A Study on Youtube Video-Watching Activities and their Effects on Improving English Reading Comprehension Skills

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Abstract In an effort to explore the effects of Youtube video-watching activities on Korean college students’ English reading comprehension skills, 148 undergraduate students who enrolled in a General English class at a university in Korea participated in the present study. Participants were randomly classified into four groups – three experimental groups and one control group – according to when they watch videos: before class (n = 33), during class (n = 42), after class (n = 36), and none (n = 37). Over 16 weeks, the three experimental groups engaged in Youtube video-watching activities for about 10 minutes before, during, and after the class, while the control group did not. Pre- and post-tests were administered to confirm the effects of the use of Youtube videos on improving English reading comprehension skills. To compare the improvement between groups, a one-way ANOVA was also run. Major findings are as follows: First, participants in all the three experimental groups significantly improved their English reading comprehension skills, indicating the beneficial effects of Youtube video-watching activities. However, there was no statistically significant difference in the mean improvement between the groups. Based on this, limitations and suggestions for the future research are discussed at the end.

Key Words : Youtube, Video-watching activities, Korean college students, Foreign language learning, English reading comprehension skills

요약 본 연구는 유튜브 비디오 보기 활동이 국내 대학생의 영어 독해 능력 향상에 미치는 영향을 조사한 것으로, 유튜브 비디오 보기 활동을 통해 국내 대학생의 영어 독해 능력이 실제로 상승하는지 여부를 알아보는 데 그 목적이 있다. 16주 동안 총 148명의 참가자가 세 개의 실험군과 한 개의 대조군으로 나뉘어 본 연구에 참여하였으며, 각각의 실험군은 수업 시작 전, 수업 중, 수업 중후 유튜브 비디오 보기 활동을 진행하였다. 연구 시작 전과 종료 후 각각 사전 사후 독해 능력 평가를 실시한 후, 대조군은 제3주에 유튜브 비디오 보기 활동의 효과를 파악하였고, 그룹 간 비교를 위해 일원분산분석을 실시하였다. 본 연구의 주요 결과 및 시사점은 다음과 같다. 사전 사후 평가 결과 모든 실험 그룹에서 영어 독해 능력이 유의미하게 상승한 것으로 나타나 수업 전, 수업 중, 수업 후 유튜브 비디오 보기 활동의 효과를 측정하였다. 한편 독해 능력 향상에 대한 그룹 간 차이는 유의미하지 않은 것으로 밝혀졌다. 본 연구는 영어 독해 능력 향상을 위한 유튜브 비디오 활용에 대한 시사점을 제시하는데 그 의미를 갖는다.

주제어 : 유튜브, 비디오 보기 활동, 국내 대학생, 외국어 학습, 영어 독해 능력

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1. Introduction

Nowadays, the importance of YouTube videos is immense. YouTube (http://www.youtube.com) refers to a website based on video viewing, posting, sharing, and commenting. On this website, users can search for others' videos based on keywords or titles, watch and comment on them, and even post and share their own self-created videos.

YouTube videos have been integrated into language learning classrooms in a variety of applications ranging from viewing video clips to supplement textbook materials to creating and sharing videos [1]. The use of YouTube in language learning has encouraged learner motivation, learner-centered learning ecologies, and authenticity of tasks [2, 3]. According to Malhiwsky [4], learners are more engaged to learn through the video-based activities, which can positively affect academic achievement.

Nunan [5] mentioned that authentic language is drawn from various sources including video materials. According to Brook [1], these visual materials are crucial for effective language learning and teaching. Particularly, in action research studies, many scholars [6–10] reported that the video use in various forms has developed language learners' oral, aural, and writing skills.

With regards to comprehension skills, Hanley, Herron, and Cole [11] discussed that videos can improve foreign language learners' comprehension scores. They asserted that these findings can be attributed to the fact that videos provide contextual supports and allow the learners to visualize words and meanings. According to them, videos provide the learners learning a foreign language with opportunities to improve their ability to understand comprehensible input.

Accordingly, Canning-Wilson and Wallace [12] reported that language learners prefer to learn a language through videos. According to her, the use of visual aids which can help understand the meaning of the language allows the language learners to clarify the message. She claimed that learner comprehension of the videos can be obtained from the visual clues rather than from the auditory components.

Likewise, according to Lockwood [13] and Marshall [14], watching videos allows English language learners to study at their own pace and increase the possibility that the learners comprehend the class material. Kostka and Lockwood [15] stated that language learners can replay the videos assigned to them as much as they need. They can also pause the videos to look up the meaning of some words if they need more clarification. In addition, the language learners can benefit from video—watching as they do not miss important materials because the materials are always accessible online any time they want.

In light of this, language teachers have turned to YouTube as a rich source of materials [16]. Warschauer and Grimes [10] reported that YouTube videos can also improve the language teachers' knowledge and aid in preparation for lessons. By showing the videos to their students, the teachers use them as a supplementary tool in their language classrooms. Jones and Cuthrell [17] also suggested the use of YouTube videos for introducing difficult subject matter, illustrating an important point, or reviewing complicated concepts taught during a lesson.

According to Brook [1], even without showing the videos to their students, the language teachers can use them as a teaching tool in their own teaching practice. Jones and Cuthrell [17] also claimed that YouTube is an excellent resource for the teachers who want to review other teachers' lesson plans which have been posted on the website. The teachers can also check their own understanding or ensure
accuracy on various subjects watching the videos on the YouTube website.

As mentioned above, there has been positive evidence in the use of YouTube videos in foreign language learning and teaching. In particular, several scholars suggested that language learners can benefit from video-watching activities before class [13, 14, 18]. Therefore, it is expected that watching videos before class can improve foreign language learning. However, little has been known about when to show the videos to the learners for effective foreign language acquisition.

In the dearth of research on this matter, it needs to determine the best time to use YouTube videos in a foreign language classroom. In particular, considering that Korean students at a college level are required to develop English reading comprehension skills [22], the current study investigates whether the YouTube video-watching activities result in improving Korean college students' English reading comprehension skills. Therefore, this study aims to compare the effects of YouTube video-watching activities on improving Korean college students' English reading comprehension skills depending on when they watch the videos. The research question is as follows:

When is the best time to watch videos for effective foreign language acquisition? Do the effects of YouTube video-watching activities on improving Korean college students' English reading comprehension skills vary according to when they watch the videos?

2. Methodology

2.1 Participants

In the current study, participants consisted of 148 college students. They enrolled in 16-week General English course at a university in South Korea. Most of them were freshmen students taking the same English class for two hours a week from the same instructor. The class objectives were to improve general English skills. The participants' age ranged from 19 to 23.

The participants in this study were randomly classified into four groups – three experimental groups and one control group – according to when they watch YouTube videos: before class (n = 33), during class (n = 42), after class (n = 36), and none (n = 37). In order to confirm the equivalence of the groups before treatment, the pre-test results were used. A one-way ANOVA was carried out, and as Table 1 shows above, there was no statistically significant group difference between the four groups (p > .05), indicating that all participants were homogeneous at the beginning of the study.

<table>
<thead>
<tr>
<th>Table 1. Participants</th>
<th>Before Class (n = 33)</th>
<th>During Class (n = 42)</th>
<th>After Class (n = 36)</th>
<th>None (n = 37)</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>17.88</td>
<td>6.61</td>
<td>20.02</td>
<td>6.51</td>
<td>19.11</td>
<td>6.48</td>
<td>17.89</td>
</tr>
</tbody>
</table>

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2.2 Instruments

The purpose of the current study was to determine when to show videos to foreign language learners for improving their reading comprehension skills. All participants in the three experimental groups engaged in YouTube video-watching activities for the 16-week experimental period.

For the experiment of the current study, participants were divided into four groups: three experimental groups and one control group. During the experimental period, those in the three experimental groups watched YouTube videos before, during, and after the class while the control group did not engage in these video-watching activities at all.
Anyone can visit the *YouTube* website (http://www.youtube.com). They allow their users to upload, view, share, rate, and comment on videos. They offer various user-generated and corporate media videos. Their available content includes video clips, movie trailers, TV show clips, music videos, short and documentary films, audio recordings, live streams, and educational videos.

While unregistered users can only watch the videos on the *YouTube* website, registered users can upload their videos and add comments to other users’ videos. Most of the available content on the website is uploaded by individuals. Media corporations such as CBS, Vevo, and the BBC, however, can also provide some of their materials via *YouTube*.

![YouTube Videos](image)

**Fig. 1. YouTube Videos**

A teacher in charge of the class used the *YouTube* videos as supplemental material. She made the participants in the experimental groups watch the videos to provide context and prompt her students’ schema and background knowledge. According to Brook [1], videos on *YouTube* have been integrated into foreign language class in various ways. These videos can be used to reinforce the class objectives as a supplement for the lesson. *YouTube* videos the three experimental groups watched for this study were all related to their class subjects. Concerning the length of videos, the average was about 10 minutes.

### 2.3 Procedures

The current study tried to compare the effect of video-watching activities on foreign language acquisition depending on when learners watch the videos. In order to explore the effect of video use in foreign language class, 148 participants participated in the present study. All participants were asked to take the reading comprehension tests as pre- and post- tests to investigate the changes after participating in video-watching activities.

The pre- and post- tests were based on ETS TOEIC Reading Tests as the test has been known as a well-established test for English as a foreign language [19]. The TOEIC test has been regarded as the leading test and has spread all over Asia including South Korea. According to Gilfert [20], the test is also becoming more frequently used in South America and Europe.

Over the 16-week experiment, all participants including the control group took their English lessons for two hours a week. Even though both the experimental and the control groups received the formal English instruction during the regular teaching time period, participants in the control group received no treatment.

Participants in the experimental groups randomly divided into three groups depending on when they watch videos: before class, during class, and after class. The participants in the first group watched *YouTube* videos before the class started while those in the second group did during class. The third group watched the same videos after the class ended. In terms of the control group, the participants did not take part in these video-watching activities.

Since the teacher in this study used *YouTube* videos as supplemental material, she used the *YouTube* website to show the videos to her students. After browsing *YouTube* videos on the website using some keywords or titles, the teacher selected some videos to provide context and prompt
her students' schema and background knowledge. After selecting the video from YouTube, the teacher copied the video link and then put the link on the school website. Participants in the three experimental groups clicked the link and watched the videos by streaming them online before, during, and after class. Each video-watching session lasted about 10 minutes.

There were 10 video-watching sessions in total over the experimental period. Although there was a 16-week experimental period, 10 sessions were carried out because the pre- and post-tests were administered in the first and last week respectively and the mid-term and final exam periods were excluded.

2.4 Data Analysis

In order to examine the effects of video-watching activities, carried out was quantitative analysis. Collected data from the present study were analyzed with SPSS 18.0 software. As for the quantitative analysis, descriptive statistics such as means and standard deviations were calculated. In an effort to compare the pre- and post-test mean scores, paired samples t-tests were administered. To compare the improvement between groups, a one-way analysis of variance (ANOVA) was also performed. P values were set at .05.

3. Results and Discussion

3.1 Changes in Reading Comprehension Skills

To explore the changes in participants’ reading comprehension skills, paired samples t-tests were administered between the pre- and post-tests within groups. Paired samples t-test results with descriptive statistics are present in Table 2 below.

Table 2. Changes in Reading Comprehension Skills

<table>
<thead>
<tr>
<th></th>
<th>Pre-test (n=148)</th>
<th>Post-test (n=148)</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Before Class</td>
<td>17.88</td>
<td>6.61</td>
<td>20.55</td>
<td>7.19</td>
<td>4.650</td>
</tr>
<tr>
<td>During Class</td>
<td>20.02</td>
<td>6.51</td>
<td>22.12</td>
<td>6.75</td>
<td>3.521</td>
</tr>
<tr>
<td>After Class</td>
<td>19.11</td>
<td>6.48</td>
<td>21.39</td>
<td>6.34</td>
<td>5.101</td>
</tr>
<tr>
<td>None</td>
<td>17.89</td>
<td>5.83</td>
<td>19.32</td>
<td>7.77</td>
<td>1.893</td>
</tr>
</tbody>
</table>

Interestingly, the three experimental groups showed statistically significant changes in mean scores between the pre- and post-tests, while the control group did not. To be specific, the first group revealed a significant mean score change over time in reading comprehension skills (t = 4.650, p = .000). The mean score was 17.88 on the pre-test, while 20.55 on the post-test. This result indicates that watching videos before class can improve foreign language reading comprehension skills, as expected in the previous section.

The second experimental group also showed a statistically significant mean score change between the pre- and post-tests (t = 3.521, p = .001). The mean score was 20.02 on the pre-test and increased to 22.12 on the post-test, suggesting that video-watching activities during class have a positive role in improving foreign language learners’ reading comprehension skills.

Likewise, there was a significant mean change in the third experimental group (t = 5.101, p = .000). The mean score was 19.11 on the pre-test, while 21.39 on the post-test. This result indicates that watching videos after class is beneficial for increasing foreign language reading comprehension skills.

No significant mean score change, however, was witnessed in the control group (t = 1.893, p > .05). Although their mean score change was found between the pre-test (M = 17.89) and the post-test (M = 19.32), the change turned out to be not statistically significant in the present study.

To sum, findings of the current study demonstrate that all participants in the three experimental
groups improved their reading comprehension skills after the intervention. In other words, it can be assumed that watching videos related to the classes' subjects before, during, or after the class can play a beneficial role in reading comprehension improvement.

Findings of the present study confirm the previous research, suggesting that videos are effective in foreign language acquisition. Particularly in relation to comprehension skills, Canning-Wilson and Wallace [12] reported that the use of videos can help understand the meaning of the language and thus language learners are able to clarify the message. According to her, learner comprehension of the videos is obtained from the visual clues rather than from the auditory components.

Similarly, Hanley, Herron, and Cole [11] suggested that the use of videos can improve foreign language learners' comprehension skills. They discussed that videos provide contextual supports and allow language learners to visualize words and meanings. Consequently, the learners learning a foreign language can have opportunities to improve their ability to understand comprehensible input.

From this point of view, findings of this study are in line with the previous studies [11, 12]. In other words, watching videos related to the classes' subjects whether before, during, or after class helps foreign language learners improve their reading comprehension skills.

3.2 Group Differences in Reading Comprehension Improvement

In order to compare the reading comprehension improvement between the four groups, a one-way ANOVA was carried out. Differences in the mean improvement between the groups were compared to determine which group improved the reading comprehension skills the most between the pre- and the post-tests. Table 3 below represents the descriptive statistics and ANOVA results.

<table>
<thead>
<tr>
<th></th>
<th>Before Class (n = 33)</th>
<th>During Class (n = 42)</th>
<th>After Class (n = 36)</th>
<th>None (n = 37)</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>2.67</td>
<td>3.29</td>
<td>2.10</td>
<td>3.28</td>
<td>2.28</td>
<td>1.43</td>
<td>.561</td>
</tr>
<tr>
<td>SD</td>
<td>3.66</td>
<td>2.08</td>
<td>1.43</td>
<td>2.68</td>
<td>1.40</td>
<td>.687</td>
<td>.561</td>
</tr>
</tbody>
</table>

As shown in Table 1 in the previous section, there was no significant difference between the groups (p > .05). That is, all participants were homogeneous at the beginning of the research. Table 3 above shows no statistically significant difference in improvement between groups (F = .687, p > .05).

Although differences in the mean improvement between groups turned out to be not significant, it is noticeable that participants who watched videos before class improved their reading comprehension skills the most with the mean improvement of 2.67. The second most improved group was the third group—watching videos after class—with the mean improvement of 2.28. Participants who watched the videos during class improved their reading comprehension skills with 2.10. Interestingly, the control group also improved with the mean improvement of 1.43.

In order to determine the best time to show videos to foreign language learners, differences in the reading comprehension improvement between the four groups was compared. However, findings of this study show that there was no significant difference between the groups.

Even though the differences in the mean improvement between groups turned out to be not significant in the present study, watching videos related to the classes' subjects before class improved their English reading comprehension skills the most.

Considering this, findings of the current study support the previous studies [13, 14, 18], suggesting that language learners can benefit from video—watching before class. They claimed that foreign language learners can improve their academic achievement via watching videos before the class starts.
This flipped language learning includes a Behaviorist Theory when learners participate outside the classroom which happens before the class via watching videos on the YouTube website. Watching videos before entering class which reversed from a traditional way of teaching has become one of the favored activities among the flipper [18]. A study on the use of video-watching activities in flipped learning before class reported the improvement in learner engagement. Findings of the current study confirm that viewing a video before class plays a beneficial role in foreign language learning.

4. Conclusion

Videos on YouTube have been integrated into a language learning classroom in various applications ranging from watching videos to supplement textbook materials to creating and sharing videos [1]. In foreign language learning and teaching, there has been positive evidence in the use of YouTube videos. Particularly, it has been known that foreign language learners benefit from video-watching activities before class by several scholars [13, 14, 18]. However, little has been known about when to show videos to foreign language learners for their effective language acquisition. In the dearth of empirical studies on this matter, the present study tried to determine the best time to use videos in foreign language class.

Major findings of the current study are as follows: First, all participants in the three experimental groups significantly improved their reading comprehension skills after participating in video-watching activities. That is, watching videos related to the classes' subjects before, during, or after the class was effective in reading comprehension improvement. Differences in the mean improvement between the groups, however, turned out to be not significant although participants who watched videos before class improved their reading comprehension skills the most.

Results of this study are in accordance with the previous studies suggesting the beneficial effects of video-based activities for developing foreign language skills. According to the previous scholars [2-4], the use of videos in language learning class has encouraged learner motivation, learner engagement, learner-centered learning ecologies, and authenticity of tasks. Malhiwsky [4] claimed that these can positively affect academic achievement.

Particularly, the video use in various forms has developed language learners' oral, aural, and writing skills [6-10]. Hanley, Herron, and Cole [11] and Canning-Wilson and Wallace [12] also claimed that videos are effective in improving foreign language reading comprehension skills.

Findings of the present study, in light of this, provide empirical evidence of educational effects of video use on reading comprehension skills in Korea. Given that there have been lack of studies supporting that videos enhance foreign language learning [12] and more practical studies on video-based activities have been called for [21], the current study provides evidence of educational effectiveness of video-watching for foreign language learners in Korea.

In particular, this research demonstrates that video-watching activities before, during, and after class provide a great opportunity to facilitate Korean foreign language learners' English reading comprehension skills. From this point of view, video-watching activities should be integrated into foreign language classrooms to develop the reading comprehension skills.

Limitations and suggestions for the further research can be also given. Learner variables including age, gender, and nationality should be
carefully considered because the participants in the present study were limited to Korean college students who enrolled in General English course at a university in South Korea. Most of them were freshmen students and their age ranged from 19 to 23. Furthermore, even though a pre-test post-test design with a control group was implemented in this study to determine the effects of video use, the improvement in reading comprehension skills for the experimental groups might be due to the increased exposure to English language itself by watching videos. The reading text used in the pre- and post-tests was not related to the text used in class. Therefore, it might be difficult to say watching videos can contribute directly towards improved reading comprehension skills. In addition, because of the time constraint, no follow-up was conducted in this study so it is difficult to know if the treatment effects continued. Lastly, as the current study was conducted with the use of video technology, any possible effects of technical issues or familiarity with the technology should be taken into consideration.

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