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By- Johnston, Donald P.

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A study compared instances of self-supervision with more traditional supervision of student teachers to determine the relationships between this variable and teacher attitudes and interaction behavior. Eighty-four secondary education student teachers were engaged in self-supervision, or were more traditionally supervised, or both. Self-supervising student teachers were videotaped with no supervisor present during each of two 20-minute microteaching sessions: after each session they analyzed their own video tapes using interaction analysis, in which they had received previous training. Traditionally supervised student teachers, who had not had interaction analysis training, were observed by a supervisor during each of their two 20-minute lessons and then met with him for a 30-minute conference. Each student teacher estimated the amount of his indirect and direct influence behavior after each lesson. Pre- and posttest Minnesota Teacher Attitude Inventory (MTAI) scores and the results of the investigator's interaction analysis of each student's video tapes provided the data which was subjected to analyses of variance and covariance. Among the conclusions were that self-supervision tends to promote indirect teaching and higher scores on the MTAI and that estimates by student teachers of the percentage of indirect teaching they exhibit in their lessons are very inaccurate under both traditional and self-supervision. (JS)

THE RELATIONSHIP OF SELF-SUPERVISION TO CHANGE IN SELECTED ATTITUDES AND BEHAVIORS OF SECONDARY STUDENT TEACHERS

(Paper presented to the American Educational Research Association, February 7, 1969; Los Angeles, California)

Donald P. Johnston
Memphis State University
Memphis, Tennessee

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Introduction

Student teaching can be a learning experience for prospective teachers if it provides opportunities for the analysis of and consequent change in their teaching behavior. Traditionally the classroom behavior of student teachers has been evaluated and analyzed by school and college personnel in cooperation with the student teachers. There has been no formal practice in which student teachers have completely assumed a supervisory role with respect to their own teaching behavior, largely because it has only recently become practical to provide student teachers with conditions upon which complete self-supervision depends. The method of self-supervision studied uses video-tape to combine the immediacy factor with faithful reproduction, and aspects of the Flanders system for categorical analysis of teaching behavior. The technique of self-supervision used in this study also involved the structural concept of micro-teaching (short lessons taught to small groups in a teach-reteach cycle). The Stanford University materials focusing on aspects of teaching behavior, however, were not used. Self-supervising student teachers were video-taped during their twenty-minute lessons. No supervisor was present. After the lesson, these student teachers analyzed their video-tapes with the Flanders system.

Both portions of the study (Fall 1967 and Spring 1968) compared instances of self-supervision by student teachers with instances of supervision of student teachers in a more traditional manner in order to determine the following relationships: 1. certain attitudes of student teachers to the kind of interaction behavior they demonstrate, 2. self-supervision to change in interaction behavior, 3. self-supervision to change in certain attitudes of student teachers, and

4. observed amounts of certain kinds of interaction behavior exhibited by student teachers to their estimates of such amounts.

An additional basis for comparison was incorporated into the study to determine changes in MTAI scores over time by administering the MTAI to the traditionally-supervised group during the Spring semester, thereby providing an initial score, a score after twelve weeks, and a score after thirty weeks for student teachers in that group.

Sample

In all there were eighty-four subjects in four treatment groups. Group I engaged in self-supervision, Group II was more traditionally supervised, Groups III and IV used both traditional and self-supervision in different sequence. Each group was categorized into high, average and low MTAI score stratifications. Subjects met the following criteria: undergraduate, secondary education, part-day, full-semester student teachers in the fields of English, social studies, science and mathematics.

Procedures

On the afternoons that self-supervising student teachers were to be video-taped, the video-tape recorder was set up prior to the arrival of the student teacher with his class of five pupils for the micro-teaching session. A research assistant placed the camera, recorder, and T.V. monitor in the back of the room, facing the blackboard, teacher's desk, and five chairs. When the student teacher and pupils were ready to begin, the video-recorder was started and the assistant left the room. After twenty minutes the assistant returned to the room and turned the machine off.

The student teacher was shown how to operate the video-tape recorder and reminded that the tape was to be watched once and that the interaction behavior was to be analyzed by using the Flanders system. At this point the student teacher was left alone as the pupils began a tour of the campus with the assistant. After approximately thirty minutes the tour was concluded and the pupils were returned to the student teacher for transportation to their homes.

Throughout the year, it was made clear to self-supervising student teachers that video-tapes of their lessons were for their use in self-improvement, and that no one in authority over them would view those video-tapes. In order to adhere to this promise, the Principal Investigator did not view any tapes until after student teaching grades had already been recorded.

Traditionally-supervised student teachers were observed by the Principal Investigator during each of their two twenty-minute afternoon lessons; a supervisory conference lasting approximately thirty minutes was then held by the Principal Investigator with each traditionally supervised student teacher.

Data and Instrumentation

Units of content for all twenty-minute afternoon lessons were developed by each student teacher from his own content area. Self-supervising student teachers were acquainted with the rationale for the use of the Flanders system as a tool for analysis of verbal teaching behavior and were given brief printed instructions for the use of the Flanders material. A one-hour lesson was prepared and taught by the Principal Investigator to train self-supervising student teachers in the use of the Flanders categories.

Self-supervising student teachers knew and used only the numbered category system and were not familiar with the utilization of the matrix or other aspects of the Flanders system. Traditionally supervised student teachers did not learn to use Flanders' categories. For consistent data in analysis of interaction behavior with the Flanders system, the Principal Investigator in this study analyzed each lesson and supervised all lessons not to be taped.

The Minnesota Teacher Attitude Inventory (Form A) was administered to all subjects during the first week of the semester and again after twelve weeks of student teaching.

Each student teacher estimated the amount of his indirect and direct influence behavior after each afternoon lesson. Such estimates were compared with the Principal Investigator's ratings.

Although the Flanders system is a system of verbal interaction analysis which has been used by teachers with audio-tape recorders, there are often statements in the classroom which cannot be accurately interpreted unless the speakers can be seen. This fact is clearly exemplified by Flanders instructions for the use of the system and especially by the descriptions for category number three. Consequently, video-tape recordings were used in this study.

Analysis

For the study of relationships both pretest and posttest MITAI scores provided the indices of attitudes. An interaction analysis, using Flanders' category system, was made for each of a student teacher's two lessons, providing two indices of indirect teaching for each student teacher. Two 2-way analyses of variance models were used on the indirect teaching scores collected during the first teaching encounter. The

second analysis was made on the second set of indirect teaching scores. Both analyses of variance models were built around classification by supervisory treatment groups over four levels and classification by the three divisions of the MTAI scores.

The relationship of self-supervision to change in interaction behavior was ascertained through an analysis of covariance model made upon the second set of indirect teaching scores using the first set of indirect teaching scores as a covariant. This model was over the four levels of supervisory treatment. Another analysis of covariance model over four levels of supervisory treatments was made on the MTAI post-tests using the MTAI pretests as covariants to study the attitude changes.

Overall Conclusions (Fall and Spring 1967-1968)

The conclusions below are drawn with respect to the methods of traditional and self-supervision which were studied with secondary student teachers teaching academic subjects in a micro-teaching framework. Indirect teaching was determined through use of the Flanders categories for interaction analysis.

1. No significant relationship exists between attitudes and teaching behavior before supervisory treatment.

2. Supervisory treatment tends to promote a significant relationship between attitudes and teaching behavior.

3. Self-supervision tends to promote indirect teaching.

4. Self-supervision tends to promote higher scores on the MTAI.

5. Estimates by student teachers of the percentage of indirect teaching they exhibit in their lessons are very inaccurate under both traditional supervision and self-supervision.

6. No significant relationship exists between time and attitude change in student teachers supervised in a traditional manner.

Further studies which could provide valuable information might include the following:

1. Studies comparing the effects of self-supervision and traditional supervision with elementary student teachers and with teachers in service;

2. Studies comparing the effects of self-supervision and traditional supervision when traditionally supervised student teachers and teachers in service are extensively trained in the use of the Flanders system;

3. Studies examining the effect of time on the teaching behavior and attitudes of self-supervised student teachers and teachers in service.

Since the attitudes of the student teacher's membership group appear to differ from those of his reference group and since he will be influenced to change his attitudes toward those of the reference group,[1] a strong tie lessening the width of the interval between theory and practice is desirable. If the student teacher is to retain the kind of predisposition to behavior provided for him by professional education courses, this tie approaches necessity.[2] He could benefit[3] from examining his own behavior for improvement,[4] defending his position through internal direction in order to resist external persuasion,[5] developing a set for pertinent data,[6] and utilizing a problem-solving approach which is so useful in producing behavioral change when necessary.[7] In this study, self-supervision through use of video-tape and interaction analysis provided opportunity for the student teacher to benefit from each of these desirable approaches as well as eliminating the anxiety sometimes produced by the presence of a supervisor[8] and overcoming the difficult task of convincing the student teacher that what the supervisor reports has really happened.[9] The combined use of video-tape and interaction analysis in self-supervision seems to produce a package extending the desirability of video-tape[10] and interaction analysis.[11]

NOTES

[1]A. E. Siegel and S. Siegel, "Reference Groups, Membership Groups, and Attitude Change," Journal of Abnormal and Social Psychology, 55:360-364, 1967.

[2]John Walton, "The Study and Practice of Teaching," The School Review, 69:136-150, Summer, 1961; Wooley, Ethel and Ralph L. Smith, "Studio Teaching Before Student Teaching," Journal of Teacher Education, 13:333-339, September, 1962.

[3]For evidence that attention to "indirect teaching" (which corresponds to the educational philosophy of the MTAI) in the Flanders system is desirable see Martin Haberman, "The Teaching Behavior of Successful Interns," Journal of Teacher Education, 16:215-220, June, 1965. Instruments for categorizing the behavior of teachers such as that developed by Flanders reflect concern with elements of teaching similar to those explored by the MTAI. Both the MTAI and Flanders' categories for interaction analysis were used in this study in order to determine the interrelationship among attitudes, interaction behavior, and self-supervision. See N. A. Flanders, "Teacher Influence, Pupil Attitudes and Achievement," (U.S. Office of Education Cooperative Research Project No. 397, 1960, Mimeographed).

[4]Eleanor S. Isard and Emily J. Sherwood, "Counselor Behavior and Counselee Expectations As Related to Satisfactions With Counseling Interview," Personnel and Guidance Journal, 42:920-921, May, 1964.

[5]Fred N. Kerlinger, "Educational Attitudes and Perceptions of Teachers: Suggestions for Teacher Effectiveness Research," The School Review, 71:1-11, Spring, 1963; Arthur W. Combs, The Professional Education of Teachers (Boston: Allyn and Bacon, Inc., 1965); W. J. McGuire, "Inducing Resistance to Persuasion," in Berkowitz (editor), Advances in Experimental Social Psychology (New York: Academic Press) pp. 200-221.

[6]M. C. Wittrock, "Set Applied to Student Teaching," Journal of Educational Psychology, 53:175-180, August, 1962; Association for Student Teaching, The College Supervisor-Conflict and Challenge (Forty-Third Yearbook, Dubuque, Iowa: Wm. C. Brown Co., 1964) p. 94.

[7]Henry Weitz, Behavioral Change Through Guidance (New York: Wiley and Sons, 1964).

[8]Association for Student Teaching, op. cit., p. 119.

[9]Association for Student Teaching, op. cit., p. 120.

[10]William W. Brickman, "Portable TV Recorder for Student Teachers," School and Society, 92:330, November, 1964; Herbert Schueler and Milton J. Gold, "Video Rdcordings of Student Teachers - A Report of the Hunter College Research Project Evaluating the Use of Kinescopes in Preparing Student Teachers," Journal of Teacher Education, 15:353-364, Dec. 1964.

[11]Edmund Amidon and Anita Simon, "Teacher-Pupil Interaction," Review of Educational Research, 31:130-136, April, 1965; George Margosian, "Suggestions for the College Supervisor," National Education Association Journal, 54:39, April, 1965.