

Using Captions Increases Comprehension

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With increasing access to TV and VCR equipment, teachers have more opportunities to use video in the classroom. Recent video resource books such as *Video in Action* (Stempleski & Tomalin, 1990), *Video* (Cooper, Lavery, & Rinvolucru, 1991) and *Communicative Video Techniques* (Wood, 1992) focus on specific activities to exploit video as a tool for teaching.

Numerous articles have also been published on using movies in the classroom (e.g., Goette, 1992; Gouat, 1992; Linke, 1981; Lofgreen & Brown, 1981; Natusch, 1990; Quebbemann, 1991; Ricketts, 1991). One reason is that "the teacher has ...a cornucopia of material to work with in all four language skill areas" (Linke, 1981, p. 14). These characteristics are also true of TV shows, but fewer articles are to be found (e.g., Bouman, 1990; Kryszewska, 1990; Vanderplank, 1990a, 1990b). Another reason for the popularity of movies, especially in Japan, is that there are no adequate ELT video materials for Japanese learners available at the moment (Natusch, 1990, p. 20).

Even more limited information is available on the use of subtitles on videos for EFL students. Vanderplank (1988) informally investigated "the potential benefits to be gained in terms of language learning....Subjects reported that they found subtitles useful and beneficial to their language development and that they were able to develop strategies and techniques for using subtitles flexibly and according to need" (p. 272).

The use of Japanese subtitles to watch foreign movies has long been employed in Japan; however, English subtitles have only recently appeared. In 1988, Futek Inc. opened several video caption centers to promote using closed caption movies in the EFL classroom. In 1989, CINEX (Cinema English Exercise) decided to distribute open captioned, "exact word" subtitles on selected American movies for the purpose of teaching English. It published several video/study book packages claiming that students can enjoy a movie, and at the same time, enjoy studying English.

The National Captioning Institute in the USA published a study indicating that captions affected "bilingual students, acquisition of language, lit-

eracy, and conceptual knowledge" (Neuman, 1990, Introduction). Data from that report was used to expand NCI's market of closed caption decoders from the hearing impaired to the "listening impaired" EFL student. The Telecaption Center introduced NCI's decoder device to EFL teachers in Japan. Sanyo, in 1992, promoted its decoder, "The English Teacher," with video study packages to the general public, claiming that one could master English with this system.

It seems logical that being able to read the captions while hearing the spoken word would increase comprehension. However, trying to measure the effects of captions is more difficult. In a study by Hirose & Kamei (1992) it was reported that captions were beneficial to all students, especially those at higher proficiency levels.

The purpose of this pilot study was also to analyze the effect of captions on comprehension. Data were collected and compared, using the same subjects to watch video segments with captions and without.

Method

Subjects: The subjects were English majors at Kagoshima Women's College. Seventy students were randomly divided into two groups according to student ID numbers. There were 34 subjects in Group A, and 36 in Group B.

Material: A popular movie, *An American Tail* (Spielberg, 1990), was divided into 19 segments by scenes. It was chosen because the subjects had been studying about immigrants in American history, and the movie had been made for a general audience.

Equipment: Two 29" TVs were connected to a VCR and a caption decoder which was used to show or hide the captions.

Procedure: The study was conducted during the second semester (15 weeks), in which each group met nine times for ninety minutes. For the first five periods, Group A was exposed to captions but Group B was not. For the next four periods, Group A watched video segments without captions while Group B watched them with captions. Finally, all subjects watched the whole movie with captions for review—a week before the final exam.

Before watching each video segment, subjects were given a handout with questions in English, which were explained by the teacher, and useful vocabulary words, which were translated by the subjects. Then the subjects were asked to watch the segment and answer the questions in English without consulting each other. After the handouts were collected, the teacher went over the answers.

There were two types of questions: *A* for audio and *V* for visual. To answer *A*-type questions, the subject needed to understand what was being said. For *V*-type questions, the answers could be found visually. Examples of each type appear below.

- How long is the giant mouse's tail? (a mile long) *A*-type
 What word does Mother not want to hear? (cats) *A*-type
 How does Fievel try to scare the cats away?
 (by hitting a pot with a spoon) *V*-type
 What happened to the Mousekowitz house? (burnt down) *V*-type

Scoring

One point was given for each correct answer. Spelling and grammar mistakes were ignored because the main purpose was to check comprehension. In several cases, if an answer to an item was given both aurally and visually, it was listed under *V* (visual) if the subject could answer the item even without understanding the dialog. The item was listed under *A* (aural) if the subject still needed the aural support to answer the item.

An NEC 9801 computer with SPSS software was used to compile and analyze data. A level of $\alpha < .05$ was selected for the purpose of establishing significance.

Results and Discussion

Attendance per class period was fairly good, ranging from 30 to 36 subjects. T-tests were used on each set of questions. In six out of nine sets, watching with captions significantly increased comprehension.

However, the number of students who attended all nine class periods was disappointingly small. The effect of captions on the smaller group of subjects who attended all nine class periods was also analyzed. More items were able to be grouped together because the subjects were the same. All the subjects experienced using and not using captions. A direct comparison could be made from the results, which appear below.

Table 1
Summary of A-type Information
from Subjects who attended All Nine Classes

Scene	Group	No. of Cases	Mean	SD	Degrees of Freedom	t-value
1-7	A w/	24	16.54	4.53	38	3.38*
	B w/o	16	11.56	4.63		
8-19	A w/o	24	11.33	2.74	38	-3.04*
	B w/	16	14.62	4.12		

(w/ means with caption; w/o means without caption)

$p < .05$

As shown in Table 1, there were differences significant a $p < .05$ among A-type questions. The means of the group exposed to captions were always higher than the group without captions. This implies that reading the captions helps subjects' comprehension ability, as Hirose and Kamei (1992) also concluded.

Table 2
Summary of V-type Information
from Subjects who attended All Nine Classes

Scene	Group	No. of Cases	Mean	SD	Degrees of Freedom	t-value
1-7	A w/	24	14.79	3.42	38	.74
	B w/o	16	14.00	3.14		
8-19	A w/o	24	16.70	2.97	38	.31
	B w/	16	16.37	3.82		

(w/ means with caption; w/o means without caption)

$p < .05$

As shown in Table 2, no significant differences between groups were found with respect to the V-type questions. The means of Groups A and B were nearly the same. This implies that the captions did not have an effect on acquiring non-verbal information.

The results of this study are weakened by the small number of subjects. Also, the comprehension questions were in English and were answered in English. Using the subjects' L2 may have prevented some

from understanding the questions and/or answering them correctly. Last, the rate at which the captions appeared could not be controlled, so it is unknown how the rate affected comprehension.

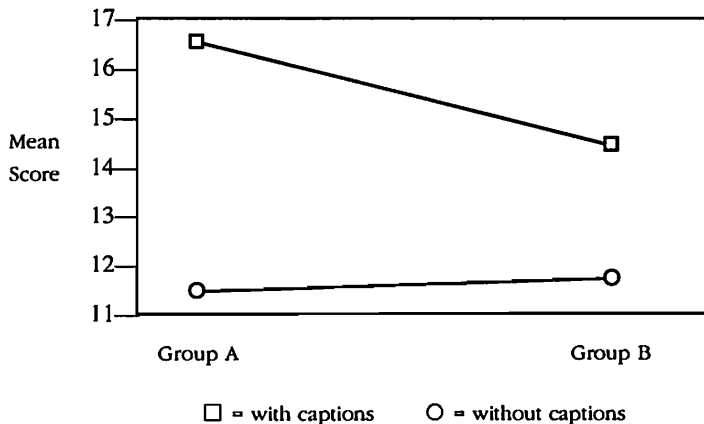
Conclusion

This study investigate the effects of captions on information acquired aurally and visually. The subjects felt that captions gave an additional opportunity to obtain information. Specifically, the results of this study indicate captions increased comprehension.

Subjects were able to experience both using and not using captions, and the results could be compared. Findings showed a relationship between reading captions and listening comprehension, although further research is necessary in order to establish the nature of that relationship. Figure 1 below summarizes the results, showing that the group using captions scored higher than the group not using captions.

Ellsworth (1992) has challenged teachers to experiment with captions, calling them a "seldom explored aspect of video" (p. 24). Bragoli (1993) gives an account of the captioned video teaching techniques incorporated into his classroom, and concludes that even though he could not statistically prove that captions improve listening comprehension, it seems that "caption use does not make it any worse" (p. 61).

Figure 1
Relationship between Reading Comprehension
and Listening Comprehension



More studies need to be conducted to evaluate the effects of captions. Many issues such as proficiency level, reading speed, and visual processing need to be taken into consideration. Further studies need a larger number of subjects, and instructor's with the ability to use video and captions effectively.

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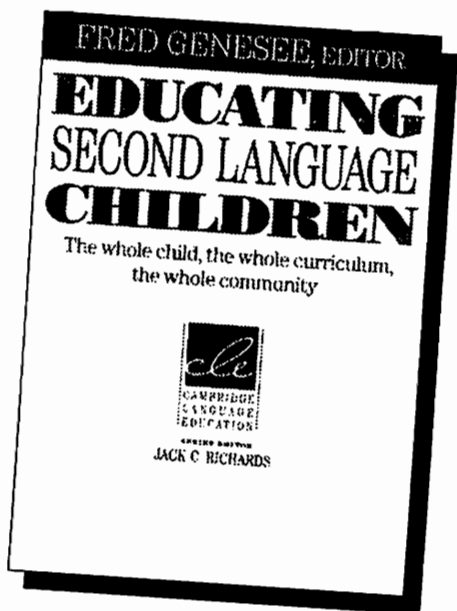
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