

Effectiveness of Using English Captioned Videos on Listening Comprehension Proficiency

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ABSTRACT

The purpose of this study is to examine the effectiveness of using English captioned videos on listening comprehension of EFL university students. Recently English captioned videos have been available and used in EFL classrooms in Japan, but only a few studies have so far been made at clarifying their long-term effects.

This paper points out the advantages of using English captioned videos and summarizes previous studies conducted on the effects of using them. Next, a data-based and long-term study is reported. There are two main aims: (1) to measure whether videos with English captions are effective teaching materials in comparison with videos without captions; (2) to measure whether fully captioned videos are more effective than partially captioned ones. Moreover, to get supportive evidence to this empirical study, we analyze the students' evaluation sheets and get feedback on the interest, usefulness and difficulty of the videos used.

The results suggest that fully captioned videos are much more effective than partially captioned or non-captioned videos if they are used over the long term such as at least one semester.

1 . INTRODUCTION

Recently videos have been used for English language instruction in EFL classrooms.¹ Moreover, as English captioned films have become available, they are used by many instructors in the belief that captioned videos will help EFL students improve their listening comprehension. However, surprisingly few studies have so far been made at examining the effects of using English captioned videos (Miyamoto 1991).

This current study points out the potential which English captioned videos have as teaching tools, then reviews briefly the previous empirical studies. Next, grounded on the results of the previous studies, a data-based longitudinal study is conducted (Study I). Finally, by analyzing the student's course evaluation sheets, we receive feedback on such issues as the usefulness of the materials, the difficulty

encountered with them, and the interest aroused by the materials (Study II).

2. THE POTENTIAL OF CAPTIONED VIDEOS AS TEACHING TOOLS

Captioned videos can be classified into partially captioned and fully captioned videos. We can name the former partial captions and the latter full captions. Originally, partially captioned videos were developed for deaf people in the United States so that they could enjoy watching TV. Because partial captions were not developed for use as teaching materials, they have some problems. The main problem is that captions used in this type of video do not necessarily represent the sounds perfectly. Kubota et al. (1990) compared the captions used in *Casablanca* and *E. T.* with their film scripts, in order to examine to what extent the partial captions represented the sounds. They report that only 60 to 80 percent of the sounds are captioned. Some of the function words, such as prepositions and conjunctions, are omitted. And in the interest of utterance speed, some of the words, phrases and sentences are apt to be paraphrased. So we encounter a gap between the spoken sounds and the partial captions. This gap applies to other partially captioned videos as well. To improve this problem, fully captioned videos have been developed specifically for English language education. Full captions represent the sounds perfectly. Another problem with partial captions is that there is a time lag between the sounds and the captions. The sounds often disappear before the captions appear due to conversational speed, i. e. an argument. As far as we know there is less of a time lag in the fully captioned videos for English language education.

Next, we may go on to point out the potential which English captioned videos have. The first important point is that English captions make videos much more accessible to EFL students. Though films highly motivate students (Edasawa et al. 1989; Takeuchi et al. 1990), films from the United States have many idiomatic expressions or regional accents that even native speakers of English may have difficulty in understanding (Pysock 1991). Hishida (1989) emphasizes that English captions make difficult videos more effective as teaching tools. Even more important is that English captions force students to do 'progressive' reading activities. Ohtagaki and Ohmori (1991) conducted an experiment to clarify the effectiveness of progressive reading activities using sense groups. They conclude that progressive

reading activities are much more effective than regressive reading activities, to which most Japanese university students are accustomed. English captioned videos may force and train students to understand the utterances by using progressive reading and listening activities. To put it another way, progressive reading and listening activities do not allow for backtracking or contemplation of the meaning. According to Glisan (1988), applying the teaching techniques of reading to the teaching of listening is very useful. It can be said that training progressive reading will lead to the improvement of listening comprehension proficiency among EFL students. Most important of all is that captioned videos are the best way to train EFL students to spontaneously comprehend written texts and spoken passages. Ito (1990) states that combining listening and reading helps students to sensitize and confirm the relationship between sounds and letters. Japanese learners of English should be trained to identify the letters with their sounds spoken at natural speed. Reading and listening concurrently would foster listening proficiency among Japanese learners of English. In this sense, the long term use of captioned videos is expected to lead students to comprehension fluency, that is, the ability to understand the spoken passages at natural speed.

3 . EMPIRICAL STUDIES ABOUT USING VIDEOS OR USING CAPTIONED VIDEOS

There are some empirical studies on the long-term effects of using videos as teaching materials. Edasawa et al. (1989) conducted preliminary studies concerning the effects of films and audio tapes. They do not believe that films help students make much progress in listening comprehension, though films highly motivate them to study English. A later study conducted by them (Takeuchi et al. 1990), testing the effects of a film, an ELT video and an audio tape on EFL students' progress in listening comprehension, reached the same conclusion. Obari et al. (1992) compared the effects of using videos with those of using the sound track of the same videos. They also conclude that there does not exist remarkable differences between the two techniques. To put it another way, though quite a few students have higher interest and motivation in the lessons using video, they do not improve their listening proficiency much more than their counterparts using the sound track of the video.

On the other hand, the longitudinal studies of using captioned videos have

been scant. As far as we know, Miyamoto (1991) and Obari et al. (1993) are the only two studies examining this matter. Miyamoto (1991) explored the effects of using English-captioned films and Japanese-captioned films on the improvement of listening comprehension. She reports that using them for one semester helps students make incremental progress in listening comprehension and suggests captions might play a vital role in the effects. Obari et al. (1993) conducted a study to compare the effects of using captioned videos and non-captioned videos. Their study shows there was a significant difference only in the CELT Listening Test.² They indicate strongly that the use of captions may improve intermediate students' listening proficiency. However, these two studies do not testify clearly the effectiveness of using captioned videos in comparison with non-captioned videos in the EFL classrooms. Moreover, no studies have ever tried to examine the efficacy of using partial captions in comparison with full captions.

4 . PURPOSE

Ito (1990) emphasizes that listening and reading concurrently is fairly important in the instruction of listening proficiency. So we can postulate that listening comprehension practice using captioned videos would be much more effective and lead learners to improve their listening proficiency. We are measuring the effectiveness of using English captioned videos on listening comprehension of EFL university students. In order to do this, a longitudinal study is conducted (Study I). There are two aims: 1) to measure whether videos with English captions are more effective teaching materials than ones without English captions; 2) to measure whether there exists any significant difference of effects between full captions and partial captions. In addition, to get supportive evidence to this empirical study, we analyze the students' evaluation sheets and get feedback on the interest, usefulness and difficulty of the videos used (Study II).

5 . STUDY I

(1) Subjects

The subjects of this study were 224 Japanese first-year and second-year students at the Faculty of Liberal Arts, Nagasaki University. I taught two English I-B and two II-B classes. Concurrently, these students were required to enroll in English I-A or II-A, whose classes were taught by four different teachers. Before

this study began, it was confirmed that these teachers would use traditional grammar translation methods, focusing only on reading without teaching listening skills. Thus, the conclusion is that these 224 students received their listening training only from me. Variables, such as teaching style and other English lessons, which might have affected the results of this study, can therefore be discounted.

Homogeneity among the four classes was confirmed by the JACET LISTENING COMPREHENSION TEST FORM A, administered as a pre-test in April, 1993. Table 1 shows the means and standard deviations. Table 2 shows that the results of a one-way ANOVA on classes mean that there were no significant differences.

TABLE 1 Ms and SDs for the Pre-Test Points 120

Class Number	Class A n=56	Class B n=56	Class C n=56	Class D n=56
Range	$68 \geq X \geq -6$	$64 \geq X \geq -8$	$64 \geq X \geq -8$	$64 \geq X \geq -8$
Mean	24.89	23.79	23.32	24.18
SD	17.58	18.13	18.59	18.66

TABLE 2 ANOVA for the Pre-Test

	SS	df	MS	F ₀	F
A	74.34	3	24.78	0.07	n. s.
W	74,545.21	220	338.84		
T	74,619.55	223			

(2) Method

The four classes were taught by me using four different sets of video materials. Students in Class A used two films called *Back to the Future* and *The Graduate* available from *Screen English* published by Kaibunsha. In contrast, the materials used for students in Class B were identical with the ones used in Class A, except that these films were partially English-captioned. Students in Class C used *CBS Evening News* produced by TeleCaption Center for the special purpose of English language education. Students in Class D used the same videos as in Class C, except that these were presented with full English captions. Unfortunately, video materials with both partial and full captions were not available for this study. Because of this factor, four classes were used in this study in order to clarify the difference of effects between partial and full captions. In addition to the video

materials, the students in the four classes used *Active Listening* published by Seibido so that they might learn basic listening strategies. The treatment explained is summarized in Table 3.

TABLE 3. Classes and Treatments

Class	Number	Main Material	Supplementary Materials
A	56	<i>Screen English</i> (No Captions)	<i>Active Listening</i>
B	56	<i>Screen English</i> (English Partial Captions)	<i>Active Listening</i>
C	56	<i>CBS Evening News</i> (No Captions)	<i>Active Listening</i>
D	56	<i>CBS Evening News</i> (English Full Captions)	<i>Active Listening</i>

Each class met one time per week for 90 minutes. The teaching methods used in each class were a combination of top-down and bottom-up methods. Specifically, true-false and multiple-choice questions, which were available in the textbooks for the videos or were made by me beforehand, were used as a top-down method. For the bottom-up method, partial dictations were used. After students completed these questions, they were immediately given correct answers and explanations of the contents. Before viewing the videos, they were taught key English words or phrases used, phonological features, and social and cultural backgrounds. Table 4 shows the methods and procedures for non-captioned classes and captioned classes.

To measure the differences in the four classes, a post-test produced on the basis of the pre-test was conducted in July 1993. The period between the two tests was 13 weeks. The correlation coefficient between the two tests is very high ($\gamma =$

TABLE 4. Methods and Procedures for the Non-Captioned and the Captioned Classes

	Classes A and C	Classes B and D
1. Explain key English words, backgrounds, etc.		
2. Watch twice with no exercises.	without captions	with captions on
3. Watch twice and work on true-false questions.	without captions	with captions on
4. Watch twice and work on multiple-choice questions.	without captions	with captions on
5. Check the correct answers of the true-false and multiple-choice questions.		
6. Watch twice and fill in the blanks on the text used in (2) and (3) (partial dictation).	without captions	with captions on
7. Check the correct answers to the dictation.		
8. Watch, listen and repeat the dictation (i. e., shadowing).	without captions	with captions on

0.80).³

(3) Results

The results of the means and standard deviations for the post-test are shown in Table 5. In order to know whether significant differences occur between the four classes, a one-way ANOVA was conducted (Table 6). The F value shows there existed statistically significant differences between the four classes at the .05 probability level. Table 7 shows where the significant differences occurred.

The highest mean is found in Class D (News, full captions); the second highest is Class C (News, no captions); the third is Class A (Film, no captions) and the lowest mean is Class B (Film, partial captions). According to Table 7, a statistically significant difference occurred between D and A at the .05 probability level. Moreover, a statistically significant difference occurred between D and B at the .01 probability level. However, there were no significant differences between A and B, and between C and D, though the difference of the mean score is rather great (6.10).

TABLE 5. Ms and SDs for the Post-Test Points 120

	A (Film)	B (Captioned Film)	C (TV News)	D (Captioned News)
Mean	25.68	21.57	27.61	33.71
SD	19.76	18.34	20.63	19.35

TABLE 6. ANOVA for the Post-Test

	SS	df	MS	F ₀	F
A	4,288.72	3	1,429.57	3.68 > F _(0.05) (2.65)	p. < 0.05
W	85,506.71	220	388.67		
T	89,795.43	223			

TABLE 7. LSD of Each Treatment

	B	C	D
A	4.11 (n.s)	1.93 (n.s)	8.03 *
B		6.04 (n.s)	12.14 **
C			6.10 (n.s)

LSD (0.01) = 9.75

LSD (0.05) = 7.38

*P < 0.05 **P < 0.01

6 . STUDY II

(1) Subjects and Method

Subjects of this study were the same 224 students as in Study I. Groupings of the subjects were naturally the same as those in Study I.

This study was conducted at the end of the last class in July 1993. The purpose of this study was to get the evaluation from the students concerning the treatment in Study I. When students answered the three questions, the questions were reread in Japanese, ensuring total understanding. The contents of the questions used are: (1) the level of interest of the material; (2) the level of difficulty of the material; (3) the level of usefulness of the material as a teaching tool.⁴ In order to determine statistically significant differences between Class A and Class B, or between Class C and Class D, chi-square (χ^2) is used and the data is analyzed.

(2) Results

Tables 8 through 10 show the results of Study II. Table 11 tells us where the statistically significant differences occur. Chi-square (χ^2) reveals that a statistically significant difference exists only in the level of difficulty between Class C (News, no captions) and Class D (News, full captions).

A most important point is that there is a significant difference about the level of difficulty between Class D (full captions) and Class C (no captions), whereas there is no significant difference between Class B (partial captions) and Class A (no captions). This suggests that full captions helped students to improve their listening proficiency, but partial captions were not so helpful for the students.

TABLE 8. Level of Interest of the Material

	Not Interesting	Average	Interesting	Total
A Film (no captions)	8	9	39	56
B Film (partial captions)	5	16	35	56
C TV News (no captions)	9	19	28	56
D TV News (full captions)	17	15	24	56

TABLE 9. Level of Difficulty of the Material

	Very Difficult	Difficult	Moderate	Total
A Film (no captions)	5	42	9	56
B Film (partial captions)	6	34	16	56
C TV News (no captions)	27	24	5	56
D TV News (full captions)	15	28	13	56

TABLE 10. Level of Usefulness of the Material as a Teaching Tool

	Not Useful	Average	Useful	Total
A Film (no captions)	5	9	42	56
B Film (partial captions)	9	15	32	56
C TV News (no captions)	10	14	32	56
D TV News (full captions)	12	9	35	56

TABLE 11. Chi square (χ^2) for the Film Classes and News Classes

	Film A vs. B	News C vs. D
(1) Level of Interest	2.88	3.24
(2) Level of Difficulty	2.88	7.28 *
(3) Level of Usefulness	4.00	1.40

df=2
*P<0.05

7. DISCUSSION

Ogasawara (1993) conducted a cross-sectional preliminary study to know in what way and to what extent viewing videos is more effective or less effective, using two different types of listening comprehension tests. According to this study, watching videos does not necessarily work positively. That is, watching videos gives learners contextual cues to make the listening passage understandable. At the same time, however, watching videos sometimes interferes with listening activities, with students paying little attention to utterances. In this way, watching videos is not as effective as we expect. It is quite difficult, or even dangerous, to generalize the effects of using videos positively.

However, using videos in classrooms produces comprehensible input much more readily than using audio tapes only. Using videos as teaching materials gives students a good source of comprehensible input. Krashen and Terrell (1983) state that if there are full visual cues, the acquisitional ability of learners is accelerated. Thus there are substantial benefits in using visual media for teaching language (Pysock 1991). Taking these things into account, using videos over the long term will be more beneficial in many ways than using audio tapes only.

But in fact, there are few studies to report the positive effects of using videos over the long term, such as one semester, in comparison with using audio tapes only. This leads us to infer that adding English captions to videos can be one of the ways to heighten the videos as teaching tools. In Study I, we tried to find the difference of effects between non-captioned videos and captioned videos. Unfor-

tunately, there is no statistically significant difference between the two, but there is a strong tendency that fully captioned videos are more effective than non-captioned videos. Moreover, fully captioned videos are much more effective than partially captioned videos. Judging from Study II, full captions are beneficial and helpful for learners while partial captions are not. Or rather, partial captions may sometimes interfere with students listening to the passage, because of a gap between partial captions and the spoken sounds. Not all the students are helped by using partial captions.

As already mentioned, there is no significant difference between the captioned classes and non-captioned classes (A vs. B, C vs. D). One of the reasons for this finding can be attributed to the level of videos used in this study. Students in this study are beginner or intermediate levels (C and D Level measured by the JACET LISTENING COMPREHENSION TEST).⁵ Edasawa et al. (1990) state that films are too difficult for even English major students and do not help students make much progress in listening comprehension. This may apply to news videos, though news videos are superior and effective materials. CBS news videos used in this study were above the students' level, judging from Table 9. To measure the effects of differences between the captioned classes and non-captioned classes more clearly, much more pertinent video materials should be chosen in this type of study, such as captioned ELT videos for beginner or intermediate learners.

Secondly, subjects in this study are almost all C and D level students, who probably have poor reading skills, specifically fast reading. Captioned videos, which force learners to spontaneously read and listen to the utterances, may be much more effective teaching tools for the more advanced students (Level A or B measured by the JACET LISTENING COMPREHENSION TEST). We should examine how effectively the captioned videos work for the advanced students.

8. CONCLUSION

With the shortcomings and limitations mentioned above, I would like to conclude my studies.

(1) There is a tendency to show that using captioned videos is more effective than using non-captioned videos. This should be examined from a variety of aspects. For example, using captioned videos may help students enhance their listening comprehension proficiency if the material is tailored to their listening com-

prehension level. Captioned films or CBS news videos used in this study would fit advanced students (Level A measured by the JACET LISTENING COMPREHENSION TEST). I feel that if the subjects in this study had been advanced students, there might have been a significant difference between captioned classes and non-captioned classes.

(2) Using partially captioned videos is not as effective and helpful for learners. There was a statistically significant difference between the fully captioned class and the partially captioned class, though the kinds of videos used were different (Film vs. News videos). Taking into account the fact that there is no difference between the non-captioned news class and the non-captioned film class, the significant difference between the fully captioned class and the partially captioned class is very important. We can infer that partial captions sometimes interfere with students listening activities due to the gap between incorrect partial captions and sounds of utterances spoken at natural speed.

As mentioned already, the empirical studies in this area are scant. Moreover, psycholinguistic theories to support these studies are very limited. From now on, empirical studies, grounded on the reliable theories, will be expected to be conducted and many studies should be reported from a variety of aspects. Owing to the improvement and availability of hardware, such as video machines or caption adapters, a variety of videos will increasingly become more available. I believe more integration of video materials into EFL classrooms will lead to the improvement of English language education in Japanese universities.

NOTES

1. In this paper, the term "videos" includes film videos, TV news broadcast videos and ELT videos. Films are defined as motion pictures such as *E. T.* made primarily for entertainment. ELT videos are defined as videos produced to teach English.
2. In their study, there was no significant difference between the captioned group and the non-captioned group in the TOEFL listening test.
3. The correlation coefficient between the JACET TEST FORM A and the post test was already checked before this study began, by using 150 other students.
4. At the same time, students of the four classes were required to answer the same three questions about the common material, *Active Listening*. All the chi-squares in the results showed there existed no significant differences in each question. This means homogeneity of the four

classes was confirmed about the common material.

5. The scales of the JACET LISTENING COMPREHENSION TEST are as follows: Level A (120–100 Excellent), Level B (99–60 Good), Level C (59–20 Fair), Level D (19– Poor).

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