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ABSTRACT

A study was conducted with social studies teacher trainees in a southern university to determine if videotaped microteaching produced changes in their self-concepts. The problem under investigation was whether or not student teachers would develop a positive self-image as a result of their videotaped microteaching experiences. Sixty subjects were randomly assigned to (1) a fully experimental group, (2) a control group, or (3) an experimental group receiving no pretest. The fully experimental group and the control group completed the pretest prior to the videotaped microteaching in which the two experimental groups participated. Following the experimental treatment all three groups took the first posttest. A second posttest was administered upon completion of the student teaching experience. The instrument employed for all tests was the Tennessee Self-Concept Scale, a multivariable instrument that yields phenomenological and empirically derived scores of attitudes toward self. Results showed significant improvement on self-criticism scores. This indicated that the videotaped microteaching did change student teachers' self-concept by increasing willingness for self-criticism and for acceptance of criticism by others. Data tables and suggestions for further research are included. (Author/AV)

THE EFFECTS OF VIDEOTAPED MICROTEACHING ON THE SELF CONCEPTS OF SOCIAL STUDIES STUDENT TEACHERS

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PROBLEM AND PURPOSES

It has long been determined that feedback facilitates learning. Videotaped microteaching provides useful feedback in such a realistic and unquestionable manner that the would-be teacher is unable to dispute the evidence before him and thus can determine the direction he must take in order to overcome his shortcomings in the classroom.

Because the importance of feedback to the student teacher has been widely recognized, videotaped microteaching has been implemented on an ever-increasing scale in American colleges and universities within the past decade. The question is, wherein does the value of this innovation really lie? To be sure, videotaped microteaching has had such meritorious effects as economy of time, a "no threat" or "low risk" teaching experience for the student, and perhaps even immediate, measureable improvement in teaching skills; but these effects must be considered peripheral unless the student teacher profits from his experiences on a long-term basis. To be of long-term consequence, videotaped microteaching must assist the prospective teacher in developing ongoing teacher-student relationships which are both personally

rewarding and academically effective long after he has become a certified member of his profession. This study was developed with the aim of providing empirical data concerning the relationship between videotaped microteaching and self concept.

Because much of the research in videotaped microteaching omits the variable of the student teacher's self concept, it can be concluded that results from many of the studies in this area are related, for the most part, to those effects which are immediate. An abbreviated summary of the rationale for videotaped microteaching which has grown out of the available research is presented by Cooper and Allen (1970), who enumerate eleven major points comprising the rationale for videotaped microteaching. These major points include no direct reference to the student teacher's self concept. Along with the specific competencies categorized by Cooper and Allen, it should be considered essential that a teacher (or any individual, for that matter) develop interpersonal competence, a skill directly related to one's concept of himself and his level of self-actualization (Maslow, 1954; 1959).

According to Fitts (1970), Rogers (1961), and Seeman (1959), interpersonal behavior is learned behavior which can be modified in a positive direction when the indivi-

dual is allowed to confront himself in the act of interpersonal functioning. Thus, if self perception is truly an important key to effective teaching and if videotaped microteaching can successfully enable future teachers to see themselves as others see them, then videotaping and playback of mini-lessons may produce long-term effects by making a significant contribution to the self-actualization process so necessary to the effective teacher.

Before being fully accetped into teacher training programs, videotaped microteaching should be carefully evaluated for the extent and direction of its effect upon the self perceptions of student teachers. In view of the number of people involved, the tie-up of expensive equipment, and the employment of studio facilities, justification for this technique must include indisputable evidence that it is the best available alternative to improving self concept.

The specific purpose of this study was that of measuring the changes in self concepts of student teachers following a videotaped microteaching and evaluation cycle. The problem under investigation was that of determining whether or not sutdent teachers would develop a positive self image as a result of their videotaped microteaching experiences. The null hypothesis was that there would be no significant differences in the self perceptions

of student teachers before and after videotaped microteaching when measured by the Tennessee Self Concept Scale. It was determined that either the rejection of the null hypothesis, or failure to reject it, would be important to the total concept of the utilization of videotaped microteaching in teacher preparation programs.

METHODOLOGY

This study was undertaken in the special methods class for social studies student teachers in a southern university. The subjects for the study were sixty senior social studies student teachers randomly assigned to three groups prior to the first class meeting. For the first week of the course, all students involved met together for general orientation. Thereafter, each of the three groups met separately, while each of the three instructors rotated from group to group on a weekly basis.

Beginning with the second week, each student was given the opportunity, within his group, to teach a twenty-minute lesson without the use of video equipment. These lessons were discussed, analyzed, and evaluated by the student teacher himself, by the remaining members of the group, and by the instructor. Following this teach-experience, Groups One and Two were given the pretest (the Tennessee Self Concept Scale, Fitts, 1965). Group

Three was not given the pretest in order to control for influence of the pretest. Groups One and Three were given the videotaped microteaching experience, and Group Two constituted the control group with no videotaped microteaching.

Six junior high school students from the university laboratory school were used as classroom participants while each student teacher in Group One and Three taught ten-minute videotaped lessons. Student teachers in the two experimental groups were given the first posttest. The second posttest was administered to all three groups upon completion of student teaching.

The design used, as illustrated below, was a three-group form consisting of experimental and control groups, first suggested by Solomon (1949) as a procedure for avoiding possible interactive effects due to the pretest.

EXPERIMENTAL DESIGN

Sample	Dependent Variable	Independent Variable	Dependent Variable	Independent Variable	Dependent Variable
Group 1 Random	Pretest	Micro-teaching	Posttest I	Student Teaching	Posttest II
Group 2 Random	Pretest		Posttest I	Student Teaching	Posttest II
Group 3		Micro-teaching	Posttest I	Student Teaching	Posttest II

The Tennessee Self Concept Scale (TSCS) was selected for use because of simplicity and directness of questioning, ease of administration, correspondence of items to factors judged to be important for student teachers, and the inclusion of the Self-Criticism Scale. TSCS is a multivariable instrument that yields both phenomenological and empirically-derived scores of attitudes toward self. It is composed of one hundred self-descriptive statements and is applicable to the whole range of psychological adjustment (Fitts, 1965). Reliability coefficients have been established at .91 (Nunnelly, 1968); at .92 (Fitts, 1965); and at .88 (Congdon, 1958). The TSCS has been validated in four areas; (1) content, (2) descrimination between groups, (3) correlation with other personality measures, and (4) personality changes under particular conditions (Fitts, 1965).

The TSCS was administered to all student teachers involved in this study, to both experimantal groups and to the control group, upon completion of the videotaped microteaching lessons presented by Groups One and Three. Posttest II was composed of a re-administration of the TSCS--on an individual basis--upon completion of the student teaching experience. The purpose of the second posttest was that of determining the existence of trends which had become evident after the first posttest.

Two subjects in the control group failed to take the

second posttest within the proper time limits; therefore, these subjects were dropped in the second posttest results, making the total number of subjects for the control group on the last posttest eighteen instead of twenty.

DATA ANALYSIS

Both the pretest and the posttests were scored and recorded for each student teacher participating in the experiment. The scores were originally recorded for seventeen variables on the TSCS and arranged, by groups, into tables. The summary tables below present only the cell means, standard deviations, and F Ratios for each dependent variable.

Table I
Pretest Data

Variable	Group 1 Cell Mean	Group 1 Standard Deviation	Group 2 Cell Mean	Group 2 Standard Deviation	F Ratio
Identity	125.750	8.416	126.150	8.531	.022
Self Satisfaction	109.350	13.975	105.250	10.843	1.075
Behavior	109.350	10.639	113.000	7.305	1.600
Physical	69.350	7.714	70.050	7.127	.089
Moral	69.150	6.218	68.950	7.529	.008
Personal	65.700	7.610	65.700	4.497	.000
Family	71.500	7.598	71.100	6.423	.032
Social	68.300	6.686	68.900	7.063	.002
Self Criticism	37.300	4.813	35.900	5.534	.729
Total P Score	344.500	28.976	344.400	23.046	.000
Variability	42.500	11.038	42.750	9.733	.006
T/F Ratio	1.000	0.173	0.934	0.167	1.507
Distribution	111.700	27.743	106.900	20.071	.393
Net Conflict	-4.750	7.946	-4.400	13.589	.010
Total Conflict	30.750	5.505	29.500	5.634	.504
Defensive P.	54.050	9.490	52.100	7.779	.505
Personality I.	10.950	3.953	11.200	3.861	.041

Table 2

Posttest I Data

Variable	Cell Mean	Standard Deviation	Cell Mean	Standard Deviation	Cell Mean	Standard Deviation	F Ratio
Identity	127.051	9.929	128.250	11.489	127.200	10.601	.075
Self Satisfaction	115.200	16.895	111.500	13.253	106.750	15.727	1.520
Behavior	111.000	11.045	115.800	10.319	113.900	15.964	.725
Physical	70.300	7.704	72.950	7.367	69.450	8.811	1.038
Moral	70.550	8.587	73.200	7.871	69.500	9.242	.987
Personal	67.800	7.245	66.900	7.291	66.300	8.348	.195
Family	72.000	8.423	73.300	6.123	71.350	12.499	.223
Social	72.100	8.013	69.450	9.006	71.550	6.763	.614
Self Criticism	39.450	5.186	35.300	6.010	38.400	5.679	2.932**
Total P. Score	352.750	33.036	355.550	31.312	347.350	35.771	.311
Variability	41.250	12.863	42.100	11.111	50.100	13.943	2.932
T/F Ratio	1.145	0.232	0.973	0.168	1.065	0.184	3.868*
Distribution	142.750	106.982	111.700	32.936	118.350	31.964	1.183
Net Conflict	4.500	18.133	-4.250	8.837	-1.800	11.705	2.248
Total Conflict	33.150	13.374	25.150	7.073	30.100	9.072	3.143
Defensive P.	55.600	10.811	57.550	11.505	55.450	11.749	.213
Personality I.	10.700	4.219	11.050	3.516	9.250	3.432	1.303

*P = .05
**P = .06

Table 3
Posttest II Data

Variable	Group I Cell Mean	Group I Standard Deviation	Group 2 Cell Mean	Group 2 Standard Deviation	Group 3 Cell Mean	Group 3 Standard Deviation	F Ratio
Identity	127.850	12.124	129.333	11.178	128.700	11.644	.077
Self Satisfaction	113.750	18.416	113.944	14.659	113.000	12.674	.020
Behavior	112.600	12.829	117.333	12.829	115.200	9.535	.783
Physical	71.100	7.947	73.167	9.193	71.100	8.479	.364
Moral	71.700	9.200	73.333	8.416	76.600	7.977	.241
Personal	66.200	8.966	68.889	7.194	67.950	8.495	.520
Family	73.700	8.060	73.722	8.058	75.250	8.638	.227
Social	70.700	9.766	71.500	8.269	72.000	7.588	.116
Self Criticism	41.350	4.945	36.055	6.073	40.850	5.659	5.150*
Total P. Score	354.400	40.285	360.611	34.204	358.100	29.546	.152
Variability	40.550	11.874	41.778	11.306	42.750	12.882	.127
T/F Ratio	1.116	0.291	1.006	0.255	1.056	0.335	.660
Distribution	113.750	33.747	121.833	37.485	112.250	24.039	.482
Net Conflict	1.950	11.843	-1.611	15.393	-2.000	14.743	.476
Total Conflict	28.950	7.944	29.722	9.815	27.150	6.900	.493
Defensive P.	51.600	11.227	54.889	11.676	54.250	9.497	.505
Personality I.	11.250	3.754	11.444	4.162	11.150	3.731	.028

*P = .01

Cell means and and standard deviations were computed for the Pretest administered to Groups I and II, followed by an analysis of variances on each of the seventeen items of the TSCS. There was found to be no significant differences between the control group and the fully experimental group on the Pretest; thus, both groups were deemed to be equal at the beginning of the study.

An analysis of variance of Posttest I revealed that there was only one of the seventeen items significant at the .05 level of confidence. This was the True / False Ratio (T / F), an indicator of the subject's tendency to agree with, or disagree with, a test item, regardless of its content. Though the fully experimental group tended to answer in a more positive direction than the other two, this statistic fails to prove any further significance upon analysis of Posttest II. Three other test scores on Posttest I narrowly failed significance at the .05 level (self criticism, total conflict, and variability), but only one--the Self Criticism score--appeared again as significant at the .01 level upon analysis of Posttest II.

The trend toward significance in the Self Criticism score from the First Posttest, reinforced by the significant results of this item on Posttest II, can be considered the major finding of this study: the two experimental

groups showed initial improvement in their Self Criticism scores, a phenomenon directly attributable to videotaped microteaching.

The significance of the Self Criticism scores is further confirmed by the results of the Defensive Positive scores (DP, see summary table). For the fully experimental group, the DP score on the Pretest was 54.05, 55.60 on Posttest I and 51.60 on Posttest II. For the experimental group with no Pretest, Group Three, the DP score on Posttest I was 55.45 and 54.25 on Posttest II. This agrees with indications from Wrightman (1966) who maintained that in order for self concept to improve, the Self Criticism score must not drop significantly and the DP score must not rise significantly. This criterion for evaluation is also confirmed by the DP scores for Group Two, which had a mean score on the Pretest of 52.1, a significant rise on Posttest I of 57.55, and a mean score on Posttest II of 54.89.

DISCUSSION

According to the author of the Tennessee Self Concept Scale, William Fitts (1965), self concepts, as measured by the TSCS, are considered to be improved in a positive direction if (1) the Total Positive score increases, (2) responses show less conflict, (3) there is less variability in scores, and (4) there is less acquiscent response

set as demonstrated in the T / F ratio.

All three groups in this study showed a rise in Total Positive scores, indicating improvement on this basic criterion. On the second criterion, less conflict the control group showed a decline in Total Conflict scores on Posttest I, but a large gain on Posttest II. The two experimental groups showed no decline until the second posttest, representing an improvement in the self concepts at the conclusion of the study. All groups demonstrated a decline in variability scores, indicating improvement once more for all student teachers. On the fourth criterion, less acquiescent responses set, the T / F ratio improved, representing change in a positive direction. While these changes did take place during the course of this experiment, they were too slight to be significant at the .05 level; and there could be no clear distinction made between Group Two and experimental Groups One and Three, save on the Self Criticism scores.

In an attempt to discern the reasons for the possible outcomes of this study, each of the forty students who participated in the microteaching experiences was asked to answer two questions: (1) Do you think the TV teaching assignment was helpful? (2) What suggestions do you have for improving the TV teaching experience? Of the forty answering, twenty-three gave positive

endorsements, five gave qualified endorsements, two were doubtful, and ten complained that videotaped microteaching was not a good experience.

In spite of the lack of significant results on the majority of the items included on the TSCS, the fact remains that this study did produce significant results with respect to increased self criticism which Fitts (1965) regards as healthy up to the 99th percentile. This positive improvement on the part of the student teachers in the experimental groups indicates a willingness to criticize one's self and the willingness to accept criticism from others, an essential attitude in the developemnt and continuing improvement of effective teaching.

IMPLICATIONS FOR FURTHER RESEARCH

The high number of negative expressions on the two-part questionaire given to the experimental groups in this study would indicate that additional research needs to be done in order to ascertain what type of person reacts positively or negatively to videotaped microteaching. A profitable area might also be that of attempting to correlate changes in self concept with certain student characteristics.

Additional research needs to be undertaken to determine the optimal length of time which should be employed

in videotaped microteaching. It might also be profitable to determine the relative effectiveness of long taping sessions versus short ones.

A particularly intriguing area of investigation would be that of followup studies which attempt to discern the continuance of trends toward the improvement of self concept, perhaps after the subjects have had one or two years of teaching experience.

Conclusions which might present themselves from controlled, experimental research in the areas suggested would no doubt make important contributions to teacher education programs. As for this study of videotaped microteaching, perhaps the results presented will aid in the development of programs which enhance the self-concept of prospective teachers. In turn, it is conceivable that once these student teachers have become professional educators, they will view their teaching in a more realistic manner, have a greater sense of confidence in themselves, and relate in a more positive way to their students.

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