TELEVISION TEACHING OF COLLEGE INTRODUCTORY SOCIOLOGY

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INTRODUCTION

Closed circuit television instruction is becoming more prominent in higher education due to economic advantages, teacher shortages, and overcrowded colleges. Future prospects are for even more extensive use of TV media. Personal involvemnt in closed circuit television instruction at college has raised my interest in the effects of this type of learning situation. Have students been negatively or positively affected by the impersonal nature of television instruction?

Central State College began offering courses by closed circuit television in the Fall Semester of 1965, beginning with introductory courses in history and geography, followed in the Spring by introductory sociology. I have taught the sociology course by television each semester for the past few years.

Frequent contact with the students over these years has revealed emergent attitudes which they express. Most students, including those who have and those who have not been taught by television express dislike for the method, in contrast to a small minority who reported positive experience with TV instruction.

A close comparison of grades given in examinations of students taught by the conventional classroom method and the television method indicated no clear differences.

Hypothesis 1: There is no significant difference in achievement levels between students examined in introductory sociology taught in the conventional classroom method and those taught by the closed-circuit television instruction method.

Hypothesis 2: There is no significant difference in attitude means between pretest and post-test measures for a group newly introduced to the television learning situation.

METHODOLOGY

For the first hypothesis, the control group was an introductory sociology class taught by the classroom discussion method, meeting at 10 AM, Monday, Wednesday, and Friday. The experimental group was a large class taught by closed circuit television at 11 AM on the same days.

Every precaution was taken to secure uniformity in the content and presentation of course materials. If class discussion slowed the progress of the presentation in the control group, it was similarly retarded for the experimental group, so that each group received the same amount of material day by day. When the two "midterm" examinations were given, the control group was held in the classroom five minutes into the 10-minute class change period, to prevent information on the test passing to the experimental group, which received the same test at 11 AM. There were 200 items in the objective test, to reduce the element of bias. The test items were composed daily after each class to ensure close correspondence of test items to material presented to each class.

Several semesters later, the Osgood Semantic Differential Test was used to compare attitudes of student groups before and after being taught by television. The semantic differential was administered to students as a pretest on the first day of class in a personal manner in a conventional classroom before the start of instruction by television. This avoided bias of test results attributable to the television teaching method. The same test was given on the last day of class, preceding the final examination period. For the semantic differential, there was no control group, since I had no access to a class taught by the conventional classroom discussion method. This segment of the research is therefore exploratory in nature. Of course, in both cases, we are dealing with the population of students in the tested classes, rather than with a sample of college students. Therefore we can say that any change noted in attitude means indicates need for further research in the matter of attitude changes in students taught by closed circuit TV methods.

The grade achievement level using the standard deviation associated with the normal distribution was applied for the t-test of difference between means for Hypothesis 1. The instrument to test Hyhpothesis 2 was a special form of the semantic differential test for measuring connotative meanings of concepts in terms of what Osgood called *semantic*

space, measured on a continuum of 7 points between opposing pairs of adjectives (Kerlinger 1965 564). In constructing a semantic differential instrument, the concepts must be chosen carefully to be relevant to the research problem and to cover the semantic space fully. They should have the potential for differing reactions corresponding to differing attitudes. The 15 concepts were chosen with help from Dr Roy Maxwell, Director of Research at Central State College and Dr Joe Sims, Professor of Geography, who had done a similar study of attitudes of students in introductory geography classes taught conventionally and by television methods. These concepts are indicated in the summary of findings in Table 2. Seven concepts were chosen to determine the students' general attitudes: Professors, Future, Meaning, Education, Questions, Teaching, and Self. Four represented attitudes toward sociology: Sociology professors, Usefullness, Personal interest, and Sociology. Four concepts were chosen to determine attitudes toward methods of instruction: Individual attention, Mass classes, Television classes, and Small classes.

Adjective pairs were chosen to allow the student to express varied feelings to each of the 15 concepts. Figure 1 illustrates the application of the semantic differential instrument to the concept, *TV Classes*. The higher numbers indicate a more positive attitude. The midpoint, number 4, is neutral. Each concept appeared on a separate sheet in a test booklet, administered in the same way in the pretest and the post-test condition. There were 141 students in the test group, reduced to 129 due to absences on the post-test or mutilation of the test booklet.

FINDINGS

For the test of Hypothesis 1 on differences in the examination score means for the two groups, the results are shown in Table 1. There were differences in performance level on the ACT Test, differences in the sex ratio, and differences in the grade point ratio, in which the television instruction group was lower. The t-test of the difference in mean grade for the sociology examinations of the two groups was not significant ($t = .74$), indicating no advantage or disadvantage in examination results for either method.

FIGURE 1: SEMANTIC DIFFERENTIAL

Evaluation of Television Classes

1. Fair	:7 :6 :5 :4 :3 :2 :1 :	Unfair
2. Valuable	:7 :6 :5 :4 :3 :2 :1 :	Worthless
3. Unpleasant	:1 :2 :3 :4 :5 :6 :7 :	Pleasant
4. Active	:7 :6 :5 :4 :3 :2 :1 :	Passive
5. Fast	:7 :6 :5 :4 :3 :2 :1 :	Slow
6. Tense	:1 :2 :3 :4 :5 :6 :7 :	Relaxed
7. Weak	:1 :2 :3 :4 :5 :6 :7 :	Strong
8. Hard	:7 :6 :5 :4 :3 :2 :1 :	Soft
9. Deep	:7 :6 :5 :4 :3 :2 :1 :	Shallow

TABLE 1: EXPERIMENTAL AND CONTROL GROUP CHARACTERISTICS

Group:	TV	Non-TV
N	100	80
ACT Scores, means		
Social studies	17.7	18.9
Composite	17.4	19.0
Mean Grade Point	2.1	2.9
Age mean	23.1	23.1
Percent males	63.0	37.5
Percent females	37.0	62.5
College Level Percents:		
Freshmen	31.0	35.0
Sophomores	36.0	40.0
Juniors	21.0	12.5
Seniors	12.0	12.5

The semantic differential was administered to 141 students in the pretest, but losses due to absence and test booklet spoilage reduced the post-test number to 129. The group was 44 percent male, 56 percent female; mean age was 23 years; four planned to major in sociology, and three planned to minor in the subject; there were 65 percent freshmen, 22 percent sophomores, 9 percent juniors, and 4 percent seniors. They came from working class and lower middle class socioeconomic background typical of the college population in the area.

The data on the size and direction of attitude changes is shown in Table 2. Generally, attitudes were unaffected by the television training experience. These were important to the goals fo the study. The attitude toward

TABLE 2: ATTITUDE SHIFTS ASSOCIATED WITH TELEVISION TEACHING
(Significant t-values, .05 level in bold type.)

Concept	Post-test Mean	Pre-test Mean	Degrees of Freedom	Direction of change	t-value
Sociology	48.6	46.6	248	+	**2.63**
Small Classes	51.7	51.7	248		0.00
Self	45.4	46.0	248	−	0.61
Teaching	48.6	48.0	250	+	0.59
Television Classes	42.7	42.1	248	+	0.54
Questions	44.7	43.8	250	+	1.15
Mass Classes	34.8	31.7	248	+	**2.47**
Education	51.1	52.0	248	−	0.27
Personal Interest in Sociology	46.2	46.0	250	+	0.20
Individual Attention	44.2	46.3	248	−	1.74
Meaning	44.4	44.8	248	−	0.40
Future	50.4	51.1	248	−	0.70
Professors	46.4	47.1	248	−	0.65
Usefulness of Sociology	47.9	47.9	244		0.00
Sociology Professors	49.0	50.2	247	−	1.20

improved significantly, and the attitude toward mass classes also became more positive to a degree which reaches statistical significance. The finding on mass classes is in line with earlier findings that students do rather readily accept mass classes in conjunction with television teaching. The balance of the 13 concept variables described in Table 2 were not significantly affected in terms of attitude changes associated with television teaching. Thus, the second null hypothesis is tenable on the basis that two significant variables are not adequate to support the assumption of measurable effect on attitudes toward television teaching.

CONCLUSION

The value of this research project lies in its exploratory nature. It tended to support similar research which held that achievement levels were not significantly different when we compare television teaching with conventional classroom discussion methods in higher education. Further research is indicated to evaluate the students professed attitudes of rejection and disgust with television teaching.

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