), this study sheds light on using captioned television programs to improve EFL learners' reading comprehension.

In order to verify the differential effects of captioning order on Korean EFL learners' listening and reading, descriptive statistics and independent samples t-tests were computed with the captioning order as an independent variable and the participants' listening and reading comprehension score as a dependent variable. The t-test results are presented in Table 4 below.

**TABLE 4**  
**Improvement in EFL Listening and Reading – Between Groups**

		Caption First (n = 60)		Caption Second (n = 68)		<i>t</i>	<i>p</i>
		M	SD	M	SD		
Pre-test	Listening	52.17	11.80	56.32	13.26	1.863	.065
	Reading	57.00	20.61	52.29	14.40	.536	.593
Post-test	Listening	51.33	17.80	59.71	19.00	2.562	.012
	Reading	63.83	22.48	60.29	17.19	.990	.324

As can be seen from Table 4 above, there were no statistically significant differences between the two groups on both listening and reading pre-tests ( $p > .05$ ), indicating that the caption first and caption second groups were homogeneous in terms of listening and

reading comprehension skills at the start of the study. No significant group difference was also observed on the reading post-test, suggesting that captioning order does not affect EFL reading comprehension.

However, comparison results on the post-listening comprehension test were statistically significant. On the listening post-test, a significant difference was found between the two captioning groups ( $t = 2.562$ ,  $p = .012$ ). To be specific, the caption second group ( $M = 59.71$ ) outperformed the caption first group ( $M = 51.33$ ) in the area of listening comprehension, suggesting that the caption second group can benefit more than the caption first group when watching the television program. That is, watching the same episode twice without captions first and then with captions second played a more beneficial role in increasing EFL listening comprehension skills.

To sum up, findings of the current study prove that captions are beneficial for EFL learners to increase listening comprehension skills, as many previous studies have suggested (Garza, 1991; Hsu, Hwang, Chang, & Chang, 2013; Markham, 1989; Mitterer & McQueen, 2009). However, Pujola (2002) noted that captions can be overused. Although captions are beneficial for language learning, he suggested that they should be carefully used in foreign language class and videos should be played once with captions and once without captions. In this vein, language teachers should be aware when such captions can be displayed to avoid their overuse.

Nonetheless, the effects of captioning order have not been widely explored, and even so, previous studies have yielded conflicting results. For example, Winke, Gass, and Sydorenko (2010) suggested captions should be used on the first exposure for effective language learning while Ghorbani (2011) insisted on non-captioned videos first. On the other hand, Roohani and Domakani (2013) reported that there are no significant effects of captioning order. Given this, the findings of this study shed light on the effects of captioning order, especially on EFL learners' listening comprehension skills.

Particularly, the results of the current study are in line with the previous study. After conducting a longitudinal case study, Ghorbani (2011) reported that EFL learners prefer non-captioned videos first to be watched and find captions distracting on the first exposure. He suggested watching videos without captions first and captioned videos on the second exposure as a crutch. Findings from the vocabulary, pronunciation, and listening comprehension tests in his study indicated that captions are beneficial for EFL learners to enhance their target language performance. Therefore, it can be suggested that EFL learners should be exposed to captions during the second viewing for their improvement in listening comprehension.

## V. CONCLUSION

For EFL learners, the best way to learn English is to learn English through real-life communication. Nevertheless, in EFL contexts, classroom teaching materials are often textbook-oriented and test-driven, focusing on form rather than meaning. As accuracy is regarded as more important than communication, the teaching materials lack an authentic and meaningful context. They fail to deal with contemporary issues relevant to learners' lives. Consequently, the learners are not able to extend their English language learning beyond classrooms (Wang, 2012).

With the advancement of technology, however, audiovisual materials have been integrated into EFL learning (Bahrani & Sim, 2013), and EFL learners, particularly, have benefitted from the captioned audiovisual materials (Tănase, 2014). They have preferred the materials with English captions to learn, practice, and improve their English language. According to Pavio (1991), these captioned materials consist of verbal information and nonverbal images, and can enhance information processing and language learning.

Nonetheless, there has been a lack of empirical research on the role of caption use in EFL settings (Roohani & Domakani, 2013), and the advantages of captioning for EFL learning have not been studied a lot. In this context, the current study explored the effects of captioning on Korean EFL learners' language performance. Given that EFL listening and reading comprehension skills are both important in university contexts (Daller & Phelan, 2006), the present study focused on both listening and reading comprehension skills. Particularly, in the dearth of studies investigating the effects of captioning order (Winke, Gass, & Sydorenko, 2010), this study examined the ordering effects of captions on Korean EFL learners' listening and reading.

Major findings are as follows: In terms of the captioning effects on EFL listening and reading comprehension skills, participants in the current study did not benefit from captioning in regards to the improvement of EFL listening skills. However, captioning played a beneficial role in improving EFL reading skills. In addition, there was a significant difference between listening and reading comprehension skills, suggesting that the participants' reading skills became much better than their listening comprehension skills after watching the captioned television program.

In regard to the effects of captioning order, whether captions were presented first or second, participants' listening comprehension skills did not increase. On the other hand, reading comprehension skills for both groups significantly improved. About differential effects of captioning order, no significant group difference was witnessed on the reading comprehension test, suggesting that captioning order does not affect EFL reading comprehension. However, there was a significant group difference on the listening



comprehension test, showing that the effects of captioning order do exist. The caption second group performed better than the caption first group, indicating that captions should be presented on the second exposure to improve EFL listening comprehension.

The current study provides evidence about whether captions are effective for EFL learners' both listening and reading skills. Foreign language learning is related to the four aspects of language skills: listening, speaking, reading, and writing. According to Caimi (2006), the crucial point regarding the effectiveness of video viewing with captions for a language learning purpose rests with listening comprehension. However, with the improvement in listening comprehension skills, learners can also gain progress in their other language skills such as speaking, writing, and reading (Mekheimer, 2011).

In this light, findings of the present study not only provide insight into which language skills can be developed as a result of the use of captions in EFL class, but also shed light on when the captions should be displayed to improve EFL listening and reading skills. Based on the findings of this study, it can be suggested that EFL teachers make use of captions for improving their students' reading comprehension skills rather than listening comprehension skills. Although participants in the current study improved their listening comprehension skills after watching the captioned television program, the improvement was not statistically significant. Thus, captioned videos are more recommended for the improvement in EFL reading.

Concerning the captioning order, the results of the study suggest that EFL teachers should take into consideration the ordering effects of captions. Regardless of whether the captions are presented first or second, reading comprehension skills can be improved. However, to increase listening comprehension skills, captions should be presented second. Therefore, the teachers should consider when to use captions based on their class objectives.

Limitations of the study are as follows: First, all participants took a TOEIC listening and reading course, and the lecture might have affected the improvement more than the treatment itself has. Although there was no control group, this study compared the differences between the two experimental groups - caption first group and caption second group - to investigate when the captions should be displayed. Finally, all participants consisted of EFL learners in Korea majoring in aviation. Different findings can be shown in different settings.

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**Examples in: English**

**Applicable Language: English**

**Applicable Level: College**

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Received: October 16, 2019

Reviewed: November 27, 2019

Revised version received: December 5, 2019