

# **A Comparison Study of Audio and Video in Language Testing**

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## **1. Introduction**

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 affective role of visual media in language testing. Given the lack of investigation of visual media in the field, combined with calls for the development of innovative methods in language testing (Cohen, 1984; Carroll, 1986; Bachman, 1990), a closer look at the role of visual media in tests of English as a foreign language is needed.

Prompted by a lack of research into the use of visual materials in the language classroom, Omaggio (1979) used pictures reproduced onto ditto masters to determine the effects of pictorial contexts on reading comprehension. She suggested that simple visual materials serve as advance organizers of information, and are most effective if given before a test of comprehension, but warned that busy visuals may confuse test takers.

Mueller (1980) questioned decisions of language teachers to use visuals as classroom aids. Mueller concluded that low level students benefited significantly from the visual input both when introduced before or after the listening task. Group means of high level students, however, showed no significant differences in test scores between the two mediums.

When Altman (1989) challenged theories of second language acquisition, he appeared to echo McLuhan (1964) in pointing out that current second language acquisition models based on a fixed, printed form of language may be fundamentally flawed. Traditional models of second language learning, Altman suggested, overemphasize grammatical accuracy, present words by uniform printed standards, look for linear comparisons of vocabularies across languages, and see vocabularies in terms of English equivalents. Altman noted that language is primarily a continuum of sounds most often used against a backdrop of visual clues. Benson (1992) employed video for classroom testing following the extensive use of video as the primary medium of instruction. For Benson, there are seven key points to consider when testing the video class: (a) that alternative learning styles are activated by visual media; (b) the enhancement of decoding and schematizing; (c) the discursive

nature of video which displays an array of sociolinguistic markers; (d) the greater access to non-verbal languages; (e) a lowering of the affective filter; (f) improved access to the target culture; and (g) that material seen on video can be readily retained. Though statistical results from her own self-made tests proved inconclusive, Benson called on those using video to teach to use the same medium to test.

## 2. Method

Subjects used in this study were advanced-level students from ESL service courses at UCLA in the fall of 1990. Of the 91 subjects in the study, 39% were Chinese, followed by 19% Korean, 17% Vietnamese, 8% Spanish, with the remainder spread among seven other backgrounds. Approximately 28% of the subjects were graduate students and 66% were undergraduates; 29% of the subjects reported having been in the United States one year or less, and a total of 73% reported less than five years.

The presentation was a simulated academic lecture on international terrorism at airports, designed to meet the listening proficiency level of the subjects. The instrument, a 14-item multiple-choice and true/false listening test, was based on the academic skills identified by Powers (1986).

For purposes of this study, a video-mediated test is one in which the primary medium of presentation is through a video monitor; in audio-mediated tests, the primary mode of presentation is by audio tape player. After piloting and refinement, the test was administered both through video and audio tape to the subjects in the last week of the fall quarter, 1990.

## 3. Results

Despite the disappointing results of the test reliability (.45), *t*-test procedures were used in order to determine whether the mean difference between audio and video groups was significant. Results of the *t*-tests, given in table 1, were not significant at the .05 level, indicating a tentative conclusion that the mode of presentation did not make a difference.

	n	x	s	f	2 tail	<i>t</i> val.	df	2 tail
Audio	46	6.39	2.16					
				1.17	0.61	1.61	85.20	0.11
Video	43	7.16	2.34					
<i>p</i> < .05	Dependent: Test Total							

## 4. Discussion

The results of the study, weakened by problems in achieving acceptable test reliability coefficients, are unclear. They may suggest, however, that advanced second language learners may not be as medium-dependent as has been theorized; like native speakers, communication takes place despite variations in the manner of delivery. Further investigation using a reliable instrument is required. Second language test developers should be careful in using video as a testing medium because of construct validation concerns. In the current study, it was claimed that the instrument used was measuring abilities in listening, but indeed, can the visual presentation of information claim to have listening trait validity? Standards in video production would be difficult to maintain if second language testers adopted video-mediated instruments. "Broadcast quality" tapes, expensive to produce, are now able to employ sophisticated computer graphics, fast paced edits, and stunning special effects. A "low production" video made without special lighting, edits, or complex graphics may not assess the same abilities as a more sophisticated production.

Future research in visual media should also investigate influences of race, gender, and appearance of the lecturer in order to study possible biases in testing introduced by these factors. Feucht (1989) found significant differences between men and women in the perceptions of simple geometric symbols such as triangles, squares, and arrows. Cross-cultural differences may highlight this. Even as language testing research begins to explore the use of further integration of video into issues of assessment, the new medium of videotex is emerging. Cutler (1990) writes that it could be "more powerful than newspapers, magazines and television put together" (p. 25). Research on the use of visual media in second language testing must meet the challenges of the electronic age.

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