The Ordering Effects of Captions on Korean Aviation Students’ Self-confidence, Interest, and Motivation in English Learning

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Abstract This study examined the ordering effects of caption use on the English learning of aviation students. This study focused on the use of captions and the students’ self-confidence, interest, and motivation for English learning. Sixty participants were divided randomly into the Caption 1 group (n = 30) and Caption 2 group (n = 30). During 16 weeks, the Caption 1 group was exposed to captioned media first, and then the same media with no captions was provided. The Caption 2 group was exposed to the non-captioned media first and then provided with captions on the second exposure. A survey was given to assess the attitude of each group to English learning. The survey results showed that all participants revealed moderately positive satisfaction on the use of captions in EFL classes. Regarding the ordering effects of caption use, the findings showed that the first exposure to the captions results in the students’ self-confidence and interest. The second exposure to the captions, however, was beneficial for improving the students’ motivation. From these findings, several pedagogical implications can be suggested.

Keywords : Captions, English Learning, Ordering Effects, Self-Confidence, Interest, Motivation

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1. Introduction

English is not only the primary language of some countries such as the United States, the United Kingdom, Australia, and Canada, but also the second language in multilingual countries such as Singapore and the Philippines. Now it plays a role as the world standard language. People from different nations frequently use the language to communicate with one another. As the most widely used international language [1], English occupies a prestigious place of a global language.

The English language is also one of the most important skills for employability [2]. Particularly, the language plays a crucial role as a working language in airline business [3]. It is used for international aviation communication [4]. According to Sirikanjanawong and Wasanasomsithi [5], airline applicants, therefore, should have proficient English skills to fulfill their job requirement effectively and efficiently.

In English as a foreign language (EFL) settings, official English tests such as TOEIC or TOEFL are considered as an effective means to recruit flight crews [5]. That is, aviation students in Korean EFL settings should take the English test and submit their test scores to prove that they are truly qualified in English skills fulfilling their job requirements efficiently and effectively.

In Korea, technology has been used to develop aviation students’ English skills. In particular, many scholars have demonstrated the beneficial effects of multimedia technology on English as a foreign language learning [6]. Television, video, and computers, for example, have been considered as a strong tool in facilitating English learning. The combination of sound and image has allowed the students of English language to achieve their pedagogical goal.

Along with the multimedia technology, the use of captions has also been suggested to increase students’ comprehension of the media contents [7]. According to Danan [8], captions can promote English learning by helping the students to visualize what they hear. Connecting the spoken and written forms of a language plays a beneficial role in language learning by allowing them to listen and read at the same time.

Nevertheless, captioned materials are still limited in EFL settings. Even so, they have not been designed to facilitate EFL learning [9]. In addition, the advantages of captioning for English learning have not been widely reported. Hence, there has been little empirical and experimental research on the role of captioning for EFL learning [10].

Moreover, regarding the captioning order, only a few studies have been conducted [11]. According to Pujola [12], captions should not be overused. In order to avoid the overuse of captions, students should be exposed to captions once with and once without. He asserted that it is important to determine when the captions should be displayed.

In their study, Winke, Gass, and Sydorenko [11] claimed that providing captions first is more beneficial for English learning when watching the same media twice. According to them, students can relieve their anxiety by doing so. On the other hand, Wang [13] argued that the captioning order depends on students’ proficiency levels. For example, no captions are good for high-level EFL students while captions should be provided on the first exposure for low-level students. Interestingly, Roohani and Domakani [10] insisted that captions are useful for English
learning regardless of their order.

Considering the mixed findings on the ordering effects of captions, there is a need to determine when to use captions for English learning in Korea. In this vein, this study investigates the effects of the order of captions on Korean aviation students’ English learning to figure out an effective way to help them to improve their English skills.

As mentioned above, aviation students in Korea still struggle with English [6]. Given that many researchers have cited affective variables such as self-confidence, interest, and motivation in a language as a reason for their difficulty in English [14], the present study investigates the ordering effects of captions on Korean aviation students’ attitude toward English learning.

Self-confidence refers to the beliefs the student holds about his or her learning ability. According to Brown [15], the achievement of foreign language learning is highly correlated with students’ self-confidence in a foreign language. It is also important to sustain the students’ interest in the foreign language for their successful learning [16]. Interest refers to a positive response to learning in a way that the student’s curiosity is aroused and sustained. Accordingly, the increase in students’ motivation leads to their foreign language improvement [17]. Motivation means comprising effort, desire, and attitudes towards learning. In light of this, research questions were posed as follow:

1. How can English captioning affect aviation students’ self-confidence in English learning?
2. How can English captioning affect aviation students’ interest in English learning?
3. How can English captioning affect aviation students’ motivation in English learning?

2. Literature Review

Many scholars have suggested that English learning is more effective when implementing multimedia technology along with captions [8, 18]. Captions provide students with hints, helping them understand and learn the English language from the media. Consequently, this allows them to perform beyond their current abilities [13].

From a pedagogical perspective, captions have used focusing on a precise skill occupying the important point of a lesson. Parlato [19], for example, used captioned media for a group activity in class, focusing on reading skills. In the study, participants looked for the differences between captions and dialogues while watching the captioned media. After the viewing, they discussed the differences in a group. Parlato [19] found that this activity helped the students to improve their reading fluency. Goldman [20] also suggested that captioned media is a powerful motivator for improving reading skills. According to him, captions can be used to address basic reading skills, including study of base words, words within words, compounds, and multiple meanings. Besides, they are good for increasing reading comprehension skills, including interpretation, prediction, critical thinking, making inferences, and drawing conclusions.

Rokni and Ataee [21] attempted to investigate the effect of the use of English captions on the improvement of listening comprehension skills in EFL students in Iran. A total of 45 Iranian students of English were assigned into two groups of English Captions and No Captions. During the ten sessions, participants in each caption group were exposed to one of the two treatment conditions. Their findings showed that the English Caption group performed better than the No Caption group on the listening test. That is, the positive effects of captions on English listening skills were confirmed through this study.

With the goal of increasing EFL speaking skills, Talavan [22] studied the pedagogical use of captions and suggested that captions provide visual, textual, and technological support,
improving English speaking proficiency. Ayand and Shafiee [23] also reported that captions can be used to develop EFL speaking skills. The authors explored the effects of the use of captions on EFL students’ speaking fluency and accuracy. The analysis of their obtained data indicated that captions are beneficial for improving EFL speaking proficiency. According to King [24], English-captioned media can be a rich source of EFL instructional materials because they provide students in EFL settings with authentic contents as well as real-life examples in spoken communication.

Previous studies on captions have also highlighted their effective role in improving writing skills. Vanderplank [25] suggested that the use of captions can be beneficial for enhancing writing proficiency. Ebrahimi, Kargar, and Zareian [26] conducted a case study focusing on the use of movies with captions for improving writing skills. This study aimed to examine the effect of the use of English-captioned movies on the improvement of EFL students’ writing ability. Participants in this case study watched English movies with and without captions as much as possible. The authors found that watching English-captioned movies lead to the improvement of EFL students’ writing skills. Talaván and Rodríguez-Arancón [27] also confirmed the possibilities of captioning to promote writing skills. In their study, most participants felt their writing skills had improved.

According to Talaván [22], captions are the most functional in general terms promoting the integration of reading, listening, speaking, and writing skills. Furthermore, captioned media can stimulate EFL students’ automatic learning. As Wang [13] suggested, captioned media can also be used for EFL students’ independent learning as a self-paced choice. In multimedia settings, students can adjust the caption condition based on their language proficiency levels, the difficulty level of the media, and their own language learning needs.

While watching the media, students postulate their own predictions about the content of the media [28]. Since captions give the students instant feedback, they can check whether their predictions are confirmed or rejected. Through this, the students can improve their comprehension of the media. In this way, the students can boost their self-confidence, interest, and motivation, while reducing their anxiety [29]. Consequently, the captioned media play a beneficial role in developing EFL students’ English language performance.

According to Krashen [30], negative emotions are created through the passive moods such as low self-esteem and low motivation. In order to reduce language students’ pessimistic moods and improve their positive attitude toward learning, language teachers should form a motivation-stimulating learning environments, where students can develop higher self-esteem as well as greater sense of self-confidence and fulfillment. By lowering their affective filter, the students can improve their language learning [30].

According to Kim [31], the use of captions has been considered to lower foreign language students’ affective filter. When captions are incorporated into the media, students become confident and motivated to watch them [22]. For the students of English language, the English-captioned materials are of even greater interest because they allow the students to read the dialogues in English while watching the screen.

Oxford [32] argued that the students’ affective side can be one of the biggest influences on their language learning success or failure. Given that these affective variables play a very important role in improving English as a foreign language skills [14], EFL students can benefit from the use of captions in many ways.

However, captions should not be overused [12]. Since they can distract the language students
from noticing new things in a language [26], it is important to avoid the overuse of captions. In this vein, Pujola [12] claimed that captions should be provided once with and once without. Regarding the order of captioning, Ebrahimi, Kargar, and Zareian [26] suggested that students watch the media with captions first, and then they should turn the captions off. In line with them, Winke, Gass, and Sydorenko [11] recommended providing captions first when watching the media.

The ordering effects of captions, however, can also depend on students’ language proficiency levels. According to Wang [22], no captions should be used first for high-proficiency level class to challenge the students while captions should be used first for low level class to help them understand.

Although several scholars have raised a pedagogical question regarding the ordering effects of caption use on English learning [9-11, 22, 26], their findings have shown inconclusive results. While Pujola [12] asserted that it is important to determine when the captions should be displayed, Roohani and Domakani [10] insisted that captions are useful for English learning regardless of their order.

Furthermore, given the dearth of empirical evidence investigating the ordering effects of captions on English learning [11], it becomes increasingly important to determine when to use captions for effective EFL learning. This study, therefore, aims to scrutinize the ordering effects of captions on English learning in Korea.

3. Methodology

3.1 Participants

Participants in the current study were selected from the students taking a 16-week English class in Korea. All participants were aviation students between the age range of 19 to 22 whose tongue was Korean. They were taking the class to get a job in airline companies in the near future.

In order to investigate the ordering effects of captioning on Korean aviation students’ English learning, a total of 60 college students participated in this study. They were randomly assigned into two caption groups — Caption 1 group (n = 30) and Caption 2 group (n = 30) — and watched the same video twice. Participants in the Caption 1 group were provided with captions first while those in the Caption 2 group were second.

3.2 Attitude Survey

An attitude survey was performed to compare the two caption groups: the Caption 1 group and the Caption 2 group. In an effort to examine their attitude to English language learning with captioned media, a structured-questionnaire was given to all participants in the current study.

Previous scholars have pointed out that affective variables such as self-confidence, interest, and motivation play an important role in English learning [6, 14, 33]. Based the previous research, a total of 15 questionnaire items were employed with regard to self-confidence (5 items), interest (5 items), and motivation (5 items). The questionnaire used in the current study was all composed in participants’ mother tongue (Korean). It was adopted by the previous survey [37]. It was handed out to the participants at the end of the experiment.

A five-point Likert scale was employed. This is a type of psychometric response scale specifying responders’ level of agreement to a statement in five points.

A numerical value of 5 was equated with “strongly agree” while 1 was with “strongly disagree.” Cronbach’s alpha reliability coefficient for the 15 questionnaire items was .972, which means that the items had adequate internal consistency.
3.3 Procedure

This study aims to examine Korean aviation students' English language learning with captioned media. All participants in this study were aviation students in Korea. A total of 60 students participated in the current study. As the previous research pointed out [34], they were having trouble with English language. Since the English language is not only used for international aviation communication [4], but also playing a crucial part in the airline business [3], it was required to find a way to help them improve their English proficiency.

For these reasons, all participants were taking a compulsory English course to develop their English skills. The course objective was to improve the aviation students' English proficiency so that they can get a job in their near future. The title of this course was Aviation English 2. The class was offered by their university to prepare them to enter aviation companies in Korea.

The whole experiment lasted for 16 weeks. Over the experimental period, all participants engaged in class for two hours every week. Considering that captioning facilitates English learning [7-8, 31], English captions were used in class.

The chosen media for this research was the animation film Frozen which is very popular all over the world [35]. This film was produced by Walt Disney Animation Studios. Fitria [36] found that this animation film makes EFL students become more interested in English learning. Although the director of this film presents the plot in an unpredictable way, it consists of a simple story. In this vein, the film has been considered to be suitable for EFL students using simple dialogue.

Given that previous researchers have shown inconclusive results regarding the order of captioning [9-11], the current study focuses on the ordering effects of captions. Thus, participants in the present study were divided into two groups — Caption 1 group and Caption 2 group — and exposed to the captions in a different order. All participants watched the same media — the animation film Frozen — twice. However, according to the experimental condition, the Caption 1 group watched the video with captions first while the Caption 2 group did with captions second.

In order to investigate how the captioning order affects Korean aviation students' attitude to English learning, the survey questionnaire focusing on the three affective variables — self-confidence, interest, and motivation — was given to all participants at the end of the experiment. According to Kim [6], these affective variables play an important role in English learning. There were five questionnaire items related to each variable. In total, 15 questionnaire items were included in the survey. The survey session was finished in class and collected immediately. All participants submitted their questionnaire to the researcher of this study.

3.3 Data Analysis

Data collected from the attitude survey were analyzed using SPSS 21.0 software. For the quantitative analysis, descriptive statistics including means and standard deviations were computed first. After that, independent t-tests were performed to compare the mean differences between the two groups: Caption 1 group and Caption 2 group. P value was set at .05.

4. Results and Discussion

4.1 Effects of Captioning on Self-Confidence in English Learning

In order to investigate the participants' perceptions of captioning, a survey was administered at the end of the experiment. There were five questionnaire items related to self-confidence,
interest, and motivation, respectively. A five-point Likert scale was employed. Descriptive statistics and independent samples t-tests were run to compare the participants’ attitudes toward English learning.

Table 1. Self-Confidence in English Learning

<table>
<thead>
<tr>
<th></th>
<th>Caption 1</th>
<th>Caption 2</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>3.93</td>
<td>3.03</td>
<td>3.837</td>
<td>.000</td>
</tr>
<tr>
<td>SD</td>
<td>1.09</td>
<td>0.68</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Table 1] above represents both descriptive statistics and independent t-test results regarding self-confidence in English learning. There were statistically significant group differences between the Caption 1 group and the Caption 2 group (t = 3.837, p = .000). Participants in the Caption 1 group have more positive attitudes towards English language learning than did the Caption 2 group. To be specific, the Caption 1 group showed that they are confident in English language, with the mean score of 3.93. With the mean score of 3.03, participants in the Caption 2 group appeared to be less confident compared to those in the Caption 1 group.

Captions can relieve foreign language learners’ anxiety and reduce their extraneous load [31]. By allowing them to be relaxed and relieved, captions encourage the students to learn their target language. Particularly, they give instant feedback on the predictions the students postulate about the content while watching videos [28]. With the support provided by captions, their predictions can be confirmed. Consequently, through this process, the students can boost their confidence in the language.

The current findings are in keeping with these previous results. Particularly, in the present study, it is noticeable that the Caption 1 group was more confident than the Caption 2 group. In other words, exposure to English captions on screen first positively affected Korean aviation students’ confidence in English language learning. According to Brown [15], students’ confidence in a foreign language is highly correlated with their achievement of the foreign language performance. Thus, without some degree of confidence in a foreign language, the students cannot use the language freely.

In light of this, it can be interpreted that showing English captions first to the students can play a more positive role in improving their language performance by increasing students’ confidence. Results of the current study support the previous findings suggesting the caption first condition. Ebrahimi, Kargar, and Zareian [26] and Winke, Gass, and Sydorenko [11], for example, also recommended providing captions first when watching the media.

### 4.2 Effects of Captioning on Interest in English Learning

Another purpose of the present study was to investigate when to provide students with English captions to effectively increase their interest in language learning. To compare the participants’ interest in English learning, the mean scores for the two caption groups were compared and the results are shown in [Table 2] below.

Table 2. Interest in English Learning

<table>
<thead>
<tr>
<th></th>
<th>Caption 1</th>
<th>Caption 2</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>3.87</td>
<td>3.40</td>
<td>2.193</td>
<td>.032</td>
</tr>
<tr>
<td>SD</td>
<td>0.65</td>
<td>0.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen in [Table 2], findings reveal that the Caption 1 group showed more positive perceptions related to interest than did the Caption 2 group. The group difference was also turned out to be statistically significant (t = 2.193, p = .032). A close examination indicates that the Caption 1 group was more interested in English learning than the Caption 2 group was, with the mean score of 3.87. In comparison with those in
the Caption 1 group, participants in the Caption 2 group turned out to be less interested in English learning, with the mean score of 3.40.

According to Kim [31], English captions can make English language class interesting. In her caption study, participants provided with English captions showed more positive attitudes toward English learning compared to those exposed to non-English captions. Particularly, regarding the order of captions, Ghorbani [9] asserted that students learning English should be provided with English captions first since they can play a positive role in increasing the students’ interest in English language learning.

Findings of the current caption study are in line with the previous research, indicating the students’ preference for displaying English captions first [9]. When students of English were exposed to the English captions first, they became more interested in English learning. Given that what is important for successful language learning is to sustain students’ interest in the language [16], it can be suggested that showing English captions first to EFL students can be more beneficial for their English learning.

### 4.3 Effects of Captioning on Motivation in English Learning

Lastly, in an effort to understand their motivation in language learning, all participants in both Caption 1 and Caption 2 groups were asked to fill out the perception questionnaire asking about their motivation in English language learning. [Table 3] below shows descriptive statistics and independent t-test results related to motivation.

<table>
<thead>
<tr>
<th></th>
<th>Caption 1</th>
<th>Caption 2</th>
<th>( t )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>M = 3.74</td>
<td>M = 4.29</td>
<td>2.902</td>
<td>.005</td>
</tr>
</tbody>
</table>

There was a significant group difference between the Caption group 1 and the Caption group 2 concerning motivation (\( t = 2.902, \ p = .005 \)). As can be seen from [Table 3] above, participants in the Caption 2 group showed more positive attitudes toward English learning than did the Caption 1 group regarding motivation to learn English.

A close examination reveals that the Caption 2 group was more motivated to learn English compared to the Caption 1 group, with the mean score of 4.29. In comparison with those in the Caption 2 group, participants in the Caption 1 group turned out to be less motivated in English learning, with the mean score of 3.74.

Contrary to the above observation related to self-confidence and interest, the Caption 2 group appeared to be more positive when it comes to motivation in English learning. These findings suggest that providing students with English captions second can lead to better motivation to learn English.

According to Cahya [17], the increase in students’ motivation to learn a language leads to an increase in language proficiency. On the other hand, the negative attitudes, such as demotivation, can negatively affect their learning performance. When students face situations that they are not confident enough, for example, demotivation makes the students easily give up and choose another task they find easier or more attractive. Therefore, foreign language classrooms should be highly motivating and make students temporarily forget that they are learning a foreign language [30].

A relaxing and enjoyable learning environment can be created with its motivational context [29]. Students’ motivation to learn a language can be improved via implicit and subconscious learning experience. Given that motivation is a crucial factor in English learning [6], it is required to make the students’ language learning process more motivating.
The survey results in the current study proved the positive effects of captioning on English learning related to motivation. In particular, this study revealed that providing aviation students with English captions second played a more positive role by increasing their motivation to learn English. Considering that this is necessary and profitable for language learning [30], it can be suggested that students of English as a foreign language can more benefit from watching the media two times, the first time without captions and the second time with.

5. Conclusion

According to Takahashi and Takahashi [33], affective factors such as self-confidence and motivation have great impacts on English language learning. That is, the achievement of language performance is highly correlated with students’ attitude to learning [15]. In this light, it is important to make sure that students of English have positive attitudes toward English language learning.

Given that Korean aviation students have trouble with English learning [6], this study aimed to look for a way to help them improve their English skills. Since affective variables such as self-confidence, interest, and motivation can be a reason for their difficulty in English learning [14, 16], the present study focuses on Korean aviation students’ affective sides of English language learning.

In particular, considering that captioned media in English is one of the richest and useful ways of providing authentic input for EFL learners, which in turn improves their English language proficiency [7], the current study investigated the relationship between the use of captions and Korean aviation students’ English learning.

To explore the participants’ attitude to English learning with the captioned media, a questionnaire was developed based on the previous studies [6, 14, 33]. Particularly, given that only a few scholars have conducted experimental studies on the ordering effects of captioning on English learning [11] and they have not reached consensus on the issue [9-10], an attitude survey was performed to scrutinize the effects of captioning order by comparing the two caption groups: the Caption 1 group and the Caption 2 group. During the experimental period, all participants watched the captioned media in different order. The first group watched the captioned media first while the second group did it second.

A close examination indicates that positive responses were obtained in all aspects, with the mean scores of higher than 3.00. These findings suggest moderately positive satisfaction for the use of captions in EFL class. To be specific, participants in both captioning groups perceived that captioning is effective and useful in ‘boosting self-confidence’, ‘enhancing interest’, and ‘improving motivation’, respectively.

The comparison of the two experimental groups show that the mean scores of the Caption 1 group were higher than those of the Caption 2 group for two variables: self-confidence and interest. Interestingly, the mean score of the Caption 2 group was higher than their counterpart for the rest one variable: motivation. That is, participants provided with English captions first became more confident and interested in English learning while those with captions second became more motivated to learn English.

To be short, providing Korean aviation students with captions first can be more beneficial for increasing self-confidence and interest in English learning than not providing them in the first place. However, exposure to the captions second can be more beneficial for improving motivation in English learning.

According to Ghorbani [9], teachers should provide English captions to their students when
watching audiovisual materials. With English captions, students can understand the given materials more easily, and this allows the students to increase their confidence and interest in English learning. Hussin, Maarof, and D’cruz [16] also suggested that language teachers should try to find practical ways to sustain their students’ interest in language learning, and at the same time, motivate them to learn the language. Considering that affective variables are an important factor for successful English learning [6, 33], it is remarkable that the use of captions is valuable, positively influencing Korean aviation students’ attitude to English language learning.

From the findings of the current study, several pedagogical implications can be suggested. English teachers should take into consideration the use of captions in their class. More specifically, the teachers should carefully consider when to use the English captions. They need to provide their students with captions based on their class objectives. Based on the result of the study, to increase the student’s self-confidence and interest, the teachers can use the captioned materials first. On the other hand, they can make use of captions second to boost their student’s motivation to learn English. In addition, the student’s proficiency level should be considered. As Wang [13] pointed out, captions should be provided on the first exposure for low-level students while captions are good for high-level EFL students on the second exposure.

The use of captions has been recommended by language professionals. This study also confirms the positive effects of captioning on English learning, providing specific information on captioning order. However, this study did not show how captions actually affect students’ English language performance. Therefore, further research is needed to determine whether the use of captions actually improves Korean aviation students’ English skills.

References


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