

The Role of Visuals in ESL Instruction

Cecilia B-IKEGUCHI

Abstract

A study was conducted to find out the effect of visuals on the comprehension ability of a group of Junior College students in Japan. The investigation was conducted in two stages. First, a section of a reading passage was read in class by both teacher and students, after which Test 1 was administered. Questions were given in printed form. Then, a video segment of the material was shown, after which Test 2 was administered. In the second testing, the questions were read out by the teacher. A 15 item test of recall and comprehension was used for both tests; each group of questions controlled for both difficulty level. A mean analysis and a t-test were conducted on the scores obtained. The findings reveal that there is a slight increase in the mean scores after viewing the material, but further analysis does not indicate highly significant statistical gains after treatment, presumably because the second testing was administered aurally. The study points out further the need to develop aural comprehension skills in ESL instruction, as a prerequisite to improving productive oral communication.

Introduction

The outstanding features of video films (or segments) lie in their ability to present complete communicative situations. The combination of sound and vision is dynamic, immediate and accessible (Lonerga, 1984). The power of the medium is acknowledged by all, even if its benefits and disadvantages are still a matter of controversy. Most students will want to watch, even if comprehension is limited. By generating interest and motivation, video films can, by providing images, further create a climate for successful learning. However, there are certain limiting factors that the vast majority of student find between the video in class and watching TV. They are so much pleased that the TV makes no demands on them and there is a personal need to do it. In a language learning context, there is a need for special action: inter-action with the video.

A review of literature and the problem:

Some researchers on Second Language Acquisition point out that the current second language

acquisition models based on a fixed, printed form of language may be fundamentally flawed. Altman (1990) noted against the traditional models of ESL learning and advocate that language is primarily a continuum of sounds most often used against a backdrop of visual clues. It is the assistance provided by visual images that help in decoding and schematizing, two vital and complimentary aspects of understanding another language. Researches on the effectiveness of interactive video report that compared to purely traditional teaching methods, video instruction influences significantly the gains of students (Boen, 1985) in that these students scored higher than their counterparts who received instruction in the traditional way.

The use of "video" in ESL courses has often been categorized under the everyday heading of "materials" as a "major source of input" (Benson, 1993). Various types of teaching videos have been presented by Strange & Strange (1991). There are also numerous commercial materials indicating applications of video (Lonerga, 1984), and pointing out its advantages (Stempleski & Tomalin, 1990). Handbooks on the uses of video in ELT point to the advantages the medium offers over other teaching aids (Strange, 1988). The development of video-interest groups indicates a growing awareness of the potential of the medium in language teaching. This increasing prominence of video in ELT has raised a number of questions. Is video always the useful teaching aid it is claimed to be? If video is to be used effectively in classroom instruction, its limitations as well as its advantages must be considered.

Despite a range on how to use video in the classroom, (Cooper, Lavery & Rinvoluceri, 1991), there is a need to investigate on how learners learn language and how specific media affect language learning (Tatsuki, 1993), especially in ESL. So far, however, there have been little theoretical justifications for the use of video as an aid to language instruction, particularly as an aid to student comprehension. At the theoretical level, what are the principles involved? At the practical level, how does the use of the video help teachers assess students who have used the video materials?

Benson (1993) came up with an outline of the seven characteristics of a course using video mainly. The major results of his investigation can be summed up in the following. First, he claims that the visual aspects help activate learning. Specifically, these visual images help in the students' decoding and schematizing, two vital complimentary aspects of understanding another language, especially in the early stages of language development. The discursive features of video, those that refer to the sociolinguistic markers available from context (Altman, 1990) help students relate them to familiar frameworks within their L1. Then too Benson claims that the video allows students' access to nonverbal languages, as well as to access to the target culture (Richards, 1990). Even the shortest and most contrived video segment shows the visual aspects of the target culture. The last claim Benson made on his report is that materials seen on video are readily retained. Although this last item has been claimed as well supported by observed classroom interactions and classroom tests, it has yet to be tested and validated by sound empirical research. The results from Benson's test proved inconclusive.

Investigations on the use of video in ESL instruction can be broadly categorized into two groups: (1) studies that compare the results of video-mediated courses and audio-mediated courses, and (2) those that relate the results of either or both of these on the skill areas of reading and

listening. Some of these findings indicated that the mean difference between the audio group and video group was insignificant. Still other studies, like the one conducted by Gruba (1996) on the development of interactive video materials for developing listening comprehension suggest that video treatment seemed to facilitate recall of both story and details. An earlier review was made by Powers (1986) on the academic demands related to listening skills. The paper reports that listening skills are perceived as more important than others for academic success. There were relatively few differences across disciplines in the degrees to which various general tasks and specific listening question types are judged as appropriate. However, a major differentiating factor was whether or not response options were presented pictorially. Even in university lecture courses, the use of visuals to facilitate skills development can not be ignored.

The sad reality remains that despite the growing interest in and use of video in the teaching of English as a second language (Stempleski, 1991) research in the field has largely ignored the third aspect of video instruction: the affective role of visual media in language testing. This research has been basically established with these issues in mind. It is an attempt to answer a part of Benson's call on "those using the video to teach to use the same medium to test". The study assumes that alternative learning styles are activated by visual media. For as McLuhan (1964) claimed, the medium is the message, this investigation is interested in finding answers to questions like: does the manner in which information in the classroom is presented really affect the way it is understood? In particular, how does the use of visual images VIA the video in the classroom help increase students' comprehension of a text?

Research Design and Methodology

(1) Subjects

A total of 93 first year students in a Japanese Junior College were taken as samples for this study. Three groups of thirty one students per group were chosen at random from three different classes enrolled in their Freshman English Course. Randomization was achieved by taking one half (31) of the total number of students from three different classes composed of 62-63 students in total. In the first class, samples were picked out from the odd-numbered students in the class starting from 1 until the desired number of samples was arrived at; samples for the second class were picked out from the even-numbered students in the list starting from 2. The samples for the third class were picked out in two ways: the first half (16 students) from the odd numbered students beginning from student 1 in the class list, and the second half (15 students) from the even numbered students beginning from the last student of the class going back the list.

(2) Material

The material used in this investigation was a segment of a reading passage taken from a College text with an accompanying video material. The reading passage was chosen because it corresponded to the level of materials in the examination guidebook *Zenkoku Tankidaigaku Nyuushi Mondai Seikai Eigo (All Japan Junior College Entrance Examination Problem Solutions,*

English), that were analyzed by Kimura and Visgatis (1996). To determine the reading difficulty of the instrument used, as well as its reading ease and interest level, certain readability yardsticks were applied: the Flesch Reading Ease scale, Gunning's Fog Index, and Flesch-Kincaid formulas. The rationale for the choice of these formulas are : they have been most often referred to in studies of readability level in the past (Klare, 1984), studies on entrance examination items in Japan have used similar formulas (Brown and Yamashita, 1995), they are widely available and enable computerized checking (Kimura and Visgatis, 1996).

The Flesch Reading Ease (FRE) Scale ranges from 0 to 100, with 100 indicating the easiest to read. The FRE score of the passage was found to be 65, a little above the observed mean of all reading texts used in the Junior Colleges in Japan (Kimura and Visgatis, 1996). The Flesch-Kincaid (FK) and Gunning's Fog (GF) indexes indicate the appropriate grade level of the reader, based on the American educational system. The FK score was 4.5 and the GF score was 5.6 (roughly equivalent to US fifth grade elementary school).

(3) Procedures in test administration

Two tests, the first and second testing, were administered after each of the two stages of reading and viewing, respectively. In the first stage, the students were given the script first, after which teacher and students role-played while reading the material. The first test was given right after the role-playing. The test questions consisted of recall and comprehension items with a total of 15 items on print. Checking was immediately conducted after the test, by both teacher and students. It took 10 minutes for the fastest student to complete answering all the questions.

The second stage consisted of making the students watch the video segment, after which similar questions of recall and comprehension and the same level of difficulty as in Test I were read aloud by the teacher. Checking of test paper was done immediately thereafter. It took the fastest student 5 minutes to complete answering all the test items in the second stage.

To control for a potential order effect, half of the Ss were allowed to watch the video in their next English class a week following the 1st stage of reading, while the other half were allowed to view the video right after the first test had been conducted.

(4) Analysis

Mean analysis was conducted to determine whether there is a marked improvement in the scores obtained by the Ss from the first stages of post script-reading and the second post-viewing. A t-test was conducted to determine whether the changes in the mean scores-from Test 1 to Test 2-were statistically significant. Test reliabilities are likewise reported.

Results and discussion

(1) mean analysis

The means obtained after the first testing following the reading stage was slightly lower than that obtained after the second testing: 10.87 and 10.91, respectively. The whole scores were widely

spread out from 15, the perfect score, to 6 the lowest score, in the first test, and from 14 as the highest score, to 6 the lowest score, in the second test. In spite of these extreme scores, the whole range of scores was spread out in a normal distribution to warrant a mean analysis.

Other inferences can be drawn based on the other results of basic statistics indicated in the table above. The range and standard deviation are both similar in that they yield information as to the patterning of student scores. The narrow range of scores implies that the students to whom the test were administered are quite similar in ability. Consequently, the standard deviation scores indicate the scores to be grouped rather narrowly around the mean.

(2) reliability report

The reported reliability of .63 and .78, although satisfactory, are not highly reliable (Hatch & Lazaraton, 1994). A number of factors could have affected these reliability results. For one, test length is one important characteristic that might have affected the reliability. The presence of outliers, as mentioned above, were also suspects to the moderate reliability results, but even with the outliers removed, the estimates did not change so much. The Ss' narrow range of ability, as reflected in their scores can also be considered a factor that might have influenced the moderate reliability result. Furthermore, the low variance could be another factor that might have accounted for the moderate reliability estimates.

Table 1 Basic Statistics on the effect of Video on Comprehension Scores

	Test 1	Test 2
No of Ss	93	93
No. of items	15	15
Mean	10.87	10.91
Range	6	5
v	4.5	3.1
Std. Dev.	2.1	1.7
KR21	.63	.78

(3) t-test

A cursory glance at the table will reveal that there is a slight increase in the scores of the students after the video material had been presented. This is indicated by the slightly higher mean scores in the second test. To compare the performance of the Ss before and after treatment, the means were analyzed on one measure in two different periods of time, using the repeated measures design. On the basis of the findings, the null hypothesis of no significance between the two different testing times can be rejected. The t value for the comparison of scores was used with significance set at .06 level. The Ss did improve, although very slightly, and the t-test indicates a slightly significant statistical result. The video treatment has a very negligible effect on the

performance of the Ss. The information can be summed up in: $t=2.210$, $df=130$, $p<.06$.

The results obtained from a t-test precludes any further generalization on the effects of visuals on comprehension, because there are certain threats to validity that there is a need to temper any claim. For one thing, unlike the first test, the second test was given aurally. The students were informed after obtaining their scores from the first test, that they would be allowed to watch the material on video. This in itself is a psychological preparation for active viewing (Lonergan, 1984). Using almost the same test questions of recall and comprehension and controlling for difficulty level for both tests, the scores obtained from the second testing, after viewing the material read, were expected to be higher than those obtained earlier. Contrary to expectations, the scores were almost the same. This does not necessarily indicate that there were no gains after treatment. The testing method done in test 2: reading out the questions aloud, could have affected the Ss scores adversely. These results indicate one perennial problem among Japanese students, the difficulty to comprehend materials presented aurally.

The results of the Ss' performance on these tests calls for a need to bring up a discussion on the channel and mode issues as well as the interactions of the skills-based issues described by Brown (1996). The channels used for communication are described as either the written channel or the oral channel, and some tests necessitate the simultaneous use of two skills within a single channel. The productive mode includes those skills used to send information to others, while the receptive mode includes those skills that involve receiving and understanding the message from others. In this investigation Test 1 was basically a reading comprehension test, typically viewed as a receptive mode of the written channel. At the same time, the productive mode is involved in producing short-response answers, although in a small-scale unlike a dictation type of test. Test 2 involves a listening comprehension task, in addition to the reading task required in the first testing. The students needed to understand question being dictated VIA the oral channel, and were required to write down their responses VIA the written channel. Here we see an interaction of the various modes as well as the different channels in the comprehension of grammar and meaning (Ikeguchi, 1995). The scores of the students in the second test which indicated a very slight improvement even after the students were shown the visuals on the same material using very similar test questions, point to the practical issues on the gap between language skills and development in ESL instruction. Test performance is only an imperfect reflection of an underlying competence.

Conclusion

The study is significant in terms of the theoretical issues it address regarding the interrelation of the various language skills, as well as in terms of the practical issues concerning the use of video and visuals in ESL instruction. The outstanding features of video in the classroom and the power of visuals in increasing learning interest and motivation have all been verified and presented in voluminous discussions elsewhere. The results of this study, however, suggest that the use of visuals does little in improving students' comprehension of a given text. It should be pointed out

however, that limitations in the design of the study, for instance, the use of aural method in the administration of Test 2, may have been a difficult task upon which to base strong claims of student gains after treatment. Furthermore, although the samples used in this study did not come from an intact group, the scores tended to cluster to form a homogenous scores group, and consequently have resulted in spuriously low reliability scores. It would therefore be extremely useful to verify these findings with more thorough instruments using repeated measures design with a larger group of subjects over a longer period of time, using various materials. Specifically, using a longer test to increase test reliability and obtain better variance for a bigger sample group is an essential task for future research.

Video is just one more-additional-tool for the language teacher. But the numerous video materials that come in varying lengths and ways of application, make them an exciting tool which the busy ESL teacher may consider adding to his/her own "toolbox" (Pauly, 1996).

References

- Altman, R. (1990). Toward a new video pedagogy: The role of schema theory and discourse analysis. *JALT Journal*, 23, 9-16.
- Bachman, L.F. (1990). *Fundamental Considerations in Language Testing*. Oxford: University of London Press.
- Benson, V. (1993). Testing Made-for-ELT Videos. *Language Teacher*, 17(9), 15-19.
- Boen, L. (1985). Results of a pilot study on Supplant Traditional Study Skills. ERIC Document. ED 266 711.
- Brown, J.D. (1995). *Testing in Language Programs*. New Jersey: Prentice-Hall Regents.
- Brown, J.D. & Yamashita, S.O., (1995). English language entrance examinations at Japanese Universities: What do we know about them? *JALT Journal*, 43, 50-56.
- Carrell, P.L. (1987). Readability in ESL. *Reading in a foreign language*, 4, 21-40.
- Cooper, R. Lavery, M. & Rinvolucru, M. (1991). *Video*. Oxford: Oxford University Press.
- Gruba, P. (1993). A comparison study of audio and video in language testing. *JALT Journal*, 15, 85-88.
- Gruba, P. (1994). Design and development of a Video-Mediated Test of Communicative Proficiency. *JALT Journal*, 16, 25-40.
- Hatch, E. & Lazaraton, A. (1991). *The research manual: Design and Statistics for applied linguistics*. New York: Newbury House.
- Ikeguchi, C. (1995). Cloze Testing Options for the Classroom. in Brown & Yamashita (Eds), *Language Testing in Japan*: Tokyo: JALT.
- Javetz, E. (1986). Interactive Video: A Tool for Developing Listening Comprehension in ESL Learners. ERIC Document. ED 271029
- Kimura, S. & Visgatis, B. (1992). University Entrance Examination and Testing Theory. *The Bulletin of Teikoku Gakuen*, 18, 167-177.
- Kimura, S. & Visgatis, B. (1996). HS English Textbooks and College Entrance Examinations: A Comparison of Reading Passage Difficulty. *JALT Journal*. 18, 81-95.
- Klare, G.R. (1984). Readability. in P.D.Pearson (Ed.), *Handbook of reading research* (pp.681-738). New York .Longman.
- Loneragan, J. (1984). *Video Movies in Language Teaching*. Cambridge: Cambridge University Press.

- Pauly, M. (1996). Video Movies: The process of making worksheets. *Studies in Foreign Language Teaching*. The University of Tsukuba: Foreign Language Center, 18, 377-384.
- Murphy, J. (1991). Oral Communication in TESOL: Integrating speaking, listening and pronunciation. *TESOL Quarterly*, 25, 51-74.
- Powers, D.E. (1986). Academic skills related to listening skills. *Language Testing*, 3, 1-38.
- Richards, J.C. (1990). *The Language Teaching Matrix*. Cambridge: Cambridge University Press.
- Stempleski, S. & Tomalin, B. (1990). *Video in action*. Englewood Cliffs, NJ: Prentice Hall.
- Strange, J. & Strange, D. (1991). Survey: Video Materials. *ELT Journal*, 45, 335-359.
- Tatsuki, D.H. (1993). Interactive video and hypermedia: Where's the beef? *The Language Teacher*, 17, 19-24.
- Writing Tools Group, Inc. (1992). *Correct Grammar 3.0 for Macintosh*.