

AN INVESTIGATION OF THE EFFECTS
OF TEACHING BEHAVIOR FEEDBACK INSTRUMENTS
UPON SUBSEQUENT TEACHING BEHAVIOR
IN STUDENT TEACHERS

A Thesis
Presented To
The Faculty of Graduate Studies
University of Manitoba

In Partial Fulfillment
of the Requirements for the Degree
Master of Education

by
Chanka Narayansingh
February 1976



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ACKNOWLEDGEMENTS

I would like to express my sincere thanks to my supervisor, Dr. K. R. Slantz, for his patience, understanding and guidance throughout this study. I am also indebted to Dr. H. D. Williams and Dr. P. J. Husby for their helpful criticism, and to Mark Bishop for the handling of the statistical analysis of the data. Finally I would like to thank my wife, Tara, for her assistance, understanding and encouragement during the writing of this thesis.

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ABSTRACTS

The study attempts to determine whether student teachers who were made aware of their teaching behaviours changed their behaviour significantly at the end of a second practice teaching session; To analyze and compare the responses of three feedback categories; self, student and supervisor before and after treatment..

The population samples used to establish average values for each item on the feedback instruments consisted of 45 student teachers, 45 co-operating teachers and 968 students ranging from Grades 7 to 12. The experimental and control group samples consisted of two groups of 9 student teachers selected randomly from the 45 student teachers. The two groups were administered three teacher behaviour feedback instruments at the end of two separate practice teaching sessions. Prior to the beginning of the second practice teaching session the experimental group was given a full disclosure of the results of their teaching behaviour performance on the first teaching session. The control group did not receive this information.

The results of the study indicated that there was no significant change in teaching behaviour by the experimental group. Greater gains were in fact recorded on the post-test by the non-treatment group for two of the feedback categories. Comparisons among the feedback categories showed that they were equally powerful in recording teacher behaviour performance on fourteen common items. There was however greater consistency in scores among the categories favoring the post-treatment results.

CHAPTER 1
INTRODUCTION

Background of the Study

In the last decade, Teacher Behaviour has been used as a major criterion of teaching effectiveness. There is an abundance of literature on the subject but very little results to prove conclusively that what the teacher does in the classroom promotes desired changes in pupil behaviour.

Musella (1970) indicates that although we have some measures of teaching behaviour and some measures of student growth (and even these are questionable) the cause-effect link poses a problem that seems insurmountable at this time. Merwin (1973) observes that one might hypothesize if a student teacher does 'A' change 'B' in pupil behaviour will follow. Acceptance that teacher performance 'A' takes place as evidence that change 'B' in pupil behaviour has taken place calls for carefully conducted research to determine the conditions under which the relationship exists, and the hypothesis holds. Unfortunately, there is little such research evidence for most competency statements. It is therefore very difficult to establish what teacher behaviour produces what pupil

behaviour. Sandefur (1970) also suggests that while more and better research is required to indicate which teacher behaviour results in which pupil behaviour, it is more expedient to evaluate teaching by teacher behaviour performance.

Behavioural Scientists and Psychologists are convinced that the behaviour criterion is the valid method of appraising teaching. Spanjer (1972) points out that improvement in teaching performance is made possible when a teacher gains awareness of his teaching behaviour, fully understands the consequences of his actions and finally accepts a perceived need for changing his behaviour.

Awareness of teaching behaviours can only be gained through feedback. Ammons (1954) indicates that feedback is one of the most dependable and thoroughly tested principles in modern psychology. The term refers to the knowledge that a learner receives relative to the quality, quantity and other aspects of his performance.

Various types of behaviour identification devices have been used by supervisors to give the required feedback. These fall into two categories:

1. Educational Hardware -
Video tapes, films, audio devices, micro-teaching devices, etc.

2. Educational Software -
Interaction Analysis, rating forms of all kinds -
self, student, supervisors, etc.

This study involves feedback from three major components of this Teaching and Learning process - the Student Teacher, the Student and the Supervisor.

Patton and De Sena (1966) support the use of student feedback in stating:

"although we as teachers place a great deal of value on what is said at conventions and conferences, and what we read in educational journals, too often we do not heed the opinion of those we are presuming to educate".

Strom and Galloway (1967) emphasize the use of self-appraisal:

"To ignore either self-direction or self-evaluation as an element of improvement is to imply that the best direction for change in every instance be extrinsic. This view under-estimates what might be gained when a teacher perceives his own shortcomings as obstacles to the achievement of self defined goals".

Many Teacher Education institutions have adopted the behaviour identification approach to teacher supervision.

This method of supervision is very objective and is focused on teaching improvement, as opposed to the traditional subjective method of in-classroom observation aimed mainly at evaluation and awarding grades. The question to be asked however is to what extent if any do teachers modify their behaviour as a result of an awareness of their past teaching behaviour? This paper attempts to answer this question as one of its major objectives.

Statement Of The Problem

This study attempted to answer the following questions:

1. Does an awareness of teaching behaviour change behaviour in student teachers?
2. How do the teacher behaviour feedback categories - self, student and supervisor compare for student teachers on each of fourteen items and in general prior to and after treatment?

Delimitations of Study

1. The study was confined to 45 student teachers in their certification year 1973-74 at the Faculty of Education of the University of Manitoba.
2. The study was confined to student teachers receiving instruction in science teaching.
3. The study was confined to student teachers having no previous formal teaching experience.
4. The study was conducted in Manitoba public schools and confined to science classes.
5. The study involved co-operating teachers with a science background and teaching in a science subject area.
6. The Faculty of Education supervisor for each student teacher was a staff member at the Faculty of Education of the University of Manitoba.

Limitations Of The Study

1. The findings in this study are limited in that the grade level or levels of the student is not taken into account.

2. The findings of the study are limited in that the students were either in Junior or Senior High School.
3. The findings of this study are limited in that the science subject taught or the level of science taught by the student teacher is not taken into account.
4. The findings of the study are limited in that the total number of years of academic training of the student teacher is not taken into account.
5. The limitation of the feedback instruments.
Musella (1970) states that one weakness evident in the use of formal rating forms as part of a research design is that regardless of the formal criteria accepted and used one must rely on the rater's perceptual - cognitive view of the ratee, of the criteria and of the relationship (similarities and differences) between the two.

Significance Of The Study

The findings of this study can be of value to educational institutions concerned with teaching evaluation and improvement through the use of the teacher behaviour criterion measure of teaching effectiveness. The findings can also have important bearings on feedback theory and practice in teacher education.

The research of literature has shown that teacher behaviour has been accepted as a criterion of teaching effectiveness. However, efforts to modify teacher behaviour through various feedback processes have had both negative and positive results. Such findings make feedback theory and practice questionable in teacher behaviour modification. The study undertaken here not only continues this trend of investigation but places great emphasis on the method of feedback. The instruments and categories of feedback used emphasize a comprehensive and objective approach to teacher behaviour appraisal. The power and suitability of the instruments in this regard are being investigated.

Definition of Terms

1. Teacher Behaviour - Teaching acts, verbal or non-verbal, performed by the teacher in the course of teaching a lesson.
2. Student Teacher - Student enrolled in the first year of Teacher Education (certification year) at the University of Manitoba.
3. Practice Teaching - Period of formal teaching experience given to each Student Teacher in the classrooms of Manitoba schools.
4. Certification Year - The professional year of the Teacher Education Program at the University of Manitoba.
5. Supervisor - Supervisors will be defined as co-operating teachers in this study. A Co-operating Teacher is an experienced regular classroom teacher to whom a Student Teacher is assigned during a practice teaching session.
6. Faculty of Education Supervisor - Professor from whom the Student Teacher receives instructions in science and science method courses at the University of Manitoba.
7. Supervision - Process of assisting Student Teachers to improve his teaching performance in the classroom.
8. Evaluation - Process of assessing the teaching ability of a Student Teacher with respect to grading his performance.
9. Pupil Growth - Pupil learning in relationship to the objectives of the teaching and learning situation.
10. Population Samples - Refer to groups of forty-five student teachers, forty-five co-operating teachers and nine hundred and sixty-eight students drawn from populations of student teachers, students and supervisors, respectively.

11. Feedback - The knowledge that a learner receives relative to the quality, quantity or other aspects of his performance.
12. Junior High Schools - Grade levels 7, 8 and 9 in Manitoba schools.
13. Senior High Schools - Grade levels 10, 11 and 12 Manitoba schools.
14. Teacher Characteristics - The term refers to intelligence, years and quality of schooling, personality traits, aptitudes and other personal attributes.

Organization of Study

Chapter II contains a review of literature relevant to this study. Chapter III contains the method used in the study, broken down under the headings of Experimental Design, Description of Instruments Used, Collection of Data and Statistical Procedures Used in the Study. The findings of the study are presented in Chapter IV. The final chapter consists of a Summary of the Study, Discussion of the Conclusion and Implications and Recommendations. The significant appendices and references are included at the end of this study.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction:

The review of related literature is organized under the following headings; Rationale for teacher behaviour criterion of teaching effectiveness; Behaviour modification research through various supervisory techniques; Feedback from student rating of teachers; Self-feedback in teacher behaviour modification. The chapter concludes with a brief summary of the findings.

Rationale for Teacher Behaviour Criterion of Teaching Effectiveness

In the last several years serious changes have been made in the supervision of student teachers to help them improve their behaviour performance in the classroom. Supervision by education supervisors and cooperating teachers in the form of observations and conferences has been considered too subjective, superficial,

threatening and placed too much emphasis on grading. Strom and Galloway (1967) indicate that a major problem is that, what is expected of the teacher by the supervisor may not coincide with what the teacher expects of himself. Veal et al (1967) state that educators are generally asked to rate teachers according to some criteria but the criteria varies according to the assumed educational objectives and their subjective impressions of which teachers meet these objectives. Strom and Galloway (1967) also point out that to emulate the co-operating teacher as the master teacher-the exemplary model, can be construed as an affront by a teacher who feels that to improve he must give up his identity and be like some one else.

A number of researchers, Conlin and Haberman (1967), Medley and Lantz (1967), Openshaw (1966), Taba and Ekin (1966), summarize the modern approach to supervision in stating that currently there are a number of teacher behaviour research projects emphasizing multiple criteria for adequate performance along with a kind of feedback plan which promises to regard the teacher as a prime reference for self-success. They point out that though we pursue separate directions, those of us engaged in this quest are agreed in the resolve that better teaching will most likely occur when the dignity of the individual classroom teacher is honoured. Goldhammer (1969) observes that opportunities for teachers to be

observed and to observe one another's work are dramatically more abundant than ever in the school's history, and interest in problems of analysing teacher behaviour and the development of feedback techniques is unprecedentedly high. William H. Lucio (1973) points out that three main criteria have traditionally been used to appraise teaching effectiveness.

1. Teacher Characteristics - This includes intelligence, years and quality of schooling, personality traits, aptitudes and other personal attributes.
2. Pupil Gain - This measures changes in pupil behaviour as a result of instruction. This assumes that if the product is good then the process is effective.
3. Teacher Behaviour - This measures what the teacher does in the classroom. If the teacher performs certain acts then pupil behaviour and teacher effectiveness can be predicted.

With respect to teacher characteristics Brighton (1965) observes that both laymen and the majority of professional educators cling to the idea that ability to teach is correlated somehow to such personality factors as a sense of humour, empathy, industriousness, willingness to co-operate, physical attractiveness, and health, love of knowledge, creativity and so forth. Almost every teacher evaluation program takes these factors into consideration to some degree. Yet hundreds of research studies to date have failed to find a significant cause-

effect relationship between traits and teacher effectiveness. In a study done by Peck and Veldman (1973) to determine personal characteristics associated with effective teaching, they found even the reverse effect - high pupil gains were produced by teachers who were self-doubting, psychologically passive and generally unhappy, whereas low pupil gain was related to teachers who were confident, self-reliant and prone to cope with problems.

The research findings with respect to pupil gain are also inconclusive. Brighton (1965), Merwin (1973), Anderson (1954) and Ort (1964) all agree that pupil gain criterion is low in reliability and validity. Some of the objections to its use are:

1. Many agencies other than the teacher affect the learning. e.g. parents, books, peers, television, radios, time scheduling, school organization, etc.
2. The teacher can always teach for the test.
3. Teachers, pupils and parents have different goals.

Anderson (1954) shows that different scores in pupil gain have low reliability, often approaching zero. Thus they have little or no validity as measures of teaching effectiveness.

There is an abundance of literature that attest to the belief that focusing on improving teacher behaviour is a worthwhile pursuit in improving teacher effectiveness.

Flanders (1965) suggests that we need to prepare teachers who can discover and identify patterns of teaching behaviour and perform these behaviours at appropriate moments in spontaneous situations. Allen (1966) in reviewing the Teacher Intern Program at Stanford University notes that the identification and training for specific teaching behaviours are the major part of the program. Veal et al (1967) observe that most of us concerned with Teacher Education in general and student teaching in particular believe that the behaviour of teachers influence student achievement, and that effective behaviour can be taught both theoretically and in practice in student teaching. Spanjer (1972) notes that the teacher behaviour criterion is based on the assumption that changing teacher behaviour is contingent on the teacher knowing the consequences of his action, defining explicitly the direction for change and developing the skills to perform the desired teaching behaviour. The way the teacher performs his teaching behaviour has more than an accidental effect on the quality of instruction. Knowledge of alternative behaviours and greater discrimination in their use will enable the teacher to perform more rationally and influence more positively the classroom learning behaviour of pupils.

Sandefur (1970) in accepting the Teacher Behaviour criterion suggests a model for evaluating the teaching. The

model suggests the use of teacher objective behaviour as the evaluation technique to employ. Teacher behaviour as depicted through:

1. Career line data
2. Direct classroom observation using interaction analyses.
3. Pupil, peer and administrator/supervisor evaluation.

The model calls for a high level of objectivity particularly in identifying behaviours relating to effective teaching.

Wright and Nuthal (1970) did a study to determine the relationship between teacher behaviour and pupil achievement in three elementary science lessons. The study involved 17 teachers of a variety of experience background and 296 students (Grade 3). The attempt was to identify the short term effect of teacher behaviour in a set of three matter controlled lessons of the discussion or recitation type. A set of 28 student teacher behaviour variables were identified across the 17 teachers and placed in 5 categories. A positive relationship to achievement was found by six major kinds of teacher behaviour:

1. Patterns of solicitations
2. Types of solicitations
3. Teacher reaction to pupil responses - comments
4. Teacher reaction to pupil responses - reciprocation and redirection