

# The Speech Teacher

VOLUME XIX · SEPTEMBER 1970 · No. 3



The Move to Power: A Philosophy of Elementary Speech Education	<i>Beverly Lusty Hendricks</i>	151
An Experimental Study of the Effectiveness of the Video-Recorder in Teaching a Basic Speech Course	<i>Bert E. Bradley</i>	161
Perception through Performance of Literature	<i>Robert M. Post</i>	168
Speech Education in Protestant Seminaries, 1958-59—1968-69	<i>William K. Clark</i>	173
Sociolinguistic Premises and the Nature of Nonstandard Dialects	<i>Walt Wolfram</i>	177
The Effects of Teacher Comment and Television Video Tape Playback on the Frequency of Nonfluency in Beginning Speech Students	<i>E. Roderick Deihl, Myles P. Breen, and Charles U. Larson</i>	185
Attitudinal Differences Between Black and White College Students	<i>Sharon A. Ratliffe and Lyman K. Steil</i>	190
The Effect of Various Methods of Employing Video- Taped Television Playback in a Course in Public Speaking	<i>James C. McCroskey and William B. Lashbrook</i>	199
Philosophic Perspective and Beginning Public Speaking Texts	<i>Walter R. Fisher</i>	206
Speech Instruction in California Community Colleges	<i>Win Kelley</i>	211
Teachers' Potpourri		225
Reviews		237
<i>Listening: A Programmed Approach and Guide for Teachers and Script of Tape Recorded Speeches, by Ella A. Erway</i>	<i>Barbara Lieb Brillhart</i>	237

# THE EFFECT OF VARIOUS METHODS OF EMPLOYING VIDEO-TAPED TELEVISION PLAYBACK IN A COURSE IN PUBLIC SPEAKING

James C. McCroskey and William B. Lashbrook

SINCE the early 1950's extensive research involving the use of television in education has been conducted. As noted in their summary of experimental research in instructional television by Reid and MacLennan,<sup>1</sup> most of this research has been concerned with the use of television as a method of processing large numbers of students with greater economic efficiency than by increasing size of instructional staff. Thus, most of these studies may be said to have investigated the use of television *in place of* a "live" instructor. The majority have observed no statistically significant differences in learning between students exposed to "live" and televised instruction.

While the study reported below was related to the earlier research in use of television in education, both the purpose and the underlying premise were substantially different. The purpose of the present study was to determine, within the limitations of the study itself, whether use of television *in addition to* "live" instruction could significantly improve student learning. Thus, this study is best described as a study investigating tele-

vision as a teaching aid rather than a teacher substitute.

The underlying premise for most of the previous research on the use of televised instruction has been that if there is no observable difference in effects of "live" and televised instruction, televised instruction will be deemed best for implementation. This, of course, is based on a financial rather than educational consideration. After the initial outlay for equipment, televised instruction is usually less expensive than "live" instruction. As any competent researcher knows, non-significant differences between experimental conditions may be observed when no true differences exist but may also be observed when the experiment is either poorly designed or poorly executed even when true differences do exist. An examination of the previously reported research causes us to suggest that the latter reason for non-significant differences is very frequently a more parsimonious explanation of the observed results than the former.

The underlying premise for this study was that unless our use of television in conjunction with "live" instruction proved to be significantly superior to our "live" instruction alone, "live" instruction without television would be deemed best for implementation. We adopted this premise for two reasons. First, operation on this premise is financially sound because including television in this manner would increase the cost of instruction

James C. McCroskey and William B. Lashbrook are Associate Professors of Communication at Illinois State University. This project was made possible by a grant from the Educational Development Program at Michigan State University. The research was conducted with equipment and in facilities provided by the Division of Learning Services of MSU.

<sup>1</sup> J. Christopher Reid and Donald W. MacLennan, *Research in Instructional Television and Film*, Washington, D.C., U.S. Government Printing Office, 1967.

rather than reduce it and can not be justified unless it is clear that this increased cost will improve instructional results. Second, by insisting that our use of television must be found to be significantly superior to the normal instructional method, poor design or execution of the research on our part would prevent us from recommending a change to a new method of instruction.

#### RATIONALE FOR INDEPENDENT VARIABLE

For many years teachers of speech have believed that an important avenue through which a student may improve his oral communication ability is by learning what he does well and what he does poorly. The presumption is that if the student is made aware of his strengths and weaknesses he can make improvements. The method commonly employed in putting this pedagogical theory into practice is to ask the student to deliver prepared speeches which are then evaluated and criticized by the classroom instructor and/or the student's peers.

We support both the pedagogical theory and the practical application of it. However, the present study stemmed from our suspicion that if the student could actually "see" his communicative act in process, his insight into his strengths and weaknesses and, as a result, his degree of improvement would be increased. The recreation of the communicative act by the instructor in his critique may not enable the student to actually visualize what has occurred. In addition, classroom criticism may have reduced effect because the student is too "close" to the situation. His ego involvement may hamper his ability to fully profit from the evaluation of others.

The above rationale led to two hypotheses:

1. Students of public speaking who

view video-taped playback of their communicative act, after proper instruction in theory, will better meet the goals of the course than students who do not view such video-taped playback.

2. Students of public speaking who receive instructor and peer criticism during and subsequent to viewing video-taped playback of their communicative act, after proper instruction in theory, will better meet the goals of the course than students exposed to either video-taped playback without criticism or criticism without video-taped playback.

Presuming the confirmation of the above hypotheses and that students who better meet the goals of the course will also be more satisfied with their educational experience, the following supplementary hypotheses were generated:

1. Students who view a video-taped playback of their communicative act will have more favorable attitudes toward the course and the use of television on the college campus than students who do not view such video-taped playback.

2. Students who receive instructor and peer criticism during and subsequent to viewing video-taped playback of their communicative act will have more favorable attitudes toward the course and the use of television on the college campus than students exposed to either video-taped playback without criticism or criticism without video-taped playback.

#### OPERATIONAL DEFINITIONS

The primary hypotheses for this study refer to the "goals of the course" in which the student was enrolled. This course was a public speaking-oriented course in persuasive communication (Speech 305—Persuasive Speaking). About 40% of the students in each condition had taken either a public speaking course in high school or the basic public speaking course at MSU. The latter

course was supposedly a prerequisite for the course in which the students were enrolled. This prerequisite was mentioned to the students, but was not enforced.

As stated in its syllabus, the goals of the course were to increase the student's insight into the communication process, and to direct his attention to the reactions of his audience and the content of his speech rather than to himself and his delivery. The direct improvement of delivery skills was not a goal of the course. In order to measure the attainment of the goals, the students were required to write four essays. At the beginning of the term the students were instructed to write an essay "in which you evaluate yourself in terms of your ability to function as the source of a message in an oral communication situation." They were then exposed to a filmed student speech and asked to write an essay "evaluating the communicative act you have just observed." This procedure was also followed at the end of the term. These essays were evaluated by thirty professional speech educators from institutions other than MSU on the basis of four fifteen-step scales.<sup>2</sup> The degree to which

the students met the goals of the course, therefore, was operationally defined as the difference between beginning and end of term ratings on these four scales for their essays of self-evaluation and speaker-evaluation.

A student's attitude toward the course was operationally defined as his response to a semantic differential type measure for the concept "Speech 305" including the following bipolar adjectives: good-bad, wise-foolish, beneficial-harmful, right-wrong, positive-negative, useful-useless, valuable-worthless. His attitude toward the use of television on the college campus was operationally defined as his response to a semantic differential type measure for the concept "Using TV in MSU Classes." This measure included the same seven scales used to assess attitudes toward the course.

#### PROCEDURE

The independent variable in this study was the use of video-tape playback of student speeches. The design of the study included two experimental conditions employing television and one not including television. The latter condition was designated the "Traditional" condition. In this condition the students were provided instruction relating to the theory and practice of persuasive oral communication. The content of this instruction was drawn primarily from one book.<sup>3</sup> As this book had not been published at the time of the study, the material was presented in lecture form. After approximately five weeks of instruction (in a ten-week term) the students were asked to present two persuasive speeches on topics of their choice. After presentation

<sup>2</sup> We would like to express our appreciation to the following individuals for serving as judges in this study: Kenneth Andersen, University of Michigan; William Arnold, Illinois State University; John Bowers, University of Iowa; Leon Camp, North Carolina State University; Nicholas Cripe, Butler University; Donald Darnell, University of Colorado; Huber Ellingsworth, University of Hawaii; Randall Fisher, Vanderbilt University; Kim Giffin, University of Kansas; Charles Goetzinger, Oregon State University; Alvin Goldberg, University of Denver; Charles Gruner, University of Georgia; Paul Holtzman, Pennsylvania State University; Carroll Hylton, San Jose State College; Harold Jordan, University of South Dakota; Robert Kibler, Florida State University; Mark Knapp, University of Wisconsin-Milwaukee; Wilbur Osborn, Kent State University; Wayne Pace, University of Montana; James Popovich, University of South Florida; Gale Richards, Arizona State University; Stanley Rives, Illinois State University; Akira Sanbonmatsu, State University of New York-Brockport; Kenneth Sereno, University of Southern California; Frank Shirley, Wake Forest; Mary Jean Thomas, Case Western Re-

serve University; Philip Tompkins, Kent State University; Forrest Tucker, University of Southern Mississippi; Raymond Tucker, Bowling Green University; Donald Williams, University of Florida.

<sup>3</sup> James C. McCroskey, *An Introduction to Rhetorical Communication* (Prentice-Hall, 1968).



the speeches were discussed and critiqued by the instructor and the class.

Students in the two television conditions received the same instruction as those in the Traditional condition. They also had the same speaking assignments. In the first television condition, designated the "Television-Only" condition, the students' speeches were video-taped and played back with no criticism by either the instructor or the class. In the second television condition, designed the "Television-with-Criticism" condition, the video-tapes were played back with simultaneous and post-playback discussion and criticism. For the simultaneous discussion and criticism the "stop-action" technique was employed.

This procedure was employed in two succeeding terms during the 1967-68 school year. All three classes were taught by a doctoral candidate in speech during the Winter Term. All three were taught by the first author during the Spring Term. The different instructors and accompanying minor differences in lecture content were initially designed into the experiment to allow possibly greater generalizability of results.

The advantage for this design was somewhat limited, however, by an alteration in procedure deemed desirable the Spring Term as a result of observations the Winter Term. This change in procedure involved the nature of the material video-taped. The reason for this change is discussed below.

All of the classes met in the same room, the Experimental Classroom Facility in the Instructional Media Center at Michigan State University. This classroom is adjoined by a control room with one-way glass behind which was television equipment and a cameraman. Each class was seated facing this control room. Behind the class was a ceiling mounted television camera operated remotely from the control room. Microphones were

mounted in the ceiling of the room so that the classroom atmosphere was intruded upon only by the remote camera and the knowledge that everything could be video-taped.

Both cameras were employed in all television conditions. One camera was focused on the speaker and moved with him. The other was focused on the audience and recorded their reactions. During the Winter Term the speaker and audience were recorded on split-screen for the entire time, each occupying about half of the screen. The classes could be observed inconspicuously from the control room. Such observation indicated that the students in the television conditions seemed to become much more speaker-oriented and delivery-oriented than students in the Traditional condition. It was suspected that showing the students video-tapes of themselves was having a negative effect in terms of the goals of the course. Since the data from the Winter Term could not be analyzed before the Spring Term data was collected, it was decided to change the procedure on the basis of this observation. Thus, during the Spring Term the speaker and audience were taped on split-screen for the first fifteen to twenty seconds, each occupying about half of the screen. The speaker was then reduced to one corner of the screen for the next 15 to 20 seconds. At that time the speaker was completely removed from the screen so that the playback constituted a full screen picture of the audience with the voice of the speaker.

#### MEASUREMENT AND ANALYSES OF THE DATA

As noted previously the primary dependent variables were the ratings of the essays by the judges. It was decided that judges should be people other than the experimenters. Therefore each student's beginning- and end-of-term essays

were edited by a secretary to remove references to the time written or the condition in which the student was taught, typed, and sent to three off-campus judges. There were twenty students in each condition for each term. The judges did not know in which condition the student was taught, which term he was in the study, or whether the essay was written at the beginning or the end of the term. The judges had been given only a very general description of the project and were in no position to systematically bias the results.

The ratings for each student from the three judges who evaluated his essay were summed across the three judges for each rating scale. Thus, there were four pretest and four posttest scores for each subject for his self-evaluation essays and for his speaker-evaluation essays. The four scales were fifteen-step scales bounded by presumably bi-polar adjectives. These were shallow-deep, perceptive-unperceptive, speaker centered-audience centered, and content centered-delivery centered. The reliability of the judges' rating in groups of three was investigated. The median reliability for the four scales across the various combinations of terms, rating object, and experimental condition were as follows: shallow-deep, .678; perceptive-unperceptive, .605; speaker oriented-audience oriented, .625; content centered-delivery centered, .742. In all cases the reliabilities were deemed satisfactory for the purposes of the study.

Preliminary analysis of variance of the students' pretest ratings and their scores on the measures of their attitude towards the course and the use of television indicated no significant differences among the groups on any of the variables. Although their assignment to class conditions was chaotic, they merely registered for the class at a given hour with no knowledge of what the experimental

condition was, these results suggest that the classes were not significantly different in any way crucial to the study. Therefore, the primary and secondary hypotheses were tested by subjecting the students' pretest-posttest change scores to analysis of variance and subsequent *t*-tests when justified.

Even though it was believed that final course marks were too highly influenced by experimenter bias to be particularly meaningful, since this data was available the final course marks were analyzed by means of non-parametric analysis of variance.

## RESULTS

Analysis of the Winter Term data indicated significant differences among change scores on two of the self-evaluation essay ratings among the three experimental conditions. (See Table 1) The scales on which significant differences appeared were "speaker centered-audience centered" and "content centered-delivery centered." Shifts in the direction of "audience centered and "content centered" were considered to be in the direction of the goals of the course. *T*-tests, however, indicated that the two television conditions produced significant shifts toward the "speaker centered" and "delivery centered" poles. The Traditional condition produced a significant shift in the opposite (and desired)) direction—toward the "content centered" pole—but no significant difference was observed on the "speaker centered-audience centered" scale for the Traditional condition. The two television conditions were not significantly different from each other on either scale.

These differences were in keeping with the impressions of the researchers which led to the change in procedure during the Spring Term. As was suspected, the use of television in the Winter Term

TABLE 1  
MEAN PRE-POST CHANGE SCORES FOR WINTER TERM AND SPRING TERM STUDIES

Variable	Term	Experimental Condition			Approx. Significance
		TV Only	TV with Criticism	Traditional	
Self-Evaluation Essay Ratings*					
Detep-Shallow	W	.20	1.60	.75	.53
	S	-6.38	5.87	-3.23	<.05
Perceptive-Unperceptive	W	-.75	2.15	2.55	.82
	S	-2.95	3.55	-.85	.19
Audience Centered-Speaker Centered	W	-3.35	-2.40	1.40	<.05
	S	-.85	9.50	2.00	<.05
Content Centered-Delivery Centered	W	-5.85	-6.70	3.35	<.05
	S	1.80	6.70	3.85	.07
Speaker-Evaluation Essay Ratings*					
Deep-Shallow	W	-3.40	-1.40	.80	.89
	S	-1.55	6.05	1.35	<.05
Perceptive-Unperceptive	W	-2.25	-.50	-.65	.82
	S	-2.25	1.85	2.40	.20
Audience Centered-Speaker Centered	W	-2.30	-2.25	.15	.63
	S	-1.65	5.90	1.05	<.05
Content Centered-Delivery Centered	W	-3.35	.15	5.60	.13
	S	-1.15	8.10	2.45	<.05
Attitude Toward TV on Campus	W	4.50	4.95	.53	.15
	S	4.60	11.88	-.90	<.05
Attitude Toward Course	W	-1.64	1.19	1.79	.22
	S	.20	.95	2.65	.10

\*Positive change scores indicate a shift in keeping with course goals.

produced significant negative effects in terms of achievement of course goals. There were, however, no significant effects attributable to instructional conditions observed on the students' attitudes towards the course or towards the use of television on the campus. Similarly, no significant differences among conditions was observed on final marks, or on the speaker-evaluation essay ratings.

Analysis of the data from the Spring Term produced markedly different results (see Table 1). Differences among conditions for change scores on the self-evaluation essays were significant for two scales (shallow-deep and speaker centered-audience centered) and marginally significant for an additional scale (content centered-delivery centered). Significant differences were observed for the same three scales among conditions for change scores on the speaker-evaluation essays. Similarly, significant differences among conditions were observed for the

students' attitudes towards the use of TV on the campus and for their final marks.

Subsequent *t*-test analyses indicated that on the self-evaluation essay scales the Television-with-Criticism condition was significantly superior to the other two conditions in producing the desired shifts toward "deep," "audience-centered," and "content-centered." The Television-Only condition was inferior to the Traditional condition in each case, but significantly so for only the "audience centered-speaker centered" scale. The results on the speaker-evaluation essays exactly paralleled those on the self-evaluation essays. Students in the Television-with-Criticism condition had significantly more favorable change in attitude toward the use of television on the campus than students in the Television-Only condition, who, in turn, had significantly more favorable change in attitude than the students in the Traditional condition.

Analysis of the final examination marks indicated that the students in the Television-Only condition received significantly lower marks than students in the other two conditions, which were not significantly different from each other.

#### DISCUSSION

The results of this investigation clearly indicate that use of television as a teaching aid can make a difference. But the most important finding is that it can make either a positive or a negative contribution depending on how it is employed. From a reading of the literature relating to the use of television in classes in public speaking it is clear that the way it is most frequently employed is consistent with the way we found it to have a negative impact. Our results indicate that showing the student speaker his speech on video-tape works directly counter to the goals of our course and those of many other speech educators. Yet, that is precisely the way television seems to be most often employed. Even the most competent previous research has accepted this procedure.<sup>4</sup>

On the other side of the coin, television

can be employed in such a manner as to make a positive contribution. But our results suggest that it can not be used as a replacement for instructor and student discussion and criticism. The results of this investigation warrant the following conclusion: Video-tape playback of student communicative acts which focuses on the audience and is accompanied by instructor and student discussion and criticism can make a positive contribution toward increasing students' insight into the communication process and focusing their attention on their audience and the content of their messages.

Because of the apparent importance of student and instructor discussion and criticism to the impact of video-tape playback as an instructional aid, the timing of such discussion and criticism may also be a significant variable. Learning theory suggests that immediate reinforcement generally produces more learning than delayed reinforcement. This would suggest that video-tape playback, discussion, and criticism should immediately follow a student's classroom communication. However, the existence of anxiety concerning public speaking on the part of the student might interfere with such an effect. A continuation of the research reported above investigating the timing of playback and types of discussion and criticism is in progress.

<sup>4</sup> Cf. Kenneth D. Frandsen, Carl E. Larson, and Mark L. Knapp, "Simulation and Self-Confrontation in Interpersonal Communication," *Educational Broadcasting Review*, 2 (April 1968), 18-23.