

The Effects of Videotaping and Verbal Feedback During
Microteaching on the Attitudes of Preservice Agriculture
Teachers Toward Themselves and the Profession

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Since the inception of microteaching in the early 1960's, there have been many variations in its implementation. In a general sense, microteaching, as described by Fortune, Cooper, and Allen (1967), is used as a scaled down teaching encounter to serve as preliminary experience and practice in teaching, as a research vehicle to explore training effects under controlled conditions, and as an inservice training instrument for experienced teachers. Agricultural education teacher training programs, like teacher education programs in other disciplines, have made extensive use of microteaching as a vital component in the preservice teaching experience.

Peters (1980) addressed the effectiveness of microteaching in developing a positive self-concept. He found that microteaching not only provides students with experience in teaching and skill development, but it also positively affects their views of themselves as teachers and their attitudes toward the profession. As microteaching positively affects the attitudes of preservice teachers about themselves and the teaching profession, the question then arises as to whether videotaping the experience and the presence of and quality of verbal feedback after the experience affects teacher attitudes.

Objectives

The specific objectives of the study were: to determine the affect of videotaping the microteaching performances of preservice teachers on their perceptions of themselves as teachers, of the profession, and their attitudes toward the microteaching experience; and, to determine the affect of verbal feedback immediately following the microteaching performance of preservice teachers on their perceptions of themselves as teachers, of the profession, and their attitudes toward the microteaching experience. Does videotaping affect self-concept and does the presence of verbal feedback affect self-concept?

The study included the following research hypotheses:

1. Students who participate in videotaped microteaching will score higher than students who participate in non-videotaped microteaching on each of the following posttest measures:

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- a) Students' perceptions of themselves as teachers.
 - b) Students' perceptions of teaching in general.
 - c) Students' attitudes toward their microteaching experience.
2. Students who receive verbal feedback on their microteaching immediately following the experience will score higher than students who receive no verbal feedback on their microteaching experience on the following posttest measures:
- a) Students' perceptions of themselves as teachers.
 - b) Students' perceptions of teaching in general.
 - c) Students' attitudes toward their microteaching experience.

Methodology

Subjects

The population studied consisted of all students who enrolled and participated in Agricultural Education 530, Methods in Teaching, during the spring quarter of 1983 at The Ohio State University.

Treatments

Students self-selected into one of three laboratory sections and treatments were randomly assigned to these groups. Individuals in group one received both videotaping of their teaching and verbal feedback on their performances immediately following their microteaching. Individuals in group two were videotaped, but received no verbal feedback of their performances. Individuals in group three were videotaped, but did receive verbal feedback immediately following their microteaching. Group one served as the control group.

Videotaping was done by a peer and was to allow the subjects to view their teaching following the performance. Verbal feedback consisted of a five minute oral critique of the teaching by the same laboratory instructor immediately following the performance using a standard checklist of specific tasks. Verbal feedback was given in the presence of the preservice teachers' peers.

All subjects attended the same class lecture and thus had equal instruction in methods of teaching. All groups were administered by the same laboratory instructor. All subjects were expected to teach according to the same lesson presentation formats, and were allowed an equal number of and length of times for presentation. Each subject taught three lessons for a maximum of 10, 15, and 20 minutes

duration during the 10 week period. A total of 18 preservice agriculture teachers participated in the study with five, eight, and five in groups one, two, and three, respectively.

Outcome Measures

Subjects were pretested during the first laboratory session and posttested at the conclusion of the final laboratory session using the instruments, "Myself as a Teacher" and "Teaching in General." The "Myself as a Teacher" instrument was to measure the subjects' views of themselves as teachers at the beginning and the end of the study. The "Teaching in General" instrument was used to measure subjects' attitudes toward teaching at the beginning and end of the study. Subjects were posttested at the conclusion of the last laboratory session using the "Students' Reaction to Laboratory Teaching Experience" instrument.

Design

The nature of the problem of interest and the limited availability of subjects for the study have directed the design of the research. The subjects self-selected into laboratory sections and thus constituted intact groups in the study. Manipulation of the independent variables was possible by the random assignment of treatments to an intact group. The design employed was quasi-experimental in nature, utilizing the nonequivalent control group design (Campbell and Stanley, 1963).

Data Analysis

The data were analyzed utilizing the Statistical Package for the Social Sciences of the Instruction and Research Computer Center at The Ohio State University. For the instruments "Myself as a Teacher" and "Teaching in General," Analysis of Covariance was employed using the pretests as covariates to determine if significant differences among groups existed on each measure ($\alpha = .05$). For the instrument, "Students' Reaction to Laboratory Teaching Experience," analysis of variance was used to determine if significant differences existed among groups ($\alpha = .05$).

Findings

Summary data for each group on each instrument are reported in Table 1.

Table 1

Summary Data

	n	<u>Myself as a teacher</u>				<u>Teaching in general</u>				<u>Type of micro teaching experience</u>	
		<u>Pretest</u>		<u>Posttest</u>		<u>Pretest</u>		<u>Posttest</u>		<u>Posttest</u>	
		\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Group 1	5	5.280	0.317	5.256	0.328	5.574	0.770	5.488	0.859	3.578	0.388
Group 2	8	5.465	0.437	5.571	0.544	5.900	0.590	5.935	0.663	3.236	0.477
Group 3	5	5.408	0.365	5.916	0.396	5.816	0.474	6.044	0.373	3.690	0.249

F values produced by ANCOVA of the subjects' perceptions of themselves as teachers from groups one and three when the manipulated independent variable is the presence of videotaping are reported in Table 2. These data indicate that a statistically significant difference does not exist among the groups.

Values of F produced by ANCOVA from groups one and three of the subjects' perceptions of teaching in general when the manipulated independent variable is presence of videotaping are reported in Table 3. These data show that no significant differences exists between the groups.

F values produced by ANCOVA from groups one and three of subjects' attitudes toward their microteaching experienced with the presence of videotaping as the independent variable are reported in Table 4. These data show that no significant difference exists between those who participated in videotaped microteaching and those who participated in non-videotaped microteaching.

Values of F produced by ANCOVA from groups one and two of the subjects' perceptions of themselves as teachers when the independent variable is presence of verbal feedback are shown in Table 5. These data show that there is no significant difference between those who received verbal feedback and those who did not receive verbal feedback.

ANCOVA F values of the subjects' perceptions of teaching in general when the independent variable is presence of verbal feedback are shown in Table 6. These data show that no significant differences exists between those who received verbal feedback, group one, and those who did not receive verbal feedback, group two.

Table 2

Subjects' Perceptions of Themselves as Teachers by Presence of Videotaping

Source of variance	ss	df	$\bar{\chi}^2$	F
Covariate-pretest	0.371	1	0.371	2.247
Main effect videotape	0.898	1	0.898	5.504
Explained	1.269	2	0.635	3.889
Residual	1.142	7	0.163	
Total	2.412	9	0.268	

Table 3

Subjects' Perceptions of Teaching in General by Presence of Videotaping

Source of variance	ss	df	$\bar{\chi}^2$	F
Covariate-pretest	0.776	1	0.776	1.406
Main effect videotape	0.578	1	0.578	1.047
Explained	1.354	2	0.677	1.226
Residual	3.863	7	0.552	
Total	5.217	9	0.580	

Table 4

Subject Attitudes Toward Microteaching by Presence of Videotaping

Source of variance	ss	df	$\bar{\chi}^2$	F
Main effect videotape	0.031	1	0.031	0.236
Residual	1.061	8	0.133	
Total	1.093	9	0.121	

Table 5

Subjects' Perceptions of Themselves as Teachers by Presence of Verbal Feedback

Source of variance	ss	df	χ^2	F
Covariate-pretest	0.028	1	0.028	0.096
Main effect feedback	0.280	1	0.280	0.963
Explained	0.308	2	0.154	0.605
Residual	2.908	10	0.291	
Total	3.216	12	0.268	

Table 6

Perceptions of the Subjects of Teaching in General by Presence of Verbal Feedback

Source of variance	ss	df	χ^2	F
Covariate-pretest	0.838	1	0.838	1.262
Main effect feedback	0.346	1	0.346	0.520
Explained	1.184	2	0.592	0.891
Residual	6.639	10	0.664	
Total	7.822	12	0.652	

Values of F produced by ANCOVA of the subjects' attitudes toward the microteaching experience with the presence of verbal feedback as the independent variable are shown in Table 7. These data indicate that no significant difference exists between those who received verbal feedback, group one, and those who did not receive verbal feedback, group two.

Table 7

Subjects' Attitudes Toward Microteaching by Presence of Verbal Feedback

Source of variable	ss	df	$\bar{\chi}^2$	F
Main effect feedback	0.359	1	0.359	1.536
Residual	2.573	11	0.234	
Total	2.932	12	0.244	

Conclusions

1. Videotaping of the performances of preservice teachers who participated in the study did not affect their perceptions of themselves as teachers, their perceptions of teaching in general, or their attitudes toward microteaching under the conditions in which they were tested.
2. The presence of verbal feedback following the microteaching performance of those preservice teachers who participated in the study did not affect their perceptions of themselves as teachers, their perceptions of teaching in general, or their attitudes toward microteaching.

Implications

This investigation dealt only with student perceptions and attitudes as affected by differing videoteaching techniques.

As the videotaping of the teaching performance seems to have no significant affect on the perceptions of preservice teachers toward themselves as teachers, of teaching in general, or their attitudes toward microteaching, institutions offering microteaching as a laboratory experience for the preservice teachers may question the necessity of utilizing expensive videotape equipment when the outcome is to affect teacher perceptions and attitudes. On the other hand, institutions where videotape equipment is currently being used may rest at ease that the presence of videotaping has no significant negative affect on the preservice teachers' perceptions of self or teaching.

Teacher training institutions may review the necessity of devoting resources to professionals to administer verbal feedback when this does not seem to affect the teachers' perceptions of self or of teaching or their attitudes toward microteaching, if the desired outcome is to affect these perceptions or attitudes.

A positive self-concept has been associated with teacher performance and the performance of that teacher's pupils. Microteaching, as a form of laboratory teaching experience, may aid in the development of teacher self-concept, and since the presence of videotaping and verbal feedback has no effect on self-concept, institutions that currently do not include microteaching for their preservice teachers for economic reasons may consider its implementation without videotaping and verbal feedback.

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