To the Graduate Council:

I am submitting herewith a dissertation written by Sherry A. Lahr entitled "A Case Study: To Support Teacher Renewal for Improvement of Instruction Through a Multi-Dimensional Observation Supervision Process." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Curriculum and Instruction.

Jerry J. Bellon, Major Professor

We have read this dissertation
and recommend its acceptance:

Janet R. Handler

J. Estill Alexander

Laura M. Lantz

Accepted for the Council:

Vice Chancellor
Graduate Studies and Research

A CASE STUDY: TO SUPPORT TEACHER RENEWAL FOR IMPROVEMENT OF INSTRUCTION THROUGH A MULTI-DIMENSIONAL OBSERVATION SUPERVISION PROCESS

A Dissertation

Presented for the

Doctor of Education

Degree

The University of Tennessee, Knoxville

Sherry A. Lahr

August 1980

3045033

ACKNOWLEDGMENTS

A project such as a doctoral dissertation cannot be accomplished without many supportive people. A sincere thank you goes to the following:

To Dr. Jerry J. Bellon, my committee chairman, for providing the opportunity to study in Tennessee, and for the direction given throughout the doctoral program.

To committee member, Dr. Janet R. Handler for freely giving of her time and expertise and for her encouragement.

To committee members, Dr. J. Estill Alexander and Dr. Francis Trusty for being on my committee and the valuable feedback they provided.

To Dr. Shirley A. Hilderbrand, a friend and colleague, for her encouragement.

To the Buckeye Central Board of Education for their support.

To my husband Chet and our family for their understanding and support.

ABSTRACT

Efforts during the past few years have yielded improved research designs for study of teacher effectiveness. However, application of the teacher effectiveness research findings in classrooms is not widespread. This case study provided research findings for the participants and helped bridge the gap from research findings to classroom implementation. An observation supervision process helped monitor the progress from awareness of research findings to classroom implementation.

The purpose of this case study was to investigate the alterations in teaching behaviors of three classroom teachers. The major vehicle for altering the teaching behaviors was a multi-dimensional observation supervision process. This process included supplementary features such as video taped presentations and a handbook which delineated current research findings on teacher effectiveness. The observation supervision process included gathering objective classroom data and providing the participants with performance feedback.

A series of four questions guided the case study. The major findings, based on these questions are summarized as follows:

1. Initially, the three participants had very little empirical knowledge of instructional principles and processes.
2. As a result of the study two participants did show marked improvement in their knowledge of instructional principles

and processes. One participant did show some increased knowledge.

3. All three participants demonstrated positive changes in their instructional patterns as a result of the study.
4. All three participants selected data from observation and post-observation conference with feedback as the components of the multi-dimensional observation supervision process which seemed to have the greatest impact on their teaching behaviors.

The following conclusions may be drawn from the findings of the case study.

1. All three participants demonstrated changes in their teaching behaviors. The changes reflected more effective teaching practices as described in research.
2. Feedback concerning the classroom observation and given during the post-observation conference was identified by participants as having the greatest impact on altering teaching behaviors.
3. The viewing of the video tapes and the readings did not prove as effective in altering teaching practices as did the one to one post-observation conference of the observation supervision process.
4. All three participants did show growth in their understanding of the principles and processes which were research based.
5. The teacher participants were able to utilize certain practices consistent with research findings without an understanding of underlying principles.

Two recommendations for further study were:

1. The classroom observer/supervisor plays an important role in effecting teacher change. A study could be undertaken to look at the characteristics of the classroom observer/supervisor and how those characteristics might relate to effecting change in teacher behaviors
2. A study could be undertaken to investigate the effective teaching practices pre-service teachers bring to the profession, and how they gained those effective teaching practices.

TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
	Statement of the Problem	2
	Purpose of the Study	3
	Statement of Need	4
	Assumptions	4
	Delimitations	5
	Definition of Term	5
	Procedures	6
	Participants	6
	Organization of the Study	8
II.	REVIEW OF RELATED LITERATURE	9
	Historical Perspective of Instructional Improvement	9
	Summary of Effective Principles and Processes	12
	Questioning	12
	Socioeconomic status	14
	Time in school/time on task	16
	Pacing	17
	Variety	18
	Participation guidelines	19
	Cues/structuring/advance organizers	20
	Modeling	22
	Method of presentation	23
	Corrective feedback	28
	The role of teacher characteristics	29
	Teachers and the Change Process	31
	Historical background	31
	Unsuccessful interventions	33
	Appropriate conditions for change	35
	Observation/supervision process	36
	Summary	38
III.	DESIGN AND PROCEDURE OF THE STUDY	40
	Introduction	40
	Prior to the Study	40
	Determined methodology	40
	Observation method established	41
	Development of support materials	42
	Development of instrumentation	44
	Criteria for participant selection	46

CHAPTER PAGE

Procedures during the Study 47
Volunteers requested 47
Participant selection 47
Initial meeting with participants 48
Initial interview 49
Initial observation 50
Intermediate observation sessions 52
Final observation session 52
Post-study questionnaire and concluding interview . . . 53
Summary 53

IV. RESULTS OF THE STUDY 55

Introduction 55
Case of Participant A 56
Context information 56
Pre-study questionnaire/interview 56
Initial observation 60
Intermediate observations/journal entries 63
Concluding observation 71
Post-study questionnaire and interview 72
Summary 75
Case of Participant B 78
Context information 78
Initial meeting with participant 78
Pre-study questionnaire/interview 79
Initial observation 82
Intermediate observations/journal entries 85
Concluding observation 91
Post-study questionnaire and interview 94
Summary 99
Case of Participant C 101
Context information 101
Initial meeting with participant 101
Pre-study questionnaire/interview 102
Initial observation 104
Intermediate observations/journal entries 107
Concluding observation 111
Post-study questionnaire and interview 113
Summary 116

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS 119

Summary of the Study 119
The purpose 119
Procedures 120
Findings 122

PAGE

Conclusions 128
Implications 129
Recommendations for Further Study 130

BIBLIOGRAPHY 132

APPENDIX 140

VITA 151

CHAPTER I

INTRODUCTION

Many research studies on teacher effectiveness have been conducted over the past quarter of a century. Relating effective teacher behaviors to student outcomes continues to be a difficult and frustrating task. Until recently educators have found the research on teacher effectiveness to be lacking both in design and results.

The past few years have yielded improved research designs for study of teacher effectiveness. Six years ago the National Institute of Education began funding studies. As a result important improvements in research design began to appear. The designs incorporated such techniques as: a rational sampling of teachers, collection of many hours of data from classrooms, multi-faceted and sophisticated classroom coding instruments, and concentration on the individual teacher and class as the unit of analysis (Brophy and Putnam, 1978).

Such research is presently being conducted by Jere Brophy and others at Michigan State University's Institute for Research on Teaching. The studies being done there are extensive process-product research efforts yielding results with implications for classroom practices. Some of their investigations previously done in elementary schools are now being replicated in secondary schools.

These newer research designs have yielded more reliable results. Several teaching behaviors that consistently affect student learning outcomes have been identified in the current research. These behaviors

include: pacing, variety of the lesson, appropriate questioning strategies, and grouping techniques.

Optimum learning situations for students could result from the incorporation of these research findings into individual classroom settings. However, application of the teacher effectiveness research findings in classrooms is not widespread. For various reasons, classroom teachers generally are not aware of the research on effective teacher behaviors and their relationship to student learning outcomes.

Classroom teachers need to understand what are effective classroom behaviors. They also need to know how and when to incorporate these behaviors into the learning situation. In addition they need objective feedback on their teaching practices. A procedure incorporating collection of data on classroom interactions, analysis of data, and provision of feedback to teachers would alleviate these needs.

I. STATEMENT OF THE PROBLEM

Educational research results now provide an array of effective teaching behaviors. However, classroom teachers are generally unaware of the results of the studies on teacher effectiveness. Those who are aware of the results often are unsure of how to implement effective teaching practices so that instructional improvement occurs.

It is assumed that teachers generally want to be competent in their jobs and to improve instructional practices and outcomes. Improvement of instruction requires not only effective teaching behaviors but also an environment conducive to change. Goodlad (1970)

maintains that for change to occur, there must be an environment that is supportive of teacher self-renewal and self-improvement.

A method for giving teachers research based feedback can help provide a supportive environment conducive to instructional improvement. Such a method should incorporate monitoring of teacher behavior, collecting objective data, and providing feedback to the teacher. The feedback should be based on the analysis of the data as related to the learning situation and to the research on effective teacher behaviors.

II. PURPOSE OF THE STUDY

The primary purpose of this case study was to investigate the day to day alterations in teaching behaviors of three classroom teachers. Specifically this study dealt with alterations occurring as a result of interaction with instructional research findings, and other forms of performance feedback. The major vehicle for the feedback was a multi-dimensional observation supervision process. The questions guiding this study were:

1. What empirical knowledge did the participating teachers have initially concerning instructional principles and processes?
2. Did the participants have increased knowledge as a result of the study?
3. What changes occurred in the participants' instructional patterns as a result of the multi-dimensional observation supervision process?

4. Based on respondents' perceptions, which components of the multi-dimensional observation supervision process seemed to have had the greatest impact on their teaching behaviors?

III. STATEMENT OF NEED

There are many research findings related to effective teaching behaviors. Researchers such as: Gage (1972), Good, Biddle, and Brophy (1975), Rosenshine (1971), Dunkin and Biddle (1974), Bloom (1976), and Brophy (1979) have made contributions in this area.

Getting this information to the classroom teacher is a problem. Procedures are needed to assist teachers in understanding the evidence concerning effective teaching behaviors. Methods of focusing on and interpreting their behaviors in relation to instructional improvement are also needed.

The case study provides a means for action oriented research. Case studies can provide participants with the opportunity to gain knowledge from current research and then put the findings into practice. This study will help bridge the gap from research findings to implementation. The case study provides a day to day monitoring of the entire process.

IV. ASSUMPTIONS

There are several assumptions underlying this case study. The assumptions are:

1. All teachers want to be competent.
2. Teaching is a set of identifiable behaviors.
3. Teachers can increase their competence if they have feedback on inappropriate teaching behaviors and instruction on what is appropriate teaching behaviors.
4. Teachers can be more effective if there is a supportive environment in which a person or persons helps to reinforce the change.

V. DELIMITATIONS

This case study took place in Buckeye Central High School in New Washington, Ohio, a small town in north central Ohio. It focused on three teachers and the changes which took place by using a multi-dimensional observation supervision process.

VI. DEFINITION OF TERM

Multi-dimensional observation supervision process—a supportive, systematic classroom observation process which included pre-observation and post-observation conferences. Supplementary features of the multi-dimensional process are:

1. Handbook for Improving Instruction.
2. Video taped presentations concerning selected instructional topics.
3. Self assessment by participants through a journal.

VII. PROCEDURES

The case study approach was judged to be the most appropriate research methodology for conducting this study. The case study method can be most helpful in generating indepth information about teacher behavior over an extended period of time. Stake (1978) claims that the case study is useful in the study of human affairs because it is down to earth and attention holding. Carter Good (1972) discussed special uses of the case study as a viable means for securing measurements of the individual or group at different stages of development (or change); to collect information for later analysis, as in establishing a data pool; to confirm theories and hypotheses; and to challenge existing modes of thought. It permits an examination of daily classroom transactions that are not evident in studies using survey techniques. As Cicourel (1975) points out, controlled observational techniques generate details on the factors that influence teaching.

Participants

Three staff members were selected from the volunteers using the following criteria: (a) both male and female subjects would be included, (b) both beginning and tenured teachers would be represented, (c) there would be representation from three different disciplines. The volunteers needed to be willing to invest time and effort in the case study. The selection process led to the choice of three subjects:

Participant A—female home economics with one year experience.

Participant B—male vocal music teacher in his first year.

Participant C—male science teacher with 18 years experience.

Volunteers for participation in the case study were requested from the teaching staff at Buckeye Central High School in New Washington, Ohio. Two of the five volunteers were not selected. One was not chosen because of the possibility of his leaving the district before the completion of the school year. The other volunteer was not used because he was in the same department as the first year teacher who was selected.

Personal interviews were held with each participant. At this time each participant completed a pre-study questionnaire to determine their knowledge of effective teaching behaviors. The instrument also entailed a self assessment of how well they were implementing effective teaching behaviors. Participants were given journals to record day to day instructional activities.

The ongoing observation supervision process (Bellon, 1976) involved the teacher delineating the content and process objectives for the lesson. This was during the pre-observation conference. The teacher also shared the learner characteristics; how the lesson fit into the curriculum or course of study; the teaching strategies and materials or media to be used; and how the learning would be assessed. The observer focus was usually on the teacher physical or verbal behavior. The focus could be on student verbal or physical behavior if data were appropriate to fit the objectives on that dimension.

Following the observation, during the post-observation conference, the lesson was reconstructed from the observer's data. Instructional behaviors or procedures which were consistently observed constituted

patterns. These patterns were identified. Judgments were made as to which patterns were more and less effective behaviors in relation to lesson objectives. The less effective behaviors were written into goals for another lesson.

Data were analyzed to determine what changes occurred in the participants instructional patterns as a result of the multi-dimensional observation supervision process. The participants' journals, post-study questionnaires and personal interviews provided data as to which components of the multi-dimensional observation supervision process created the most extensive alterations.

VIII. ORGANIZATION OF THE STUDY

This study is organized into five chapters.

Chapter I consist of the statement of the problem; purpose of the study; statement of need; assumptions; delimitations; definition of term; and the procedures for the study.

Chapter II is a review of the related literature and represented the research findings which were a basis for the case study.

Chapter III describes the methods and procedures used for the data collection.

Chapter IV presents the three case studies of each participant.

Chapter V includes a summary of the study; procedures; findings; conclusions; implications; and recommendations for further study.

CHAPTER II

REVIEW OF RELATED LITERATURE

Improvement of instruction has been a concern of educators and researchers for many years. In the past few years the research on effective teaching has improved greatly. Found in the literature are studies which relate to improvement of instruction and learner outcomes. A review of the literature was conducted to thoroughly examine the factors which have been found to affect instructional effectiveness. These included the specific teaching behaviors, principles, and processes which affected instructional improvement.

I. HISTORICAL PERSPECTIVE OF INSTRUCTIONAL IMPROVEMENT

For many years educators and researchers have been concerned about the criteria for teacher effectiveness. During the first several decades of the 1900's research on teacher effectiveness faced problems of productivity, methodology and theory (Doyle, 1977). After more than 10,000 published and poorly reviewed studies The Committee for Criteria of Teacher Effectiveness of the American Educational Research Association in 1953 commented:

> The simple fact of the matter is that, after 40 years of research on teacher effectiveness during which a vast number of studies have been carried out, one can point to few outcomes that a superintendent of schools can safely employ in hiring a teacher or granting him tenure, that an agency can employ in certifying teachers, or that a teacher-education faculty can employ in planning or improving teacher education programs (Dunkin and Biddle, 1974, p. 13).

Much of the research during the late forties and early fifties focused on the teacher. A large number of personality checklists and character trait rating scales were proposed to analyze teacher qualities, with little emphasis placed on student outcomes.

The research of Morsh and Wilder along with the Educational Research Association findings helped to alter the personality trait focus. Morsh and Wilder in their review of the literature from 1900 to 1952 stated that, "No single, specific observable teacher act has yet been found whose frequency or percent of occurrence is invariably and significantly correlated with student achievement (Flanders, 1970, p. 6)."

Over the next 10 years the situation did improve somewhat. The studies of Rosenshine and Furst, and Dunkin and Biddle pointed to weak but consistent findings supporting such variables as: an organized, businesslike approach to teaching; clarity; and enthusiasm (Rosenshine and Furst, 1973).

In 1957, investigators, Flanders, Medley, and Mitzel ushered in the "modern era," which seemed to be the turning point in research for instructional improvement (Rosenshine, 1976). The focus was on the actual classroom transactions. Ned Flanders made a considerable contribution with his Interaction Analysis, a systematic method of gathering frequency data on student or teacher dialogue. His contributions also included his "law of two-thirds." He found through observation that two-thirds of the time spent in the classroom was devoted to talk, two-thirds of this talking time was occupied by the teacher and

two-thirds of the teacher talk consisted of direct influence (Dunkin and Biddle, 1974).

How does one account for the ineffective effort of the early research? Dunkin and Biddle listed several possible reasons: (a) failure to observe teaching activities, (b) theoretical impoverishment, (c) use of inadequate criteria of effectiveness, and (d) lack of concern for contextual effects. More recent studies have focused on activities in relation to the effects of teaching (Dunkin and Biddle, 1974, p. 13). Furthermore, there were a different set of assumptions which were apparent during the first half of the century that are not as apparent today. Nathaniel Cantor lists some of these assumptions. He stated,

> Teachers acted as if they assumed that the teacher's responsibility is to set out what is to be learned and that the student's job is to learn it; that knowledge taken on authority is education in itself; that education can be obtained through disconnected subjects; that the subject matter is the same to the learner as to the teacher; that education prepares the student for later life rather than that it is a living experience; and that knowledge is more important than learning (Flanders, 1970, p. 14).

During the next decade and a half, progress was realized from empirical studies. A series of operational definitions of teacher behaviors that seemed to belong on the same dimension were identified. The focus was on studying the relationship between classroom instruction and student achievement. By the mid 1970's there were only about 12 investigators studying the relationship between classroom instruction and student achievement (Rosenshine, 1976). In 1975 these researchers met in San Diego and in November of 1975 they met again at the University of Texas in Austin, to present and discuss their findings. Among the

researchers were: Berliner, Brophy, Gage, McDonald, Stallings, Ward and Tikunoff (Cruickshank, 1976).

Since 1976, Jere Brophy has headed the Institute for Research on Teaching at Michigan State in East Lansing. Brophy's research is funded by the National Institute of Education. Clearly delineated goals for the studies and better data gathering procedures have resulted in improvement of research design (Brophy, 1978).

II. SUMMARY OF EFFECTIVE PRINCIPLES AND PROCESSES

In reviewing the effective teaching behaviors in the literature, there is a concern that must be kept in mind. Effective instruction may depend on the situation and the clients involved in the instruction. There are many variables which influence the effectiveness of teaching behaviors. Some of the variables are: socioeconomic status, questioning, time in school, time on task, pacing and variety, participation, teacher modeling, corrective feedback, and method of presentation. All of these effective behaviors are reviewed and summarized in the following discourse, since they appear to be the important variables emerging from the literature.

Questioning

The research of Barak Rosenshine sheds new light on levels of questioning as they relate to student achievement. Rosenshine (1976a) found that lower order questions, (factual "who, what, when, where" type questions) tend to be positively related to achievement, particularly

for reading and math; higher order questions tend to be unrelated; and personal questions tend to be negatively related. Further Rosenshine (1976b) reported that low ability primary students did best with factual questions and without probing and redirection. However, high ability students did best with probing and redirection.

This research does not support the common belief that factual questions are bad and higher level questions are good. Rosenshine's findings are supported by correlational studies by Stallings and Kaskowitz in their 1975 Follow Through Study, as well as Brophy and Evertson and their 1970 Process-Product Texas Teacher Study. Soar is also in agreement with his 1973 Follow Through Study at University of Florida (Rosenshine, 1976b).

Ward and Tikunoff's research results and the research from the Stanford Program on Teacher Effectiveness produced similar data. Both studies found that students did slightly better on recall tests in classes where more recall questions were asked (Rosenshine, 1976b). These researchers also concur with Rosenshine in concluding that teacher use of higher cognitive questions may not lead to improved performance of all students (Ward and Tikunoff, 1976). Indeed, higher cognitive questioning may not be appropriate for low ability students, particularly for reading and math.

Rosenshine also pointed up the importance of "probing" after asking a question. Probing involves the teacher encouraging further answers to fact questions; encouraging further explanations; and encouraging interrelationships, generalizations, and problem solutions. When the

teacher responds to students with further clarifying questions, more comprehensive answers may be elicited (Rosenshine, 1971). The exception to this may be for low socioeconomic students.

Socioeconomic Status

Brophy's research found a dichotomy between a successful teacher in high socioeconomic status (SES) school and a teacher in a low SES school. In the high socioeconomic status schools, the more successful teachers were task oriented and kept their students on task, had high expectations, and were demanding of student performance. They got best results when they pushed students and taught in traditional ways. The successful teachers in the low SES schools had high expectations for students, were more supportive, encouraging, and affectively oriented. They were willing to reteach and to take up personal matters with students, and they looked for materials that helped these students be successful (Cruickshank, 1976).

More specifically, Brophy and Evertson (1976) listed those positive teacher behaviors which were apparent in the high SES schools. They are:

a) allowing students to call out comments
b) providing students with enrichment materials
c) building good rapport with students
d) praising frequently
e) using peer tutoring
f) keeping high interest
g) avoiding rote memorization
h) asking questions frequently
i) avoiding too much lecturing

There are some differences in the positive teacher behaviors from a low SES school to a high SES school. Brophy's list of behaviors for a low SES school follow:

a) use more small group discussions
b) permit students to learn by themselves
c) make use of advance organizers
d) allow students to choose assignments
e) encourage students to believe that they can succeed
f) use praise
g) spend extra time with students if necessary

Neville Bennett did extensive research in England on teaching styles in relation to the clients and their progress. His research sought the differences between "formal" classrooms and "informal" classrooms as they affect pupil progress. The socioeconomic status of students was not part of the design, but there are inferences that can be drawn from his research.

More than five hundred teachers in the sample were given questionnaires concerning their clients. They were asked to agree with items which were more appropriate for high SES students or low SES students. There are similarities between behaviors identified from Bennett's questionnaire and from Brophy and Evertson's findings. Behaviors under the high SES category were: allows students to call out comments; regularly uses praise as motivational technique; lecture method is seldom desirable. Likewise there are similarities in the low SES category: advance organizers are important; encourage students to believe they can succeed (Bennett, 1976).

Like Bennett's and Brophy and Evertson's research, Sears (Tikunoff, 1975) found similar results. She conducted a five year study designed to discover what classroom teacher behavior would improve achievement in low SES students. The results showed that: (a) Achievement was greater when teachers directed attention more often to individual

children than when they spent more time with groups or with the class as a whole; (b) Achievement was greater when these private interactions were related to students' work rather than to their behavior, and when teachers gave the children their undivided attention; (c) Achievement was greater when teachers spent a greater proportion of their time giving individual information publicly (the interactions with individual students appeared to be especially important) (Good, Biddle, and Brophy, 1975).

Time in School/Time on Task

A variable in student performance is time on task. Bloom (1980) describes time on task as active learning time, the time that students are engaged in learning. Walberg reported that 24 of 25 recent investigations on the relationship between increased time allocated for instruction and learning, showed a positive relationship between time and cognitive learning (Walberg, Schiller, Haertel, 1979). Berliner found in his study with elementary children that if a teacher's questions, reinforcement, warmth, and clarity are to affect outcomes, it can only be done by engaging and keeping the students' attention (Berliner, 1976). Further he found that there was as few as 30 hours of effective instruction during the school year (Walberg et al., 1979). Likewise, Wayne Frederick of the Chicago Public Schools found that after subtracting time lost in absences, interruptions, tardiness, disruptions, and inattentiveness, as little as 25% of students' time in lower achieving schools is actually spent on learning (Walberg et al., 1979).

From the studies by Bloom, McDonald, Wiley, Carroll and Good, it seems clear that increasing the time on task might increase gains in learning. Some of Bloom's research, as recently as 1976 and in his new book being released, (Bloom, 1979) pointed out the importance of a student being given sufficient time to achieve mastery. In a recent article, Bloom (1980) discussed two methods for appraising time on task. One method is to determine if the student is "overtly" engaged in learning, paying attention, and doing work assigned. The other method is to determine the extent the student is "covertly" engaged in learning. This is done by stimulated recall, interviews, or questionnaires to determine if the student is thinking in relevant ways about what is going on in the classroom.

McDonald's (1976) research centered around elementary mathematics lessons and the amount of time spent in teaching mathematics as it directly related to increased pupil performance. Wiley's (1974) study points out the importance of length of school day as well as length of school year. Likewise, Good (1975) pointed out the importance of time in school in his report on the Missouri Teacher Effectiveness Study. Carroll's (1963) contribution to active learning time is defined by the ratio of total active learning time to total allocated exposure time as the percentage of "time on task," which Bloom later expanded.

Pacing

The pace of a lesson can be motivational and have an effect on student outcomes. Ausubel (1968) refers to pacing as "the rate of

introducing new subject matter material as determined by the length of time interval between component task units (p. 327)." Ausubel goes on to describe other subsidiary ways of influencing rate of coverage, which might include: manipulation of step size (degree of overlap in content between successive task units); increasing or decreasing the density (informational content) of task units; regulating the number of initial repetitions and subsequent reviews given each task unit (p. 327).

Rosenshine and Kounin offer cautions concerning pacing. Rosenshine (1971) warns that pacing should be neither too fast nor too slow. Kounin (1970) reports that sometimes over dwelling or nagging a student can slow down the pace. Likewise pace can be slowed by group fragmentation, getting involved in another topic inappropriate to the subject at hand.

Pacing also has implications for scheduling activities within a lesson. Consideration should be given to the types of activities within a lesson, whether there is high or low student involvement and whether a smooth transition from one teaching strategy to the next can be accomplished.

Variety

Variety in planning a lesson and selecting materials was pointed out in several studies as having a positive relationship to student learning. McDonald (1976) reported that teachers characterized by large gains in learning used a variety of materials. Variability was a characteristic which correlated highly with students' learning gains in

a study reported by Rosenshine and Furst (1973). They defined variability as different instructional methods. Rosenshine (1971) further reports that variety, in addition to varying instructional materials and techniques, may mean the frequency and assortment of reinforcements used. Rosenshine reports significant results when variation is designed as variety of classroom materials and activities.

Participation Guidelines

The psychological work of Dollard and Miller (Hecht, 1978) became the framework for Bloom's quality of instruction; the extent to which cues, practice, reinforcement, and corrective feedback are appropriate to the needs of the learner.

Examples of participation are the student's attending to the instruction, avoiding procrastination, practicing the responses to be learned, and responding mentally or verbally to teacher questions.

Bloom (1976) claims that there must be active participation by the learner, either overt or covert, for maximum learning. It is essential for the teacher to recognize the amount of practice and participation needed. Effective student participation means that the student would practice, respond, and participate in a given learning task. Among many others, the research of Ethna Reid (1976) of the Center for Exemplary Instruction reinforces the notion that there is a significant relationship between sufficient practice and student achievement.

The research of Kounin supports Bloom's position on student participation. Kounin (1970) reporting the results of research

conducted in mathematics classes, showed how high student participation could affect achievement. He pointed out that all children, reciters and nonreciters, could be actively engaged in doing something during each problem exercise, using digit cards at their desks while other students performed at the chalkboard. Student participation, whether overt or covert, should be encouraged if increased achievement is to result.

Cues/Structuring/Advance Organizers

A parallel may be drawn between advance organizers, cues, and structuring. All of these techniques may be used by a teacher to inform students as to what will be presented next in a lesson. Ausubel, Bloom, Brophy and Good, Gage, and Rosenshine have made contributions in structuring, cues, and advance organizers. Ausubel (1968) describes advance organizers by stating that they "provide relevant ideational scaffolding, enhance the discriminability of the new learning material from previously learned related ideas, generality, and inclusiveness, which is much higher than that of learning the material itself (p. 330)." He goes on to state that if advance organizers are to be effective, they must be formulated in terms of language and concepts already familiar to the learner, and be used with appropriate illustrations and analogies.

Gage, Rosenshine, and Soar report on structured learning or structuring. Gage (1976) states that structuring "consists of telling the students what is going to happen next; what they are going to be

dealing with, talking about, and handling; how the teacher intends to deal with the material (p. 35)." A skilled teacher may use high structuring strategies as a part of his/her effective teaching behaviors. High structuring may be broken down as follows: reviewing main ideas and facts covered in a lesson; stating objectives at the beginning of a lesson; outlining the lesson content; signaling transitions between parts of a lesson; indicating important points in a lesson; and summarizing the parts of a lesson as the lesson proceeded.

Rosenshine (1971) summarizes structuring as the teacher comments made at the beginning or at the end of a lesson; and the teacher comments made before or after the teacher asks a question. It is important that the teacher gives a clear signal, by using verbal markers, when one part of the lesson ends and another begins.

Cueing refers to actions that make stimuli more salient and thus more likely to be noticed. Brophy and Good (1977) discuss cueing as any directing of attention through pointing, holding up objects for viewing, telling students where to look in their books or in the room, or asking questions that will cause them to process information and find the appropriate stimulus.

Bloom (1976) lists cues as a component in his quality of instruction guidelines. He classifies cues as: instruction as to what is to be learned; and directions as to what the learner is to do in the learning process. Forms of cues are: (a) verbal, call something by given terms; remember particular things in form of words or sets of words; perform complex cognitive or psychomotor process, (b) visual, stimuli and

patterns remembered or responded to, (c) tactile, kinesthetic or olfactory, (d) models, observations of self or others, or demonstrations.

Modeling

Teacher modeling may be a form of cueing. It involves the teacher demonstrating or actually going through a specific activity to assist the student with the cognitive process for a certain learning task. To be effective, the teacher should help the student perceive the significant features of the modeled behavior. Brophy and Good (1977) discuss how this can be accomplished. They state that when modeling is combined with verbal instructions and verbal mediation, it can quickly and easily induce learning that might require long and frustrating trial and error under other circumstances.

Bandura (1977), in his book Social Learning Theory, explains that most human behavior is learned observationally through modeling. By observing others, one forms an idea of how new behaviors are performed and on later occasions this coded information serves as a guide to action. He does warn that students cannot learn much by observation unless they attend to and perceive accurately the significant features of the modeled behavior.

Brophy and Good (1977) cite Meichenbaum's research done in 1974. Meichenbaum uses an approach which combines modeling with verbalizing directly to the learner. He terms this approach "cognitive modeling" which distinguishes it from modeling without verbalization. Models talk to themselves, "thinking out loud" as they carry out the tasks.

Learners see the desired behavior demonstrated, but also hear the thoughts (self-talk).

Modeling is one of the most efficient methods of teaching. If the behaviors are easy to imitate, learning may occur with ease. The research of Bandura and Walters (1963) lists three kinds of effects of the learner's exposure to a model. Samples of the effects might be a modeling effect, whereby the learner acquires new kinds of response patterns, i.e. inculcates such new behavior as how to hold a pencil. Another kind is an inhibitory or disinhibitory effect, whereby the learner decreases or increases the frequency, latency, or intensity of previously acquired responses. Finally, the third kind is an eliciting effect, whereby the learner receives from the model merely a cue for releasing a response that is neither new nor inhibited, a male removing his hat upon entering a formal setting.

Method of Presentation

Teachers have an array of methods at their disposal for promoting maximum understanding of concepts or processes which are to be learned. Choosing the appropriate method of presentation is vital to effective instruction. The teacher must analyze the content to be learned and evaluate the best vehicle for that learning. The lecture method is probably the oldest method. John McLeish (1976) traces the lecture method to the fifth century pre-Christian academy, the public pleasure gardens in Athens where Plato and his students gathered. As in earlier times, it is still useful in communicating with large audiences. Napell

(1978) states that "lecturing is used best when a person with special information wants to share complex intellectual analyses, to synthesize ideas, to compare and contrast new ideas with those already known, or to unfold results of recent studies (p. 55)."

When the lecture method is used, it is the instructor's primary goal to transmit knowledge. McKeachie (Gage, 1963) stresses that the student seldom receives feedback, since the student makes no responses. The lack of feedback could be a hinderance if involved with problem solving skills. Indeed, when problem solving is the goal, experimental evidence reveals that active participation is more appropriate than passive listening or observing.

The 1953 research by Hovland (Gage, 1963) identified several variables that can affect the lecture method. Those variables include: (a) credibility of lecturer, (b) order of presentation, (c) presentation of one side of an issue vs. presentation of both sides, (d) emotionality of the argument. Organization of materials is also relevant to lecturing which is aimed at cognitive changes. The organizing is guided by the maxim; "Tell them what you're going to tell them. Tell them. Tell them what you've told them (p. 1129)."

The lecture method is most efficient for transmitting a set of information to a large group of people. The rate of transmission is very slow in discussion classes. In 1933 Remmers (Gage, 1963) found slight but nonsignificant differences favoring learning in large lecture groups as compared with that in small recitation sections. McKeachie (Gage, 1963) reported from his research that there was no

significant difference in achievement between lecture and discussion. In 1968 Dublin and Taveggia (Smith, 1978) reviewed 96 research projects encompassing the previous 40 years and found agreement with the results of McKeachie.

In 1973, Trent and Cohen (Smith, 1978) did a review of research on comparative methods of teaching by lecture versus discussion and found a multiplicity of variables affecting the outcomes of instruction. Tallmadge and Shearer (Smith, 1978) incorporated some of those variables into a new study. They used two instructional approaches (inductive and deductive reasoning) to determine the relationship between content, instructional methods, and learner characteristics. The results strongly supported the existence of learning styles, which represent differences in achievement as a function of the content, method of instruction, and personality of the individual.

Doty (Smith, 1978) in 1967, compared student characteristics and teaching methods and revealed that students characterized by high creativity or high social needs performed best in small discussion groups. Conversely, students who achieved most in conventional lectures were characterized by moderate achievement, low social needs, and low creativity.

One must keep in mind the instructional goals before deciding on the method of presentation. If the instructor wants to give information and develop concepts, use of both lecture and discussion may be the most appropriate choice. The discussion method provides students with opportunities to analyze, find relationships, make generalizations, and develop skill in critical thinking.

McKeachie (Gage, 1963) lists several advantages to the discussion method. He asserts that if students are to achieve application, critical thinking, or some other high cognitive objective, they should have ample opportunity to practice application and critical thinking skills and to receive feedback on the results. Discussion gives the students an opportunity to gain experience in integrating facts, formulating hypotheses, collecting relevant evidence and evaluating conclusions.

Other features were reported by Stanford and Stanford (1969) (Gall and Gall, 1976). They claimed that the discussion method helped students "to solve problems, to air opinions, to find out what others think, to vent feelings, to clarify one's point of view, to re-evaluate one's opinions, and to gain feelings of acceptance and belonging (p. 172)."

Bloom and associates (1953) (Gage, 1963) at the University of Chicago found that discussion did indeed stimulate more active thinking than did lecture classes. In addition, McKeachie (Gage, 1963) held that discussion might be favored over the lecture method when information encountered intellectual or emotional resistance. He contends that the discussion method might be necessary to bring the source of resistance to light.

However, Gall and Gall (1976) pointed out that researchers at the high school level discovered that teachers without special training in issue-oriented discussions, seldom identified the issue under discussion. They seldom asked students to substantiate their opinion, and they engaged only infrequently in other techniques considered desirable.

Gall and Gall (1976) list four methods in which cognitive outcomes are the primary concern. These methods are: (a) subject matter mastery discussions, (b) issue oriented discussions, (c) problem solving by groups, and (d) brainstorming. Subject matter and issue oriented discussions represent a specific set of information to be acquired, which might suggest that the learners would use convergent thinking. Problem solving and brainstorming represent selecting the best alternative from an array of options, and may represent divergent thinking.

Recitation may fit into a lecture presentation or a discussion mode. Napell (1978) points out that a lecture format can be modified to offer students an opportunity to interact with the information being presented. Questions can be asked which stimulate complex analysis. Likewise large topics can be broken down into smaller, more manageable units. Summing up exercises can be structured into the lesson to allow for emphasis, review, and logical synthesis. The students can then be given opportunities to redefine, rephrase and recapitulate the most salient points of the topic.

Gage (1976) points out that recitation strategy consists of repeated episodes of structuring; soliciting; responding; and reacting. Structuring involves sharing with the students what is going to happen next; what they are going to be dealing with, talking about and handling; and how the teacher intends to deal with the material. Soliciting is about the same as question asking and responding refers to student answering. Reacting is what the teacher does after the student has given an answer.

For the recitation method to effect learning, there must be involvement on the learner. The learner must do something with the new knowledge. Napell (1978) suggests: "Explain the new knowledge, rephrase it, compare or contrast it with what is already known, demonstrate it, or better yet teach it to another student. The real learning takes place when ideas new to the listener become a part of his own thinking (p. 53)."

Before determining the best method of presentation, the teacher must have a clear idea of the objectives for the lesson. Bellon (1976) discusses content and process objectives. Content objectives refer to what the students are to learn in terms of factual information and process refers to how or the procedure in which they will learn it. If the teacher writes objectives in terms of content or process, there is a better chance that an appropriate method of presentation will be selected.

Corrective Feedback

As noted in the previous discussion, it is essential that students receive feedback about their learning. However, it is also important that the feedback be corrective, giving new direction for the learning.

Bloom (1976) has written extensively on corrective feedback. In simple terms, he defines corrective feedback as checking for accomplishments and determining where and when the student needs additional correction and support. This notion fits the mastery learning model of which Bloom is a proponent. Mastery learning involves having a complete

knowledge and understanding of a specific skill before progressing on to the next skill.

A weakness in much current instruction is that students are rarely given an opportunity to learn their errors and be retested. Bloom (1980) believes when the feedback and correction process is used well, we begin to tap into the enormous learning potential of all students.

Rosenshine's review of research indicates that there is inadequate evidence to support a claim that teachers should avoid telling students that they are wrong, or should avoid giving academic directions. However, he does point out that those teachers who use a great deal of criticism consistently appear to have classes who achieve less in most subject areas (Rosenshine, 1971). Therefore, to be most efficient, the corrective feedback process should probably include brief formative tests covering material that has been taught, with alternative cues and additional time and practice for mastery (Bloom, 1976).

The Role of Teacher Characteristics

As was mentioned earlier, up until the 1950's teacher characteristics were the prime focus in trying to determine teacher effectiveness. Recent trends have led to delineation of an array of teaching behaviors and student outcomes. However, there are some teacher characteristics and traits which researchers have found relate positively to student growth. In most cases the characteristics can be learned. Berliner (1976) pointed out that teachers are not effective and noneffective, but more and less effective. The discussion which follows relates those characteristics to teacher effectiveness.

Brophy and Good and Rosenshine point out two teacher attributes which appear to have general effects: warmth and enthusiasm. Brophy and Good (1974) in reporting reviews of teacher effectiveness literature, referred to the studies of Rosenshine (1970); and Rosenshine and Furst (1971); which found that the two variables warmth and enthusiasm consistently correlated positively with student achievement. Rosenshine (1971) listed some of the elements that indicate enthusiasm. Enthusiastic teachers delivered from memory, used vocal inflections, used eye contact, gestured, used animation, and generally had a dynamic manner.

Kounin (1970) has defined the term "withitness" in discussing classroom management. Withit teachers make a difference in the behavior of pupils. He describes withitness as being highly aware of classroom activities and preventing an incident before it happens. He states, "The teacher communicates by actual behavior 'I know what's going on' . . . and it is important that the teacher communicates to kids that he/she knows what they are doing (p. 80)." It is as though the teacher has eyes in back of his/her head and remains one step ahead of students at all times.

Brophy (1976) claims that withit teachers are likely to anticipate potential problems and respond appropriately. He reports that if teachers overreacted and became angry or upset, it tended to stop the immediate problem with students who caused this reaction. However, the rest of the class reacted by becoming more tense and anxious, resulting in a higher frequency of disobedience and other disciplinary problems.

One might think that the intelligence of teachers would be related to their effectiveness. Studies by Barr and others in 1958, and Morsh

and Wilder in 1954 show that this is not the case. Teacher effectiveness as measured by pupil gains in achievement and by principals' and supervisors' ratings is only negligibly related to teachers' intelligence (Ausubel, 1968).

For teachers to be effective they must feel good about themselves and open to professional and personal renewal. Brophy (1976) mentions the idea that teachers' moods and morale can be affected by agreeable or disagreeable aspects of their personal lives outside of school, and also by factors inside the school such as the number and kinds of students in their classes in a particular year, the arrival of a new principal, or the adoption of a new curriculum. A system of support would be appropriate in such situations.

There are many other teacher traits and characteristics which relate to teacher effectiveness and student outcomes. The characteristics discussed appear to relate more directly to effective teaching behaviors.

III. TEACHERS AND THE CHANGE PROCESS

Change in teacher behavior has been slow over the years. There appear to be some fundamental conditions that must be present if change is to take place. This section addresses the historical background, successful and unsuccessful interventions for teacher change and the appropriate conditions for change to take place.

Historical Background

Silberman and Goodlad found prior to 1970 that despite many innovative educational practices, very little change had taken place in

classrooms across the country. Specifically, Silberman discovered that teaching was much the same as it had been twenty years ago, and in some respects not as good as forty years ago. He stated, "We were unable to discern much attention to pupil needs, attainments, or problems as a basis for individual opportunities to learn (Silberman, 1970, p. 159)."

Silberman reported that teaching was predominantly telling and questioning by the teacher, with children responding one by one or occasionally in chorus. He goes on to claim, "Rarely did we find small groups intensely in pursuit of knowledge; rarely did we find individual pupils at work in self sustaining inquiry (Silberman, 1970, p. 159)."

Goodlad found very similar conditions in the 150 classrooms he observed. He found "sameness" of activity from room to room with a great deal of routine apparent. Goodlad commented, "It would appear that neither preservice nor in-service teacher education programs have provided teachers with the precise pedagogical understanding and skills required for diagnosing and remedying the learning programs and needs of individual pupils (Goodlad, 1970, p. 93)."

Goodlad went on to point out that it appeared that teachers were very much alone in their work. He stated, "Teachers had the feeling of not being supported by someone who knows about their work, is sympathetic to it, wants to help and, indeed does help (Goodlad, 1970, p. 96)."

Probably one of the biggest contributions this study made to the literature was the fact that our education system was reinforcing itself and preserving the existing conditions. Goodlad found endless recommendations for improvement, but without "any effective structure by

means of which countervailing ideas and models may be pumped in and developed to the point of becoming real alternatives (Goodlad, 1970, p. 99)."

In a January 1979 article and in a speech at the 1980 American Association of School Administrators convention, Goodlad was still not optimistic about change in American education. One of the reasons stated by Goodlad is that, "The prevailing theories of change that take as their model factories and assembly lines simply do not fit the realities of schooling (Goodlad, 1979, p. 345)." Consequently, according to Goodlad, educators may be trying to apply an inappropriate model for change, resulting in inadequately defined goals to find new direction.

Unsuccessful Interventions

Gambrell, Laktasic, Raulsten, Battiste, Pritchard, and Pennington reported on research studies they conducted to change teacher behavior. However, there were no significant results to report from their findings.

Pennington (1976) and Raulsten (1977) prepared inservice programs at the University of Northern Colorado and University of Missouri respectively. Their research was designed to alter teacher behavior and attitudes. Pennington's results produced no significant differences in behaviors, except in introducing vocabulary. Raulsten concluded that the in-service training did not demonstrate any positive change in the attitudes of teachers toward students. Battiste (1977) sought the effects of an inservice self concept protocol module on verbal behavior

of primary grade teachers. She found that the in-service protocol module can have an effect on teacher's verbal behavior, but it was not effective for increasing the teacher's supportive statements or decreasing the nonsupportive statements. She did conclude that more than in-service was needed to improve teacher's verbal behavior.

Laktasic, Pritchard, and Gambrell, conducted studies with preservice teachers, all producing nonsignificant results. Pritchard's (1976) study sought the effects of training wait time, which is the time span between the teacher initiated response and the student response, on the questioning behavior of preservice teachers, with no significant difference as a result of the training. Gambrell (1977) conducted a study at Florida State University which measured the effect of instruction based on social learning theory (modeling) on teaching behavior of preservice teachers with the same results as Pritchard's. Laktasic (1977) purported to find the efficiency of video simulated observation and experience upon the teacher trainee's application of the selected teaching principles. The results of this study were nonsignificant.

What were the reasons for these experimental studies to produce nonsignificant results after an intervention? There may be several reasons based on research. Teachers are able to show growth when working in a supportive environment. They need to be made aware of their appropriate and less appropriate behaviors through direct feedback. These are discussed in the following section.

Appropriate Conditions for Change

Brophy and Good (1974) emphasize that much teacher behavior in unconscious, mainly because it has not been called to their attention that teaching is a set of identifiable behaviors. Teachers need to be made aware of what they are doing. As Flanders notes, "Many teachers would like to improve their own effectiveness. This involves making a change and then deciding whether the change was or was not an improvement (Flanders, 1970, p. 10)."

In a study conducted by Tuckman, McCall, and Hyman (1969), it was found that only the group given direct feedback about their teaching showed any changes in their behavior (Brophy and Good, 1974). Brophy reports research with similar results. He states, "When teachers are acting in self defeating ways without awareness, they change their behavior quickly, if the problem is called to their attention. Once called to their attention, teachers act in accordance with their beliefs about optimal teaching (Brophy, 1976, p. 32)."

These results suggest that if interventions are to be successful, the teacher must be aware of inappropriate behavior via direct feedback. This notion is validated by the research of Kallenbach and Gall (1969) as reported by Borg (1972). Kallenbach and Gall used a microteaching model which involved identifying appropriate behaviors and then giving the participant an opportunity to practice these results. Borg reported long term significant results on 7 out of 12 of the behaviors.

Another important condition for change, according to Flanders (1970) is creating an environment for change. One way this can be achieved is

through a support system. The Far West Laboratory for Educational Research and Development has designed self-instructional teacher training packets which include a built in support system. The support may come from another teacher by conferring on a problem, or covering and observing one another's classes (Ward, 1974).

A supportive environment is suggested by John Goodlad in some of his more recent writing. James Cass (1974) reveals Goodlad's approach: "The objective is to provide an environment within which the pervasive desire for improvement can be supported. Evidence indicates that a supportive environment will pay off handsomely in bringing the realities of the classroom closer to the rhetoric of education (p. 51)." In other words, if an attitude of growth is apparent and there is an environment of support, the self-preservation of traditional teaching which Goodlad mentioned cannot be maintained.

Observation/Supervision Process

Much of the current research on supervision compares traditional supervision to clinical supervision. Clinical supervision includes the preobservation conference, observation, post-observation conference of which analysis of classroom data is a part. Traditional supervision is not as scientific in its approach. It involves a classroom observation, but usually reflects feedback based on the observer's biasness. Sullivan (1980) sets clinical supervision apart from traditional supervision by pointing out that clinical supervision requires the teacher and supervisor to attack problems together and it "rests on the

conviction that instruction can only be improved by direct feedback to a teacher on aspects of his/her teaching that are concerns to that teacher (rather than items on an evaluation form or items that are pet concerns of the supervisor only) (p. 5)."

Reavis (1978) studied teacher attitude in regard to clinical supervision as opposed to traditional supervision. He found that teachers favored clinical supervision in all six criteria studied (communication, conferences, observations, suggestions for improvement, self-perception, and supervisor helpfulness). Traditional supervision was not preferred in any category.

Sullivan (1980) reported on a study with student teachers conducted by James (1971). He found that the feedback dimension which offered opportunities for self-confrontation and self-evaluation, facilitated the development of the desired teaching strategies to a higher degree than did traditional supervision.

On the basis of research conducted thus far, it is safe to say that teachers favor the clinical supervision approach over the traditional approach. No study has found traditional supervision favored over clinical supervision. In fact, one can say that no study has found traditional supervision effective in changing teacher behaviors when compared to clinical supervision (Reavis, 1978).

Clinical supervision can assist teachers in changing their teaching behaviors and can offer an environment of support. Sullivan (1980) reported that general research indicates that the "supervisor who is close and supportive is favored by teachers (p. 16)." Garman (1971)

reported that four of five teaching assistants who received clinical supervision were able to design changes in their instruction. Kerr (1976) through his research was able to change instructional patterns of four elementary teachers with increased individualization resulting (Sullivan, 1980).

Eaker (1972) surveyed the attitudes of administrators and teachers toward clinical supervision. He found that most teachers and administrators agreed with the basic assumptions of clinical supervision; that administrators tended to agree more strongly with assumptions and procedures of clinical supervision than did teachers (Reavis, 1978).

More specifically a dissertation study by Shultes (1978) reported on the implementation of the synergetic supervision process. The major instructional implications of the study were: the student/teacher interaction patterns were improved; the teachers were able to focus on individual needs; classroom management was improved; teacher questioning techniques were improved; and improvement was noted in planning for instruction.

IV. SUMMARY

Improvement of instruction has been a concern of educators and researchers for many years. Until recently the progress with research findings in instructional improvement has been slow. Presently there are new research findings available which appear to make a difference with classroom instruction.

A number of principles and processes which research studies have shown to be effective teaching behaviors have been discussed. Some of

those principles and processes are: questioning techniques; socioeconomic status of students; time on task; and pacing and variety of a lesson. Additional factors discussed are: teacher modeling; corrective feedback; advance organizers; and method of presentation.

Simply identifying positive teacher behaviors is not enough. Brophy aptly stated, "Effective teaching involves the orchestration of a very large number of relatively limited principles, linking specific stimulus situations to teaching responses that differ in probable effectiveness (Brophy, 1976, p. 36)." From the literature the conclusions can be made that: (a) a good transmission of current literature to classroom teacher is essential, (b) there must be a sound procedure for analysis of classroom interactions that emphasize patterns of teaching behavior. The advantages of clinical supervision compared to traditional supervision were surveyed. A clinical supervision process does provide a procedure for analyzing classroom data and providing feedback to the teacher.

Other conclusions from the literature are: (c) there needs to be continual dialogue between the observer and teacher so feedback can take place, (d) a supportive environment conducive to creating change need to be established and reinforced. The clinical supervision process is by nature supportive, as the literature reports.

CHAPTER III

DESIGN AND PROCEDURE OF THE STUDY

I. INTRODUCTION

This chapter describes in detail the design and procedures of the case study. Key points addressed in this chapter are the selection of the participants, observation data gathering procedures, instruments used for data collection, and reading and visual materials used for the study. A case study was selected over other research methods so that a full portrayal of the multi-dimensional observation supervision process, including teacher self-assessment through a journal could be developed.

II. PRIOR TO THE STUDY

Determined Methodology

The researcher was interested in the day to day alterations of the participants' behavior as it related to their classrooms. Information was needed to demonstrate their increased knowledge of research findings. The researcher wanted to report on the feelings and attitudes of the participants as they were experiencing the alterations. More than a frequency count of behaviors practiced was needed. As a result, the case study was determined to be the most appropriate method for the study.

Observation Method Established

A synergetic supervision process developed by Bellon and Jones (1976) was selected as the observation method. This process has been used extensively throughout the United States. The researcher has used the process for the past six years.

There are some underlying assumptions to the process. They are:

1. Teaching is a set of identifiable patterns of behavior.
2. When selected patterns of teacher behavior are changed, improvement of instruction can be achieved.
3. The supervisor-teacher relationship must be based on mutual trust if change is to take place.
4. The improvement of instruction is the primary goal of supervision (Bellon and Jones, 1976).

The process involves a pre-observation conference with the teacher, the observation, and a post-observation conference with the teacher. Prescribed forms, The Teacher Pre/Post Conference Form and the Teacher Observation Form are used for collecting information during the pre-observation conference, the observation, and summarizing the post-observation conference. A sample of the Teacher Pre/Post Conference Form and the Teacher Observation Form may be found in the Appendix.

Information collected during the pre-observation conference includes the following:

(a) The teacher lists the content and process objectives for the lesson. Content objectives involve what the students are to learn. Process objectives reflect how the students are to be learning the material.

(b) Strategies and materials the teacher uses;

(c) Characteristics of the students, and assessment of their instructional level.

(d) How the students are to be evaluated following the lesson.

Depending on the objectives for the lesson and the teacher's identified area of concentration for improvement of instruction, the researcher focuses on specific categories. The synergetic process focuses on teacher verbal behavior or physical behavior; student verbal or physical behavior; or a combination of the four categories. Within that framework the researcher is able to collect objective data which give direct feedback to the teacher. Observation data were a verbal log of what was said or a classroom map showing movement or student participation.

The post-observation conference is held as soon as possible after the observation. During this time the lesson is reconstructed by the teacher and observer using the verbal log/or classroom map. Patterns of behavior are identified. Instructional behaviors or procedures which were consistently observed constitute patterns. Judgments are made as to which patterns are more and less effective behaviors as they relate to the learning objectives. The less effective behaviors are sometimes written into goal statements for another lesson.

Development of Support Materials

A means by which teachers could gain an understanding of research findings on effective teaching practices was required. It needed to be

in a practical format that would help bridge the gap between research findings and classroom implementation. The Handbook for Improving Instruction was collaboratively written by Handler, Lahr, Bellon, and Bellon (1978), which was an ideal tool for the study. The Handbook was designed for teachers to assess their understanding of the principles and processes of good instruction; read what current research findings were; then extend that knowledge through renewal activities.

The chapters and their general content are listed below:

1. Planning and Evaluation—This topic deals with the importance of systematic planning and how the planning relates to district goals and priorities.
2. Organizing the Environment for Learning—This chapter discusses the importance of a comfortable physical environment and an environment conducive to learning.
3. Organizing/Presenting Subject Matter—The important elements in this chapter includes sharing with the students the objectives for the lesson, explaining performance expectations, and providing ample opportunity for practices and participation.
4. Applying Teacher Effectiveness Variables—This chapter discusses and summarizes the various behaviors that constitute effective teaching.
5. Adapting to Learner Needs/Characteristics—Discussion in this chapter includes the various techniques for adjusting teaching behaviors to fit student needs.

Another means by which teachers could gain an understanding of research findings on effective teaching practices was via video-taped

presentations. The researcher selected three topics which seemed appropriate extensions of topics covered in the Handbook for Improving Instruction. The topics and summaries are listed below:

1. Teacher Modeling for Expected Student Behavior—explains in detail what teacher modeling is, what current literature states about it and how to implement it in the classroom.
2. The "Withit" Teacher—explains the characteristics of a withit teacher according to Kounin. Strategies are also given on managing disruptive behavior.
3. Differences in Socioeconomic Status of Students—based on research, delineated are the various approaches a teacher might take with a group of low socioeconomic status students and a group of high socioeconomic status students.

Scripts for the video-taped presentations were written by the researcher. Graphics were produced by an art teacher. With the assistance of the high school media specialist the ten to twelve minute tapes were made for later participant viewing.

Development of Instrumentation

A Teacher Effectiveness Form was designed by the researcher. It was to be used following each observation. Listed would be all behaviors, effective and less effective. In addition the observed evidence of that behavior would be delineated. This information would come from the post-observation conference and the observation data. A copy of the form would be given to the participant following each observation. The form served

as a monitoring summary for the researcher. A sample of the Teacher Effectiveness Form may be found in the appendix.

The pre-study questionnaire and pre-study interview questions were developed prior to the study by the researcher. They were designed to give baseline data for the questions guiding this study. A sample of the questionnaire and interview questions may be found in the appendix.

The researcher wanted an opportunity to extend, clarify and generally discuss the written responses to the questions from the pre-study questionnaire. This would be accomplished during the pre-study interview. Additional questions which extended the discussion were designed for the interview session. The researcher wanted the participant to talk about how and where they learned what effective teaching behaviors were and if there was a significant person who had supported them in their professional renewal activities.

The questionnaire was designed to take approximately fifteen minutes. Participants were asked to share information as to their teaching assignment; total years in education; college/university attended; year of graduation from college; degree held; and additional hours beyond the Bachelors degree.

The questions established baseline data about each participant and were designed to help obtain information essential to answering the research questions guiding this study. Essentially the researcher wanted to know what had influenced the participants' professional growth up to now, and more specifically the researcher was looking for more detailed information on the steps taken for the professional growth. Had they

grown professionally by using any of the components in the multi-dimensional observation supervision process?

Several effective behaviors or conditions were consistently found in the literature to make a difference in instructional improvement. Consequently, eleven effective behaviors or conditions were selected and questions were designed to assess the participants understanding and self-perception of implementing the behavior or condition. This self-perception was later checked by means of classroom observation. These eleven topics were discussed or read about at some time during the study, either through the Handbook for Improving Instruction or through the video-taped presentations. Therefore, participant knowledge of each concept served as baseline data for assessing what they learned as a result of the study.

The post-study questionnaire was developed by the researcher at the same time as the pre-study questionnaire. Some of the questions were the same as on the pre-study questionnaire. The post-study questionnaire was designed to give information on new understandings and knowledge as a result of the study. The participant would have an opportunity to discuss the post-study questionnaire during the concluding interview. A sample of the post-study questionnaire may be found in the Appendix.

Criteria for Participant Selection

Criteria for participant selection were established. The participants would need to be willing to invest time and effort to the case study and had plans to remain in the district for the entire

1979-80 school year. In addition, the researcher wanted male and female representation; beginning and tenured teachers; and representation from three different disciplines.

III. PROCEDURES DURING THE STUDY

Volunteers Requested

The researcher asked for volunteers from the 42 member high school teaching staff. A memo was sent to all teaching staff explaining the nature of the study. A week after the memo went out to the teachers, the researcher attended a high school staff meeting to reinforce the request and answer any questions staff members had concerning the study.

Five staff members volunteered, four male and one female. The four males represented the following disciplines: science, English, and two from fine arts. The female represented the home economics subject area.

Participant Selection

The criteria for selection was: a willingness to invest time and effort in the case study; assurance that the participant planned to remain in the district for the 1979-80 school year; male and female representation; beginning and tenured teachers; and representation from three different disciplines.

The male English teacher had the option of changing jobs and leaving the district during the school year. Consequently, he was dismissed. One of the males representing fine arts was a first year teacher; the

other male fine arts teacher had five years experience. The first year teacher was selected over the five year teacher since being a first year teacher met one of the criteria.

The three remaining volunteers met all criteria for the study so they were selected as participants. The breakdown of participants follows:

Participant A—female home economics with one year of experience.

Participant B—male vocal music teacher in his first year.

Participant C—male science teacher with 18 years of experience.

The researcher serves as superintendent in the school where the participants were selected. However, the superintendent is not directly responsible for evaluating high school teachers.

Initial Meeting with Participants

The researcher conducted an initial meeting with each participant. At this time their role in the study was explained. The components of the multi-dimensional observation supervision process were reviewed. Participants were asked to view video-taped presentations which had been prepared for the study. They would also be expected to read the Handbook for Improving Instruction, which was given to them at this time; and they were requested to make journal entries on anything which pertained to the study. Journal notebooks were given to the participants at this time.

The observation supervision process forms were reviewed. The Teacher Effectiveness Form was reviewed and the purpose of the form was

explained. It was explained that visits would be by appointment. They could invite the researcher to do a formal observation if there was a specific class on which they wanted data.

The seven month time span of the study was given. Participants were told that each of them would have at least four observations for the study. Each participant was given their pre-study questionnaire to fill out. An appointment was set with each participant for the next day to conduct the initial interview.

Initial Interview

The rationale behind the interview was to extend the pre-study questionnaire. It provided an opportunity to probe, clarify, and generally discuss the responses listed on the questionnaire.

The purpose of the interview with participants was to determine their perceptions of their own teaching strengths, teaching style, and in general what kind of teachers they felt they were. At this time an initial assessment was made concerning their knowledge of what constitutes effective teaching behaviors. This process also helped the researcher analyze the consistency between the written and verbal responses. The interview provided the researcher the latitude of discussing the relevance of the questions and how the questions were based on current literature relating to effective teaching behaviors. For example there were eleven effective behaviors or conditions listed on the questionnaire which had been found in the literature. The researcher wanted to clarify if participant knowledge was empirically based and if so, what was the

method of transmission of that knowledge, reading professional journals or influence of a supervisor or administrator. The researcher also wanted to determine if the participant felt their teaching behaviors could be altered via a change agent such as a supervisor, principal or other administrator.

During the initial interview the participants established which class would participate in the study. One specific class was established so that the students would be the same from one observation to the next. Likewise it seemed more appropriate for the participant to concentrate on effective teaching practices in one class rather than several.

Participant A selected a Family Living class made up of Juniors and Seniors. Participant B selected the high school choir which included students 9 through 12. Participant C selected a Freshman Introductory Physical Science (IPS) class.

Initial Observation

Appointments were made with each participant for the pre-observation conference, the observation, and the post-observation conference. The pre-conference took between 15 and 20 minutes. The observation was for the duration of a class period of 42 minutes, with the post-observation conference usually taking a full 42 minute period. The cycle was always completed within a two day time span.

Data concerning classroom behaviors were collected. The observation focus could be on the teacher physical or verbal behavior; or the student physical or verbal behavior. If the focus were to be on verbal

behavior a log was kept recording the dialogue of the lesson. If the focus were on the physical behavior, a classroom map was used to chart any physical movement. Some of the patterns identified during the observation were: variety and pacing of the lesson; initiation of participation from students; questioning techniques; extent of teacher modeling; student time on task; and evidence of planning.

Following the observation and during the post-observation conference the participants received feedback. The researcher and teacher identified the areas of effective instructional behaviors which the teacher was practicing. Selected instructional behaviors were also identified for further work before the next observation. Suggestions were made to the participants as to where and how they could learn more about these instructional behaviors. Specific chapters from the Handbook for Improving Instruction were suggested, as were the video taped presentations.

After the initial observation and every observation thereafter, at the conclusion of the post-conference, the Teacher Pre/Post Conference Form was returned to the participant. The Teacher Effectiveness Form served as a summary of the effective and less effective behaviors observed. In addition the observed evidence of that behavior was listed. The Teacher Effectiveness Form gave the teacher written feedback of the observation and was returned to the participant several days after the observation.

Based on the observation feedback, participants established goals they wanted to concentrate on during the study. In some cases it was a

new behavior they had not tried. In other cases it was reinforcing and working on behaviors already in their repertoire of instructional patterns.

Intermediate Observation Sessions

The same procedure which was discussed under "Initial Observation" was followed for the intermediate observations. All observations were by appointment or by invitation of the teacher. A breakdown of classroom visits by participant is shown below:

Participant A—6 visits, five formal, one informal

Participant B—5 visits, four formal, one informal

Participant C—4 visits, four formal, no informal

Participants were to view the appropriate video-taped presentations; read the Handbook for Improving Instruction and write in their journals their self-assessments or impressions of specific topics covered in the study. The journals became a vehicle for candidly communicating to the researcher and sharing feelings about a specific technique or process. Weekly contacts were made with each participant to monitor their progress on the independent activities.

Final Observation Session

The final observations were made for each participant by the researcher and the high school principal. The principal, who had been trained in the synergetic observation supervision process, assisted the researcher by collecting data on students. The researcher collected data on the participant. Consequently, a broader portrayal of classroom

interactions resulted. The same procedure was followed as in the other observations: pre-observation conference; observation; and post-observation conference.

Post-Study Questionnaire and Concluding Interview

Following the final observation, participants were given the post-study questionnaire. Appointments were set for the concluding interviews. The post-study questionnaire and interview would give information if additional knowledge was gained on research findings as they pertain to effective teaching behaviors. More specifically the researcher wanted information from participants as to what component of the multi-dimensional observation supervision process was most beneficial to their growth. During the concluding interview each participant was asked to assess and summarize the entire process. The participant's journals were shared and discussed at this time.

Summary

As a result of the study, the questions guiding the case study were answered. The pre/post-study questionnaires gave information on initial knowledge of research findings on effective teaching behaviors and on participants' increased knowledge of instructional principles and processes. The post-study questionnaire listed the participants perceptions of which of the components of the multi-dimensional observation supervision process seemed to have the greatest impact on their teaching behaviors. The observation data gave the researcher

information on what teaching behaviors were actually altered as a result of the multi-dimensional observation supervision process. The participants' journals also were informative, particularly in identifying effects on teaching practices and procedures.

CHAPTER IV

RESULTS OF THE STUDY

I. INTRODUCTION

The case studies of the three participants are presented in this chapter. To establish continuity, data concerning individuals are presented case by case, following a consistent format. Each case study is presented according to the following outline:

1. Context information: a brief introduction to the participant describing their professional development and their initial interest in the study. This information was derived from the pre-study questionnaire and initial participant meeting.
2. Pre-Study Questionnaire/Interview: results of the pre-study questionnaire and interview conducted prior to the initial observation.
3. Initial Observation: data are reviewed after collecting information on the teacher or student physical or verbal behavior.
4. Subsequent Observations: results from intermediate observations, with references from participant journals.
5. Concluding observation: results from concluding observations based on data from dual observation by high school principal and researcher.

6. Post-Study Questionnaire/Interview: results of the questionnaire and interview seven months after the initial questionnaire and interview.
7. Summary: concluding statements for each case study.

II. CASE OF PARTICIPANT A

Context Information

Participant A is in her second year of teaching. She graduated from Ohio State University in 1978 with a Bachelor of Science in Education. Her major was in Home Economics. She has not taken any additional hours beyond her Bachelors degree.

During the general high school staff meeting when the study was explained, Participant A exhibited some interest in being a participant. She asked the researcher privately how much time would be involved. At that time she indicated that she wanted to give it some thought. About a week later she came to the researcher's office and said that she would be a participant. She was the only female who volunteered.

Pre-Study Questionnaire/Interview

Participant A filled out the pre-study questionnaire which was clarified and extended during the pre-study interview. The first question on the questionnaire asked how Participant A had renewed herself professionally up to this time. From a list of eleven items she was to rank them according to importance. Her response was:

1. Experimenting with new methods and techniques
2. Attending professional meetings

3. Feedback following classroom observations
4. Self-assessment
5. Discussing methods and techniques with colleagues
6. Professional reading
7. Observing a colleague
8. Travel
9. Hobbies
10. Simulation/role playing
11. College course work.

The next question asked was, "How have your first two choices improved your competency as a teacher?" She replied,

> I get some of the ideas from meetings and workshops and then try to apply them to the classrooms. In some cases, I get more students involved who might otherwise not be and it makes the class more interesting.

Being a vocational home economics teacher, Participant A is required by the State Department of Education to attend state sponsored professional meetings. She elaborated on a meeting she had recently attended on the topic of sex-sterotyping. She listed some of the cautions of which she had been made aware such as segregating the girls and boys in a classroom.

In response to the question, "What are some of your current practices which make you an effective classroom teacher?" She stated:

> Use of games, role playing, and discussion sessions. I feel using games and puzzles is a good way to review materials, possibly for a test. Good examples that have worked are Bingo, Crossword Puzzles, and Seek and Find. For role playing and discussion sessions I have used case examples. I read aloud a specific situation, then ask questions related to the situation. The students are able to relate them to their lives or their future lives by role playing the situation or discussing them in depth.

Participant A was asked to share her knowledge on eleven instructional principles and processes which consistently emerged from

the literature as having positive effects on classroom transactions. This question directly related to the first question guiding the study which asked what empirical knowledge the participant had concerning instructional principles and processes. The researcher coded the responses as follows: UC—understands concept; IU—incomplete understanding; NR—no response. Participant A's composite is shown below.

Levels of questioning	NR
Methods of presentation	IU
Pacing/Variety of lesson	NR
Student participation	NR
Planning	IU
Learning Environment	NR
Student Socioeconomic Status	IU
Corrective Feedback	IU
Classroom Management	NR
Motivation	IU
Number of student practices	NR

None of the responses were complete enough to merit an "understands concepts" rating. Several of the responses which were coded incomplete understanding are listed: (a) corrective feedback—response was: positive feedback, prompt feedback; (b) motivation response was: attention getters at beginning of class; and (c) methods of presentation response was: need a variety and student involvement. Consequently, the NR represented 55 percent of the responses; IU represented 45 percent of the responses; with UC not being represented at all.

The final question on the questionnaire requested Participant A to explain if she felt that she had a good knowledge of what constituted effective teaching behaviors. Her response was:

> Yes and No. There are so many different strategies to use that I don't know if they are the ones that might work for me, and this being my second year of teaching, I haven't had that much experience at teaching to know everything.

However, during the initial interview this question was extended. Participant A's response was more demonstrative than it was on the questionnaire. She revealed that she felt that she learned what effective teaching behaviors were from her college supervising teacher. She reported that the supervising teaching demonstrated by modeling good teaching techniques. An example was various methods for grouping students, depending on materials to be covered.

Participant A further reported that she had a good personal relationship with the supervising teacher. The supervising teacher had "lots of personality and related well to people, and she made herself readily available to students who needed her help." Likewise the supervising teacher was continuing her professional growth and communicated the importance of this to her students. Consequently, Participant A assumed that strategies and techniques suggested by the supervising teacher were research based. As a result of the influence of the supervising teacher, Participant A felt that she was able to use effective instructional patterns in her classroom.

The final question asked during the pre-study interview was: "What do you expect to learn from this experience?" Participant A responded, "I would like to get some new ideas and continue to grow professionally."

During the initial interview agreement was reached on the specific class which would be part of the study. The class Participant A and the researcher selected for the study was a Family Living class made up of 14 Juniors and Seniors, five males and nine females. The students

were average or above in academic ability. All students had previously taken a home economics class.

An appointment was set for the initial observation. Times were established for the pre-conference, the observation, and the post-conference.

Initial Observation

The initial observation was done during the start of a unit on decision making. The specific lesson centered around personality development during adolescence. The teaching strategy was lecture and discussion. The basis for the discussion was a questionnaire which the students had previously filled out.

The unit had been planned jointly by the teacher and students. During the first week of school the students had written essays about themselves and their interests. The teacher requested them to give input as to some of the topics they wanted to cover within the framework of the course curriculum. She used this input to give direction for future planning. A requirement of Vocational Home Economics teachers is to submit a long range plan for the year to the State Department of Education by October 15. Consequently, this teacher was required to plan in detail for the year.

The observer focus for the observation was to collect data on the teacher's verbal behavior which would entail a written log of the dialogue during the lesson. In addition student participation was to be charted. This was done by marking tallies on a classroom map which

displayed the seating arrangement. As a result of the observation the following data were collected.

1. Teacher shared objectives for the lesson with the students.
2. Teacher effectively used the lecture/discussion method.
3. Good pace/variety to lesson (31 minutes for lecture/discussion, 14 minutes to answer questionnaires).
4. Teacher movement—discussion/lecture took place primarily with teacher at front of the room, near her notes. She did go to the chalkboard several times.
5. Student participation—every student except two responded at least once. Discussion was informal and students were not required to raise their hands.
6. There was conversation among small groups of students during the overall discussion. This was observed among four groups of students.
7. Planning was evident—both long range and short term planning.
8. Grouping—discussion was by total group. Everyone did not enter into the discussion.

During the post-observation conference it was noted that four sets of students were interacting among themselves. The observer did record that they were discussing the topic. The suggestion was made to consider a different grouping strategy so that even more discussion could take place. If students were placed in smaller groups with a student discussion leader in charge, more efficient use of time could result. Participant A was open to this suggestion.

Consequently, Chapter V, Applying Teacher Effective Strategies, of the Handbook for Improving Instruction was assigned. The goal for another observation was established. The teacher would try a different grouping strategy.

Even though the questioning strategies of Participant A were adequate, the student responses were "opinion" responses. By the nature of the course, Family Living, opinion responses were many times appropriate. However, the teacher agreed with the researcher that learning could be enhanced if the teacher would probe the opinion response for an application level which entailed further thinking for justification of the response. For example this could have been done during the discussion of adolescence. The students had the factual information of developmental stages to draw from when discussing characteristics of adolescence. Questioning strategies were established as a second goal. The teacher was directed to Chapter IV, Organizing and Presenting Subject Matter, also in the Handbook for Improving Instruction.

Another area which was noted during the initial observation was teacher movement. Participant A was a second year teacher, but planned in writing, her questions, strategies, and resources. She had difficulty in freeing herself from her notes, except to reinforce visually by using the chalkboard or the overhead projector. When this was pointed out to her, she indicated that she felt discussion had not been hampered by her staying close to her notes.

Even though several of the students interacted among themselves, Participant A said that she was aware that they were talking about the

topic, so she did not disrupt the group discussion with a request of the small groups to stop talking. The discussion was informal. Students did not raise their hands for permission to enter into the discussion. When asked what kind of management guidelines had been established at the beginning of the year, Participant A stated that very few were listed as such. However, she went on to point out that she had all of the Family Living students last year and they became familiar with her expectations. In any event, the fact that the teacher did not insist that students raise their hands before responding did not interfere with classroom management.

Two days after the initial observation the researcher gave Participant A the Teacher Effectiveness Form which listed the effective and less effective behaviors along with data to substantiate those behaviors. Listed on the form were the effective and less effective teaching behaviors and the observed evidence of those behaviors. Even though the items had been discussed during the post-observation conference, Participant A looked over the Teacher Effectiveness Form very carefully. She wanted several points clarified under observed evidence of behavior. She appeared genuinely interested, but not intimidated with what had been written.

Intermediate Observations/Journal Entries

The second observation was conducted eight days after the first observation. The general topic was love. The teacher planned to spend two to three days on the topic. The students had viewed a filmstrip

on the subject. Participant A wanted to concentrate on her questioning techniques. She asked the researcher to focus specifically on this area.

She did have her content and process objectives well established. She had written out her discussion questions and had anticipated some student responses for which she had probe questions ready. She commented, "It's just what I have to do to feel comfortable."

The general discussion on the subject was very lively with high participation from the students. Only one student, Jeff, did not actively participate despite the teacher trying to involve him. He did appear to be listening, was not disruptive in any manner, but did not verbally take part.

The teacher did ask probe questions during the discussion to assist the students in justifying and applying their responses. Participant A started out with the question, "What does love mean to you?" Five students responded with their opinion of love. The teacher asked more questions such as: "How do you know when you're in love; when the perfect person comes along?," and "What is the difference between loving and being in love?"

Participant A knew the concepts she wanted the students to understand. She clarified, probed and redirected responses until they arrived at the desired understanding. She was skillful in keeping her opinions out of the discussions, despite students requesting her to share her opinions. Consistently students were asked to justify or make application to their responses. In a number of cases, if the

justifications were weak, fellow class members picked up on it and assisted the teacher in further clarification of a point.

The teacher initiated more responses from the students by calling on them by their first names, rather than letting them informally volunteer. She also signaled a transition in the discussion. This was a new behavior observed.

Participant A reinforced and practiced positive behaviors from the first observation. Some of those behaviors were: clearly stated content and process objectives; good pace of lesson; teacher shared objectives with students; and high participation of students. New behaviors added were: asking application questions; calling students by name for responses; and signaling transition in the lesson. Again the teacher led the discussion from the front of the room. She did use the chalkboard to reinforce visually. This was once again drawn to her attention. She still did not agree with the researchers concern over this point. Consequently, the researcher did not make it a high priority of concern.

During the post-observation conference the researcher and Participant A reviewed the questioning strategies. Agreement was reached that the students were forced to think beyond their opinion responses. She indicated that she didn't mind writing out the questions, including application level questions, since it would be beneficial to the students.

The researcher suggested that Participant A might want to view the video-tape on Socioeconomic Status of Students since her response

on the pre-study questionnaire indicated she did not fully understand SES. She agreed and asked if there was a specific chapter to read in the Handbook for Improving Instruction. The researcher assigned Chapter II, Planning and Evaluating Instruction. Participant A asked if it were necessary to write out responses to the preliminary questions and the renewal activities in the Handbook. She was told that it was not necessary to write out each question, but that it would be helpful for her to try to answer the questions.

In regard to questioning, Participant A wrote the following in her journal:

> Level I questions can get boring after a while. I realize it is important to have all of the basic facts, but it's even more important to let students state their feelings and ideas (especially in Family Living Class). I believe the application level questions went well during Mrs. Lahr's visit. Some of those people, particularly Dave, Bobby, Natalie, Paula, and Darla are capable of higher level thinking. I can see where higher levels of questioning can be used in my other home ec classes. I even used some of these higher level questions at the Junior High level. It makes them think on their own, rather than just recalling items. I think that I'm getting better with asking higher level questions, especially when I think about and jot them down before hand.

It should be noted that during the final interview, while going through Participant A's journal, one of the above points was clarified. She stated that it is important for students to state their feelings and ideas. It was pointed out that research shows that generally little learning is evident when students simply share opinions with no rationale for the opinions.

Following the viewing of the video-taped presentation on Socioeconomic Status of Students, Participant A stopped by the

researcher's office to discuss the subject. She did make this entry in her journal regarding Socioeconomic status.

> Socioeconomic status makes a difference as to what I have the students do. If I know the money situation, I don't expect as much for example, when it comes to buying fabric, etc. I try to work around it. I have found that socioeconomic status makes a difference with the amount of background knowledge some students have. This can be seen when talking about different kinds of foods. I do try to give them my understanding and help and fill in the gaps as best I can.

On another occasion Participant A made this entry in her journal which could relate to Socioeconomic Status of Students.

> Having Educable Mentally Retarded (EMR) students in the classroom makes a difference in teaching method. I have found it takes more student-teacher interaction with these students. I have found that the teacher has to check on these students more often, because the ones I have do not ask for much assistance on their own. I try to prevent a problem before it actually happens. Written tests have to be written in words that these students understand. I sometimes confer with the EMR teacher before a test so she can help quiz the students before they actually take it.

Participant A appeared to have missed some important points on Socioeconomic Status which came out in the tape. Namely that expectations of students from higher socioeconomic status could be different; that her strategies in dealing with them would vary from strategies dealing with lower socioeconomic status students. In her journal she mentioned the fact that five of her students were capable of higher level thinking. Those five happened to be from homes considered above average in economic status, but no reference was made to altering her questioning strategies or expectations as a result of her knowledge of socioeconomic status.

Participant A also made a journal entry regarding grouping. She said:

> I sometimes randomly pick groups or sometimes I let them pick their own groups. I have found that in some cases more work is done in groups where the students know each other. But the opposite can be true, because sometimes the students who are good friends get off on other tangents and little work is done. I make the decision on choosing groups based on the activity.

The next two observations came over a two month period. Participant A invited the researcher to observe a class in which the grouping of the class was varied. The students worked in pairs, assigned by the teacher. They role played real life situations such as: working wives, budgeting for a new car, and when to have children, all of which related to family living. All students including Jeff took part in the exercise. Each pair of students had 3 minutes to role play their topic. Discussion was not total class but in smaller groups of four or five students. One student briefly reported to the class their agreement or disagreement following each of the role playing situation discussions.

Once again the pace of this lesson went well, all objectives for the lesson were accomplished, with all role playing situations being completed. The teacher held to the time schedule of 3 minutes for each pair of students to role play. The discussion was not permitted to drag as the teacher called time after so many minutes of discussion. The observer noted that students stayed on task with their small group discussions.

The first 3 to 5 minutes of this class period was spent preparing the students on directions, guidelines and expectations for the role playing exercise. Students were given an opportunity to ask any clarifying questions.

Data collected from these two observations reflected new observed behaviors. Participant A reinforced students with positive language. Another new behavior observed was the use of overhead transparencies. The teacher lectured while using the transparencies. Students were requested to take notes due to the nature of the subject content. The teacher did move between her notes, the overhead projector and the screen. Several times she reinforced by pointing to a picture or drawing on the screen. Participant A made this entry in her journal concerning lecturing.

> Lecturing for an entire 90 minutes is usually unsuccessful if carried out very often, because students get tired and bored. It is better to put a variety of activities in a double period class or at least give the students a break somewhere at midpoint.

Some of the positive behaviors from the preceding observations were practiced. For example: thorough planning and sharing objectives with students; signaling transition in the lesson; positive reinforcing language; high student participation; good pacing of the lesson; and appropriate questioning strategies.

Classroom management was not a problem in any of these observations. The most the teacher had to do was call a student by their first name for talking to a neighbor. Participant A made this entry in her journal concerning discipline.

> This year I have not found discipline to be a major problem as I did last year. I feel this may have something to do with experience. Last year was my first year of teaching, believe me I learned a lot. I have used much of that knowledge in my teaching this year. I also believe it has to do with the students. The type of student I have this year is quite different from those last year. I think it

> will be this way each year, meaning I will have to deal with different types of students differently. Mrs. Lahr has mentioned the good discipline. I truly think it's the kids in that class.

During a post-observation conference the researcher and Participant A discussed evaluation of each lesson and of student progress. Participant A had read Chapter II, Planning and Evaluating Instruction, in the Handbook for Improving Instruction. Therefore, she was familiar with the principles of evaluating a lesson. She indicated that she did try to mentally review the lesson and assess what might have been done differently to enhance learning.

On student evaluation the teacher stated that she would only give two or three tests in Family Living. Essay questions would be given to allow latitude for student opinion. She indicated that a large portion of the student's grade was based on classroom participation and how responsible they were for class projects.

One of the big class projects was planning and implementing a mock wedding. Each class member was assigned to a committee, from securing the music for the wedding to the refreshments for the reception. Estimating the costs for all aspects of the wedding was a major objective for the activity. The researcher made an informal visit the day of the mock wedding. It should be noted that the teacher selected Jeff, the student reluctant to participate, as the groom.

During the fourth post-observation conference the remaining chapters in the Handbook for Improving Instruction was assigned. Participant A also indicated that she was interested in viewing the video-taped presentation on "The 'With-it' Teacher."

Concluding Observation

Permission was requested of Participant A for the high school principal to assist the researcher in collecting final data. Participant A was receptive to the idea. The high school principal had previous training in the observation process being utilized.

The final observation was conducted seven months after the initial observation. The unit of study was divorce. The principal agreed to focus on student physical and verbal behavior, the researcher on teacher physical and verbal behavior. The teacher had outlined specific objectives, which included: the effects of divorce on children; and statistics on remarriage on the rate of success.

The behaviors observed were varied. Student participation was high. One student, Brenda, who had not entered into many previous discussions was more open with her opinions. Thorough planning was evident. The teacher used a filmstrip and had questions prepared which related to the filmstrip. The questions were factual, inferential, and application level questions. There was variety in the lesson, with not all of the class period spent on discussion. The pace of the lesson was good and time aas appropriately allocated for the three distinct strategies. The teacher did signal transition from one strategy to the next. The transition was smooth. Concepts were reinforced visually by types of divorce being listed on the chalkboard. Teacher used appropriate wait time for student responses during the discussion. There was no time lost for managing students. The teacher did not free herself from her notes during the discussion. She stayed in one place in the room. The students were attentive during the filmstrip.

During the post-observation conference the teacher shared her pleasure that Brenda had been demonstrative in stating her position on a specific point. Brenda sometimes participated, but never to initially take a position and defend it. No new behaviors as such were observed during the final observation.

Participant A appeared to have concern for the students she taught. The journal entry below helps confirm that notion.

> Individual help to each student is very important, especially with sewing and lab work, because each student works at his/her own pace. If you make them all work at the same pace, some more advanced students will get bored and possibly disrupt the class. Keeping students busy with something which interests them helps with this problem.

The post-study questionnaire was given to Participant A during the post-observation conference. An appointment was set for the post-study interview. The journal would be collected and read at this time as well.

Post-Study Questionnaire and Interview

The first question from the pre-study questionnaire was repeated on the post-study questionnaire. It asked, "Which of the following has helped you renew yourself professionally?" They were to list those items in order of importance. The researcher was looking for participants perceived importance of some of the components of the multi-dimensional observation supervision process. Participant A listed them in the following order:

1. Experimenting with new methods and techniques
2. College course work
3. Self-assessment

4. Feedback following classroom observations
5. Observing a colleague
6. Discussing methods and techniques with colleagues
7. Simulation/role playing
8. Professional reading
9. Attending professional meetings
10. Hobbies
11. Travel

Participant A's first choice had been her first choice on the pre-study questionnaire. The biggest variance was with college course work which ranked eleventh on the pre-study, but second on the post-study. When asked why the difference, Participant A responded, "I guess being a participant in your study reminded me of my growth as a student at Ohio State. There were similarities."

Self-assessment and feedback following classroom observations, both being components of the multi-dimensional observation supervision process exchanged slots from the pre- and post-study. On the pre-study feedback had been ranked third, self-assessment ranked fourth. On the post-study, feedback ranked fourth and self-assessment third.

The second post-study question was, "Which of the procedures listed above, which we have gone through during the study, have been most helpful to you?" Her response was, "Feedback from supervisor/ administrator following classroom observation, I could actually see on paper what I did in class. It is almost like seeing an instant replay. It made it easy to discuss the situation (I could pick out areas to explain in more detail)."

The eleven principles and processes which emerged from the literature were formulated into a question on the post-study questionnaire.

The question was: "Briefly state how the following concepts could be used to improve instruction and how you have used them to be a more effective teacher." Again the researcher categorized the responses according to the following codes: UC—understands concepts; IU—incomplete understanding; NR—no response. Participant A's composite from the pre- and post-study is shown below.

	Pre	Post
Levels of questioning	NR	UC
Methods of presentation	IU	UC
Pacing/variety of lesson	NR	UC
Student participation	NR	IU
Planning	IU	IU
Learning environment	NR	UC
Student socioeconomic status	IU	IU
Corrective feedback	IU	IU
Classroom management	NR	UC
Motivation	IU	UC
Number of student practices	NR	IU

Participant A did show a gain from no UC (understands concept) on the pre-study questionnaire, to six UC's on the post-study. There were six NR (no response) and five IU (incomplete inderstanding) on the pre-study. However, the NR's were reduced to zero on the post-study while the IU's remained the same. Three categories remained the same.

It should be noted that the responses were coded on an intellectual level and not on the level of practical application of any of the principles or processes. Participant A demonstrated sound classroom practices in student participation, planning, and student socioeconomic status. It appeared that the practices had been internalized and were a part of Participant A's teaching behaviors. However, she was unable to satisfactorily verbalize their importance according to the research data she had read.

Participant A's response to motivation was appropriate. She said, "The teacher should be motivated as well as the students. Enthusiasm is very important. I have found that if I am down, sometimes the students are also."

Question four on the post-study questionnaire related directly to the fourth question guiding the study. The respondents were asked to choose two or three components of the six components in the multi-dimensional observation supervision process which were most beneficial in altering their instruction. Participant A chose the following:

Data from observation.

Post-observation conference with feedback.

Self-assessment through the journal.

The respondent was then asked which one of the above might work best in sustaining professional growth and why? She listed the following, "Post-observation conference with feedback, I get an objective idea of how I teach and suggestions for improvement or change. I can actually see it on paper."

Participant A was asked what she felt the benefits were of being a participant in the study. She indicated that she felt it was possible for "someone to constructively look at the way I teach." She went on to state that she could pick up new ideas in teaching and obtain suggestions on ways to improve.

Summary

A total of six observations were made of Participant A's Family Living Class. Four were by appointment and two by invitation of the

teacher. One invitation was to the class which different grouping strategy could be observed. The other invitation was in informal visit and data were not collected. It involved the mock wedding which the Family Living Class had planned and implemented, culminating a unit of study.

Participant A was able to maintain effective teaching practices such as: thorough planning; sharing objectives with students; pacing the lessons to achieve objectives; encouraging high student participation; involving students in planning; utilizing media for visual reinforcement; maintaining good classroom management; and using positive reinforcing language.

The most obvious alteration in teaching strategies was with the teacher's questioning techniques. She was aware that by the nature of the class, opinion responses from students were appropriate. However, by planning ahead and anticipating those student opinion responses, she was able to extend the questions to a high level of cognition. The students were forced to justify their opinions based on factual information.

The second alteration the teacher demonstrated was in her grouping patterns. She found that she could more efficiently achieve lesson objectives through a different grouping strategy. Participant A indicated that she would try some different grouping patterns in her other Home Economics classes.

Two behaviors which were not altered appreciably were teacher movement and voice modulation. Both of these behaviors were called to

her attention. It was apparent that she did not feel that her movement was ineffective. Her position in the room changed from observation to observation, but once she established her position she did not move. She always had her class notes in front of her and she always stood. She was never observed sitting behind her desk.

In addition to the many effective instructional patterns Participant A practiced she liked to be involved with her students. Evidence of this was recorded in her journal.

> I very much believe a teacher, especially a home ec teacher, needs to get involved with her students. I believe it is good to joke around with students sometimes. It makes the students more at ease. For example maybe one day a month I would let the students get off on a tangent (it is usually about their families). It is usually a fun time. It also lets the students release some frustrations that have built up.

Participant A was involved with her students by attending co-curricular functions. Her attendance was observed at Honor Banquets, sporting events, music functions and by helping prepare and serve the 6:00 a.m. Senior Breakfast.

Participant A was conscientious about her participation in this study. She made many entries in her journal, she did not cancel an observation appointment, she worked through the Handbook for Improving Instruction and she came by the researcher's office on several occasions to discuss a certain topic.

Participant A's future plans call for enrolling in graduate school to work on a Masters degree.

III. CASE OF PARTICIPANT B

Context Information

Participant B is in his first year of teaching. He graduated from Ashland College in Ohio. He graduated in 1979 with a Bachelor of Science in Music which certified him to teach music K-12. He has not taken any additional hours beyond the Bachelors degeee. His present teaching assignment is half-time high school music and half-time elementary music.

Participant B asked several questions about the study during the general high school saaff meeting. He was apprehensive to be a participant since it was his first year. He half-jokingly said to the researcher, "But I might get fired!" The researcher reassured Participant B that it would be a learning experience for him and the researcher. After due consideration Participant B decided that it was worth the risk and agreed to be a participant.

Initial Meeting with Participant

During the initial meeting with Participant B his role in the case study was explained. The components of the multi-dimensional observation supervision process were reviewed. It was explained that independent work would be expected, such as viewing the video-taped presentations and reading the Handbook for Improving Instruction. The Handbook and a blank journal notebook were given to Participant B. The use of the journal notebook was explained.

Participant B asked if he could use a tape recorder rather than writing in a journal. The researcher explained that continuous

reactions and comments were expected throughout the study. Participant B replied that he understood but he had kept a journal via tape recorder for one semester in college and it had worked out fine. Consequently, agreement was reached that a tape recorder rather than writing in a journal would be used.

The class for observation was established as the high school choir. The choir was made up of thirty-four students, grades 9-12. The pre-study questionnaire was given to Participant B at this time. An appointment for the next day was set to go over the questionnaire and conduct the initial interview.

Pre-Study Questionnaire/Interview

Participant B filled out the pre-study questionnaire which was clarified and extended during the pre-study interview. The first question on the interview asked how Participant B had renewed himself professionally up to this time. From a list of eleven items he was to rank them according to importance. His response was:

1. Observing a colleague
2. Discussing methods and techniques with colleagues
3. Experimenting with new methods and techniques
4. College course work
5. Travel
6. Professional reading
7. Feedback following classroom observations
8. Attending professional meetings
9. Self-assessment
10. Hobbies
11. Simulation/role playing

The next question asked was, "How have your first two choices improved your competency as a teacher?" Participant B clarified that

since he had been teaching for only about a month, his response was based on his student teaching experience. His student teaching had been with an exemplary choir director in a large inner city high school. His response to the question was:

> My first two choices go hand in hand, by observing I learn what works for other people and by discussing I learn why the things I observed work. I then try these observations on my own class.

In response to the question, "What are some of your current practices which make you an effective classroom teacher?" He stated:

> I develop an intense pride in what the choir is doing. I encourage imitation of the teacher (I do what I want them to do). I set up rules to let the student know exactly what is expected.

Participant B was asked to share his knowledge on eleven instructional principles and processes which consistently emerged from the literature as having positive effects on classroom transactions. This question directly related to the first question guiding the study. The researcher assessed the response according to the codes which follow: UC—understands concept; IU—incomplete understanding; NR—no response. Participant B's composite is shown below.

Levels of questioning	NR
Methods of presentation	UC
Pacing/variety of lesson	IU
Student Participation	UC
Planning	IU
Learning Environment	IU
Student Socioeconomic Status	NR
Corrective Feedback	IU
Classroom Management	IU
Motivation	IU
Number of Student Practices	NR

Two of the responses were graded "understands concept." His response to "methods of presentation" was not a traditional response,

but seemed appropriate for a choir director. His response was, "A choir director has the duty to put abstract ideas into concrete patterns and must present this to the choir."

The final question on the questionnaire requested Participant B to explain if he felt that he had a good knowledge of what constituted effective teaching behaviors. His response was:

> I know what works for me. However, one must remember that a choir teacher is unlike any other teacher. He works only with teaching (learning) through doing. An effective teaching behavior is one that entices students to respond correctly.

During the initial interview the last question was extended, by asking where and how he had learned what effective teaching behaviors were. His comment was:

> No one ever pointed out what effective behaviors were, but I assume those teachers who get results are doing something right. I have asked them and observed them, but they never articulated the effective behaviors.

Participant B shared that he learned a great deal from the cooperating teacher with whom he had student taught. He indicated that "she gave insights as to how to redirect for correct response. She constantly gave me feedback on how I was doing and she had a great concern for the affective—for the choir members showing their feelings." He felt that she had influenced him greatly, as did his high school choir director who influenced him to go into music.

When asked if the effective behaviors practiced by the cooperating teacher were based on research findings, Participant B stated that he felt her practices were half from research reported in professional journals and half experimentation by adapting to a need.

The final interview question was: "What do you expect to learn from this experience?" Participant B responded:

> I may be crazy telling you this, but being a first year teacher, there's a lot I don't know and need comments on. I'm flying by the seat of my pants. I crave ideas and I need to know how to get enthusiasm going. I will need more affective development of the students, perhaps the observations can give feedback on how to affect the students.

During the initial interview it was clarified that the high school choir would be part of the case study. The choir consisted of thirty-four students, ninth through twelfth grades. General knowledge of music was almost nonexistent in the majority of the students and only a few of the choir members read music. Participant B explained that due to a scheduling problem some of the students took choir during their lunch period. Consequently, about nine students came in after they had eaten lunch and after the period had started.

An appointment was set for the initial observation. The times were established for the pre-conference, the observation, and the post-conference.

Initial Observation

Participant B planned to rehearse three numbers during choir. The students were at different places with the numbers: one just learning the notes; the other two numbers the notes had been learned but they needed embellishment.

The observer focus was on the teacher's physical and verbal behavior. A classroom map was used to record teacher physical behavior.

The researcher kept a verbal log of the transactions. As a result of the observation the following patterns were listed.

1. Teacher had objectives well in mind for the class, but did not share the objectives with the students.
2. No lapse time was observed between the rehearsal of each of the three numbers.
3. Pace of lesson—considerably more time was spent on the first number (25 minutes) than on the last two (8 minutes and 5 minutes, respectively).
4. Teacher modeled expected behavior three times during the period.
5. Students appeared to be very task oriented. When the teacher made a request for their participation, they responded immediately with no time wasted.
6. Teacher moved among singers as they rehearsed the first number. They were learning notes and parts on this number.
7. Teacher used sarcasm with the students.
8. Teacher used positive reinforcing language with students: "thank you"; "working good today people"; "you can do it."

There were six interchanges between sets of students recorded by the researcher. The nature of their conversations were unknown, but it happened during a time when they were waiting to rehearse their parts. Some students were observed following along with the music when they weren't participating.

Participant B freed himself from the director's stand to be among the singers as they rehearsed their parts. The directing as such was

very animated. The teacher had a habit of looking over his glasses when speaking to the students.

During the post-observation conference the observed patterns were analyzed. Attention was drawn to the sarcasm he used with students. He felt it was effective for the "shock value." The researcher pointed out that it didn't seem to be consistent with the positive reinforcing language he used.

The teacher modeled expected behavior three times. He was very interested in learning more about modeling. Consequently, the video-taped presentation on modeling was suggested. In addition, Chapter V, Applying Teacher Effectiveness Strategies, of the Handbook for Improving Instruction was assigned.

It was pointed out that the teacher knew the objectives for the rehearsal, but it would be wise to share those objectives with the students. Participant B shared several of his goals for the year. Those goals were: (a) Set up rules and expectations of the choir and communicate them clearly to the students. Participant B was adamant about holding to those expectations despite students wanting to drop out of choir. He told them that their goal was to attain a I Ranking at District competition in March; that they would know by their own evaluation when they were doing something correct or incorrect; that there would be no student/teacher planning in the selection of music, he would make the selections since he knew the best vehicle for choir performances. (b) The students would understand correct methods because he would model for them what was expected as it pertained to enunciation, phrasing, and breathing.

Intermediate Observations/Journal Entries

The second observation was conducted ten days after the first observation. The choir was rehearsing the same three numbers. The rehearsal took place in the band room rather than the choir room. The choir stood on risers the entire period.

Participant B did list for the students his objectives for the lesson. He also reinforced his expectations of how he wanted them to perform. The teacher modeled expected behavior eleven times, used positive reinforcing language and the pace of the lesson was more balanced. A new behavior was observed. Participant B used corrective feedback for students breathing improperly. The students appeared attentive and listened when Participant B gave directions. There was no lapse time observed.

A consistent pattern for Participant B was his saying "thank you" to students when they followed his request. During the second observation he had warned students of a very difficult task in a specific number. He said, "This might be the hardest thing we're going to do—you're doing the things I'm asking, but it's still too choppy." They rehearsed that segment several times, starting and stopping. Finally he enthusiastically said, "You did it right, I just want to give you a chance to do it right a couple more times so you hear how it sounds."

The researcher understood from the high school principal that some of the choir members had come to him with their displeasure over choir. The director would ask the choir to do things that apparently seemed

ridiculous and embarrassing to them. Participant B said over and over, "Trust me people, you won't sound dumb and you won't look dumb, trust me."

Positive reinforcing language such as the following were recorded: "You did a good job coming in basses"; "That's really nice, that really is, that tone"; "I really love you when you do so well."

During the third observation which was a month and a half later, a new behavior was observed. Participant B requested that students put their music away and perform from memory. One female student did not. Participant B marched back to her and abruptly grabbed the music away from her. The group continued singing just as though they had not noticed his behavior. Twice he singled out two female students for their poor performance. To the one student he said, "R_____ that's not enough out of you—it's jagged" and "N_____ you can do this better." He did not use sarcasm as he had in the first observation. Some of the behaviors still appeared inconsistent with affective development of the choir.

During a given period, Participant B did exhibit many varied behaviors. Rehearsals were task oriented. It was not unusual for him to remove his jacket or sweater midway through the period. Shortly after the "music grabbing" incident, Participant B made this request: "Tenors, you come in when I point to you." A male student S_____ responded, "You're the boss!" Participant B responded, "Thank you," with Student S retorting "You're welcome."

The above incident was discussed during the post-observation conference. The researcher noted that Student S's comments had not

offended Participant B. His response was, "Do you know the reason why? Because S. is just like I was as a student. The only difference is S. is mischievous and I was obnoxious." Participant B went on to tell the following story of himself.

> When I was a Senior we had a librarian who absolutely hated kids. She didn't like us messing up her library. One day a group of us decided to "fix her." One of the fellows went to the pay phone at shcool and impersonating a book salesman called the librarian to the phone. While she was gone we moved every table and chair out of the library. When she returned she completely fell apart, she started crying and went for the principal.

Participant B went on to relate, "That's the kind of thing S. would do, and think it funny. Before he graduates this year, I'm going to tell him that story (it's too early in the school year to tell him now) and let him know why I tolerate his antics—I was just like him."

The discussion turned toward the music grabbing incident and the singling out of the two girls. He admitted that he embarrassed Student R with his comments and was sorry he had said anything. He felt his grabbing the music was justified, since part of the discipline he was trying to instill in the choir was listening to him. A lengthy discussion followed. Again the point was made that he wanted affective development of his people, he wanted them to trust him. He had to have a sound rapport with students to be successful. This topic was not brought to complete closure at this time.

Further assignments were made for him to read in the Handbook. During the second and third post-observation conferences it was suggested that he view the video-taped presentation on The "Withit"

Teacher and Socioeconomic Status of Students. He agreed to view the tapes and indicated that he had some strong feelings about SES as it pertains to music students.

The researcher became aware that there were some problems within the choir. The high school principal reported that during the first two months of school, several students, good vocal students wanted to drop choir. Two students had skipped choir. They gave the excuse that they were held up in the lunch line. The problem appeared to be the personality of the choir director. The principal had met with Participant B and had observed the choir. The principal found him to be open to criticism and definitely wanting to be successful in agreement with the researcher's observations. It appeared that the students were getting mixed cues from Participant B which did not help with their understanding him as a person. Good rapport was lacking. One thing the choir was sure of, he was expecting far more perfection than they had been accustomed and they were unsure if they could meet such high expectations.

At no time did Participant B share with the researcher the concerns of the principal which were similar to the researcher's i.e. rapport with the students. During a conference in the researcher's office he did share the problem of the two students skipping choir. The researcher pointed out that the one male student involved was perhaps intimidated by Participant B and not a "smart aleck" as the teacher perceived him to be. Participant B agreed that maybe he had perceived him incorrectly and would talk to him one to one. He also stated that he had talked to

the other young man (who was a Senior and also wanted to drop choir, but a real asset vocally to choir) but would talk to him again and try to relate better to the young man. This conference took place in the researcher's office.

The following entry was made on tape by Participant B about five months into the study.

> If we are to attain my expectations, there must be a trust relationship—a familial atmosphere. This means that I must be more vulnerable with them for a trust relationship to develop. It turns out to be more like family. We aren't afraid to show emotion, to appear a little ridiculous in front of each other. If we are to perform as a unit, I believe that this is vitally important.

This comment was also on his tape:

> When dealing with artistic material, students automatically set up defense mechanisms. They say, "I can't sing, I can't dance, I can't paint," by setting up defense they eliminate approval. . . . they let you know right off they're not so good. When one sets up trust atmosphere, the teacher must risk, must be vulnerable. I can't ask the students to do something I can't do myself.

The comments by Participant B leads the researcher to believe that he was thinking very seriously about the feedback given him. Those comments juxtaposed with earlier comments on the tape, give more insight to the rather complicated Participant B.

> I just found out Mrs. H_____ said that I am a perfectionist. . . . indeed I am and I have told the students that I am. But I think the students appreciate the fact that I am not a heavy. I am a dictator, but I am not unreasonable.

Another entry also gives insight to Participant B.

> I try to set aside time for fun, very important. I expect them to work very hard, therefore they need a break—I need a break from working very hard. I let my hair down, talk, tell stories, I think they trust me. I don't say cruel things about them, at least not to embarrass them, don't mean to but sometimes it has embarrassed students with my comments.

Participant B did view the video-taped presentation on socioeconomic status of students. He came into the researcher's office to discuss the tape. He wanted to make the point that he did not feel the research findings on SES had full implications for vocal teachers, particularly choir directors. He stated,

> Music is something that crosses social and economic lines. There might be drawbacks with instrumental music, students from lower socioeconomic homes cannot always afford an instrument. Not so, with choir. When I student taught, the choir was full of poor kids, in fact they couldn't read the words, they were taught by rote. But boy did they have a feeling for the music. The artistic qualities seemed to come easier to the poorer students. They were not afraid to show emotion. I think it's more socially acceptable for poor people to show emotion. The kids from better homes checked their emotions and it was reflected in their singing.

He went on to say,

> Expectations were just as high for those kids from lower socioeconomic homes and they met that expectation. The choir offered them some self-respect, something they could be very proud of. I don't disagree with the research findings, I just wanted to let you know I think it has different implications for choirs. I feel that I treated them the same as kids from better homes, but learning the music was altered, I guess that's part of altering instruction.

Toward the end of his journal tape, Participant B made this entry:

> I feel an effective teaching behavior is humor. When I started teaching I never expected to use humor to the extent that I do. In fact, I've never had a teacher use humor like I do. But it works. After difficult rehearsals it eases the tension for all of us. I need it too.

Mid-way through the study, the researcher attended a public concert by the choir. The choir was very well received by the public and did an outstanding job. No one dropped out of choir and they seemed proud of themselves for their accomplishments. They still had a big hurdle; that was the District II Music Competition.

Concluding Observation

The high school principal and the researcher cooperated in the final observation. The principal focused on the choir members; the researcher on the choir director. The observation took place in the band room. The choir stood on risers for their rehearsal which was the entire period. The numbers they were rehearsing were for the District II Competition.

During the pre-observation conference Participant B wanted to share his perceptions of the students—the learner characteristics. He commented,

> These students realize that the upcoming competition is very important and is extremely important to me personally and professionally. To receive a I rating can be compared to a coach's win/loss record. These students have progressed, they are markedly talented. They are very hard workers, sensitive, feeling people. Their aural depth has come a long way. They now pay attention to those things they were not aware of before. I hope choir has enriched their lives by being more aware of music.

He went on to report, "at the beginning of the year they were up tight—I was up tight. I truly feel the choir became a vehicle for letting out pent up emotions. They are feeling now, not as defensive, more open and trusting. They can actually 'experience' a number."

Several patterns of behavior were the same as the first observation, but now Participant B knew that they were positive behaviors and appeared to practice them with more confidence. For example, the teacher had the objectives for the lesson well in mind but he shared those objectives with the students. Teacher modeling is another pattern which was observed three times during the initial observation. Participant B

became very interested in teacher modeling as a skill. He consistently used teacher modeling and in a more thorough manner than in the first observation. He was unaware that this teaching skill could play such an important role in student learning (performance). Participant B did continue to use positive reinforcing language.

A new pattern was observed during the final observation, nonverbal communication. This pattern had been used during other observations, the researcher just had not caught it before. Participant B had certain nonverbal messages to indicate specific things to the students. For example, if he pointed up, the students were singing flat; if he pointed down they were singing sharp; palm of hand down about waist high, they were singing too loud.

Other behaviors observed during the final observation were: high teacher expectations were communicated to students. This was demonstrated by stopping rehearsal at least 11 times during 18 minute period. Corrective feedback was given during this time. The teacher pointed out that as the choir progressed his corrective feedback became more sophisticated. In many cases the teacher modeled what he wanted the students to do when giving corrective feedback. It might have been in the form of enunciation, phrasing or breathing techniques. The teacher did demonstrate a sense of humor. One comment he made was: "Now you can talk a little, (about two seconds passed) stop talking." Another comment was, "If I'd sing for you, it would be great." There was no time wasted between rehearsals of the three numbers. The students were very task oriented. There were no management problems at all. During

the observation, the teacher reinforced to students the rewards for their hard work and how close they were to the goals set at the beginning of the year. He pointed out that perfection and accomplishment were rewards in and of themselves, but getting a I rating at competition would be the ultimate reward. The students did appear enthusiastic as demonstrated by their smiles, nodding head to music, tapping feet, and general bouncing. The students did seem freer to show emotion with their music without being embarrassed. Likewise the teacher maintained high level of enthusiasm throughout the period.

During the post-observation conference the teacher shared his pleasure with how far the group had come since the first of the school year. He told the researcher that he had a surprise. He said, "I know you didn't ask me to do this, but I thought it would be fun since the choir was involved in your study. We made a video-tape of the choir at the beginning of the school year. We just made another tape. Even a nonprofessional can see how far they have come, technically speaking." The researcher was surprised that Participant B had taken the initiative to video-tape the choir. Apparently he believed that he could help the students reach his performance expectations.

Participant B went into detail on how he had altered enunciation practices of the choir during an earlier rehearsal. He explained,

> The case of Bach's writing is a good example. I explained to students how Bach's music was written. During Bach's period, the music was written for instruments, it was not intended to be sung, the qualities of the voice were not considered when these lines were written. Consequently, students must alter enunciation for the best quality. I modeled this for students saying it the way they were saying it and then saying it correctly. The students demonstrated their ability to do it correctly today when they sang, "Sing Praise to Christ."

The last entry Participant B made on his tape reveals some self-perceptions. Here is the last entry:

> Effective teacher behaviors for choir directors are a little harder to define. Our grouping strategies are dictated by the music we are doing, and even at that the singers simply change their positions to one another. Questioning strategies are seldom used by choir directors. In choir situations the ways of testing effective teacher behaviors are almost immediate, if you're an effective teacher the students are doing what you are asking of them, if not, the students are throwing spit wads at the accompanist! My most effective teaching behaviors this year were modeling and creating a family atmosphere. One last thing. One must outdo the students. If you expect 100 percent from students, the teacher must give 150 percent performance.

The post-study questionnaire was given to Participant B during the post-observation conference. An appointment was set for the post-study interview. Participant B's taped recorded journal was played at this time.

Post-Study Questionnaire and Interview

The first question from the pre-study questionnaire was repeated on the post-study questionnaire. It asked, "Which of the following has helped you renew yourself professionally?" Participants were to list those items in order of importance. The researcher was looking for participants perceived importance of some of the components of the multi-dimensional observation/supervision process. Participant B listed them in the following order:

1. Observing a colleague
2. Discussing methods and techniques with colleagues
3. College course work
4. Experimenting with new methods and techniques
5. Self-Assessment
6. Feedback following classroom observations

7. Simulation/role playing
8. Hobbies
9. Travel
10. Professional reading
11. Attending professional meetings

Participant B maintained consistency on his first two choices from the pre-study to the post-study. The third and fourth positions exchanged spots from the pre-study to the post-study. Travel and self-assessment exchanged positions, travel moved from fifth place on the pre-study to ninth place on the post-study. However, self-assessment, which was a component of the multi-dimensional observation supervision process moved from ninth place on the pre-study to fifth place on the post-study. Likewise feedback following classroom observation, which was also a component of the multi-dimensional observation supervision process moved up one place.

It should be noted that despite Participant B listing "discussing methods and techniques with colleagues" as his second choice in the post-study, during the post-study interview he was critical of the researcher for not organizing more opportunities for discussion of methods and techniques, particularly with the other participants. He stated,

> Support to me from the other two participants was almost nonexistent. You (the researcher) should have called meetings for the three of us while the study was going on. My support came from you and four other people on staff. Granted, those four people are my friends and I trust them and they gave me good feedback, but I think the other two participants could have helped too, if we could have had more discussion on our methods and techniques.

The second post-study question was, "Which of the procedures listed above which we have gone through during the study have been most helpful

to you?" His response was, "Self-assessment and feedback from supervisor/administrator following classroom observation. These two things have helped me view myself as a student would view."

The eleven principles and processes which emerged from the literature were formulated into a question on the post-study questionnaire. The question was: "Briefly state how the following concepts could be used to improve instruction and how you have used them to be a more effective teacher." These responses were categorized according to the following codes: UC—understands concept; IU—incomplete understanding; NR—no response. Participant B's composite from the pre- and post-study is shown below.

	Pre	Post
Levels of Questioning	NR	NR
Methods of Presentation	UC	NR
Pacing/Variety of Lesson	IU	UC
Student Participation	UC	UC
Planning	IU	IU
Learning Enviornment	IU	IU
Student Socioeconomic Status	NR	UC
Corrective Feedback	IU	UC
Classroom Management	IU	UC
Motivation	IU	IU
Number of Student Practice	NR	UC

Participant B gave three nonresponses on the pre-study and two on the post-study. Two categories reflecting no response on the post-study were not applicable to his discipline. Five categories remained the same. He did show improvement by going from two understand concepts on the pre-study to six on the post-study. Participant B did come into the researcher's office to discuss several of the topics listed above.

Question four on the post-study questionnaire related directly to the fourth question guiding the study. The respondents were asked to choose two or three components of the six components in the multi-dimensional observation/supervision process which were most beneficial in altering their instruction. Participant B chose the following:

Post-observation conference with feedback

Data from observation

The respondent was asked which one of the above might work best in sustaining professional growth and why. He listed the following, "Feedback from people helps me to see what I miss." He also added that he felt a principal or supervisor could influence his teaching. He went on to say, "It is nice to know someone is interested in what I'm doing, be it a supervisor, principal or superintendent."

The final interview with Participant B lasted close to two hours. He reflected on his feelings previous to the study, that he was hesitant to "risk" being a participant, but he stated, "I'm glad I went ahead and agreed to be a participant. I realize now what I as a person can give, my uniqueness. I can do things other people can't do. I didn't have that confidence at the beginning of the school year."

He went on to say, "I am not as happy with my Junior High classes. They still don't understand me. I'm afraid to use humor with them. I'm just not as comfortable in Junior High. I have tried some techniques from this study, it's getting better, but I know I'll work harder in that area next year."

The researcher commented that one of his big successes was establishing the trust relationship with students which he felt was so important. The researcher asked for his perceptions of how this change came about.

His response was:

> Once I got my feet on the ground and the school year was underway, and from some feedback I received, I realized the personal worth of those students was so very important, I tried to communicate to the kids "you're okay" and as I concentrated on trying to communicate that, more and more I believed it. Frankly, I began feeling a little better about "me" as their choir director. You know, I think the choir counts me as a friend, a task master, but a friend. I realize I can't have that kind of relationship with other classes, but I think it worked in choir.

Participant B then asked the researcher if she had heard anything about rehearsal practices for the school musical, Oklahoma. The researcher responded that she had heard nothing. He went on to say,

> I want you to know I enjoyed every rehearsal, I enjoyed working with those kids. Even the night they picked me up (and I'm afraid of heights) and were going to throw me off the stage. I knew they wouldn't of course, they know how far they can go with me. Anyway, I really got to know the kids as people and I liked that.

He made one final comment about self-assessment. He said, "I learned from the self-assessment and I also realize self-assessment never stops. I'll probably always ask myself, 'How am I doing?'"

Participant B was asked what he felt the benefits were of being a participant in the study. His response was, "I feel I benefited in several ways but mainly this study helped me become more sure of my teaching methods."

Summary

The researcher observed the choir four times. Data were collected and feedback given for each of these visits. One informal visit was made by invitation of Participant B. No formal data were collected during this visit. The researcher did attend several public performances of the choir. Participant B was able to maintain effective teaching practices such as:

Planning in detail what the students would be doing.

Sharing objectives with the students.

Pacing the lesson so objectives were met.

Made use of nonverbal communication.

Practiced good classroom management.

Making maximum use of teacher modeling.

Providing corrective feedback which became more sophisticated as student needs changed.

Setting high expectations and helping students achieve expectations.

Maintaining high student participation.

Using positive reinforcing language.

The biggest change occurred with the teacher's relationship with the students. He replaced or tempered the sarcasm with humor. In so doing he was better able to achieve the affective development of the students which he was seeking. He used less embarrassment of students. This behavior was still practiced to a degree, but it didn't seem to come off as abrasively as when it was used at the beginning of the year.

Even though Participant B used modeling during the first observation, he was unaware of the potential it promised for better

instruction. He learned to use the skill effectively, many times combining it with corrective feedback. The first observation, modeling was used three times. The subsequent observations it was used eleven times, six times and nine times respectively.

The data do indicate alterations in Participant B's teaching patterns. He was open to new ideas and suggestions and was not set with his methodology. Positive changes were able to be accomplished. The choir did receive a I rating at the District Music Competition in March. This prestigious rating gave Participant B a great deal of satisfaction, indeed confidence, that he must have been using some effective practices since the beginning of the school year.

Participant B is interested in professional growth, even though at times during the study he seemed intimidated by the observations and being involved in the case study. The researcher made an effort to establish a better trust relationship with Participant B. The high school principal also played a role of support and trust. He backed Participant B and tried to help the students understand where their choir director was coming from. Participant B received a great deal of positive feedback from the principal.

The future plans of Participant B call for graduate school with emphasis on speech and drama. He indicated that he would like to teach at the college level someday.

IV. CASE OF PARTICIPANT C

Context Information

Participant C has 18 years of teaching experience. He graduated from Ohio State University in 1961 with a Bachelor of Science in Education. He has taken 30 quarter hours beyond the Bachelors degree, but does not have a Masters degree. His college major was Mathematics with a minor in Science. He presently teaches Science. He is president of the local teachers organization, chief negotiator for them and co-chairman of the Athletic Boosters organization. In addition he is active in civic organizations such as the community band.

There was no hesitation from Participant C to volunteer as participant. He came into the researcher's office after he received the initial memo and before the general high school staff meeting when the study was explained. He simply asked what the researcher wanted him to do. The researcher explained that everything would be gone over at the initial meeting.

Initial Meeting with Participant

During the initial meeting with Participant C his role in the case study was explained. The components of the multi-dimensional observation/supervision process were reviewed. It was explained that independent work would be expected such as: viewing the video-taped presentations and reading the Handbook for Improving Instruction. The researcher requested that a journal be kept of impressions and self-assessments of the various techniques. The Handbook and a blank journal notebook were given to Participant C.

The class for observation was established as the Freshman IPS (Introductory Physical Science) class. Twenty above average students made up the class. It is a process approach to Science. The pre-study questionnaire was given to Participant C. An appointment was set to go over the questionnaire and conduct the initial interview.

Pre-Study Questionnaire/Interview

Participant C filled out the pre-study questionnaire which was clarified and extended during the pre-study interview. The first question on the questionnaire asked how Participant C had renewed himself professionally up to this time. From a list of eleven items he was to rank them according to importance. He listed only five out of the eleven. His response was:

1. Travel
2. Professional reading
3. Self-assessment
4. Hobbies
5. Experimenting with new methods and techniques

The next question was, "How have your first two choices improved your competency as a teacher?" He replied:

> To be an educator you need to know why you spend your time with students. What I read and what I see make me realize the possibilities that await the well prepared.

In response to the question, "What are some of your current practices which make you an effective classroom teacher?" He stated:

> Adaptability—the ability to change approach. Every individual, every group is different. I try to give every student a fair chance. That doesn't mean I treat them all alike. I use natural and developed competitive instincts. Keep students off balance (if you want to avoid boring them).

Participant C was asked to share his knowledge on eleven instructional principles and processes which consistently emerged from the literature as having positive effects on classroom transactions. This question directly related to the first question guiding the study. The researcher categorized the responses according to the codes which follow: UC—understands concept; IU—incomplete understanding; NR—no response. Participant C's composite is shown below.

Levels of questioning	IU
Methods of presentation	IU
Pacing/variety of lesson	IU
Student participation	IU
Planning	IU
Learning Environment	UC
Student Socioeconomic Status	NR
Corrective Feedback	IU
Classroom Management	NR
Motivation	IU
Number of Student Practices	IU

Participant C appeared to have more than initial knowledge of the principles and processes. Seventy-two percent of the responses were incomplete understanding. It did demonstrate that he had some knowledge of the principle and processes. Eighteen percent of the responses were coded no response.

The final question on the questionnaire requested Participant C to explain if he felt that he had a good knowledge of what constituted effective teaching behaviors. Participant C's response was:

"Yes, I have had experience at many levels."

The questionnaire was extended during the interview. The question was asked, "Where and how did you learn what effective teaching behaviors were?" Participant C responded that he guessed it was poor

examples from the teachers he had in high school. He avoided many of the patterns by which he had been taught and had observed, mainly because they didn't work. He went on to state,

> Students dislike false compliments, they can spot a phoney. So you've got to do what fits you. I had some phoney high school teachers. When I went to college I had no intention of being a teacher, but as a college Sophomore I took a Zoology course that was practical—it was a "hands on" approach. I switched to education, guess looking back that Zoology Professor influenced my teaching style.

He didn't really know if the behaviors he had learned and used were based on research, but he was adamant in pointing out that "from his experience" his methods worked.

The final question asked during the pre-study interview was: "What do you expect to learn from this experience?" Participant C responded that perhaps he could be a support person to the other participants.

During the interview it was reestablished that the Freshman IPS class would be the class participating in the case study. Participant C had taught IPS to Freshmen the past eight years. An appointment was set for the initial observation. Times were established for the pre-conference, the observation, and the post-conference.

Initial Observation

The IPS (Introductory Physical Science) curriculum is organized in modules: pre-lab exercises; the experiment; and post-lab exercises. Participant C had already conducted the pre-lab exercises before the initial observation. The lab experiment involved learning to use the

balances to scientifically establish the preciseness of measurement. The purpose of the lab had been established for the students. The teacher served as facilitator for the lab, monitoring the students working independently. The teacher hoped to start the post-lab during the initial observation.

The observer focus was the teacher movement and if possible log the interactions between teacher and students. As a result of the observation the following data were collected.

1. Teacher shared objectives of lesson, setting the purpose for the exercise, reviewed expectations.
2. Teacher served as facilitator to students during lab, interacting with students more than 17 times.
3. Teacher modeled behavior by demonstrating how to accurately measure substance and he asked appropriate questions to guide their work.
4. Teacher planned this lesson with two teaching strategies in mind.
5. Student participation was high, students were task oriented, even though working independently there was no lapse time observed.
6. Teacher provided corrective feedback to students.
7. Teacher used visual reinforcement by listing data from the experiment on the board.

The teacher did get to the post-lab exercise. The teacher used the chalkboard to compare data from students. He directed the discussion,

asking higher level questions of the students for validation of their results.

During the post-observation conference the data were discussed. The lesson had appeared to go very well, with objectives for the lesson being met. The structure of the IPS program gave the teacher little latitude in teaching strategies. Everything was delineated step by step. The only goal established was better written, detailed plans, which were to be handed in each Friday. He pointed out that he did plan thoroughly. Being very familiar with the material, he didn't write plans in detail. He defended this practice by saying, "I am always aware of that teachable moment. If I see an opportunity to give students something that was not called for in that lesson, I do it. Many times students are working an experiment and the questions they raise indicates that perhaps they are ready for new information."

The researcher suggested that Participant C start reading in the Handbook for Improving Instruction, Chapter II, Planning and Evaluating Instruction. No video-taped presentation was assigned at this time.

Participant C gave the appearance of being very confident and he did not appear to feel there were many inadequacies in his teaching. He does have a reputation of being a master teacher. On several occasions the researcher had talked to students who were being expelled from school or wanting to drop out. Consistently they praised Participant C as a teacher, stating they learned from him and they liked his class. The researcher expected Participant C to establish an area of growth in which he wanted to concentrate. The only area identified initially was writing out detailed lesson plans.

The Teacher Effectiveness Form was returned to Participant C several days after the initial observation. He took the form as matter of fact without making any comment. The researcher asked when the next observation could be conducted. He indicated that he would need to let me know. Since the class was taught in modules, he wasn't sure when the next lab (experiments) and post-lab would be scheduled.

Intermediate Observations/Journal Entries

The second observation was conducted nine days after the first observation. The lab had been completed the previous day and was on how temperature effects solubility. The purpose of the experiments had been clearly established, and the teacher reinforced the purpose throughout the post-lab exercise. By going through the experiment the students were to draw conclusions from their data. The data would be shared for the class by putting the data on a chalkboard grid. The observer focus was on the student verbal behavior and the teacher verbal, particularly the questioning techniques.

All students participated by volunteering responses, except five students; four females and one male. Two of the females sat to the back of the room, almost physically removed from the rest of the class. The researcher showed Participant C the chart of student responses and asked about the two females. Participant C stated that the girls were from St. B's (a parochial feeder school) and he was unsure how well prepared they were, consequently he did not put them on the spot by initiating responses from them. He indicated that they volunteered when discussions

were topics they felt comfortable with. The researcher suggested that the girls should be moved closer to the front of the room.

The teacher did ask higher level questions such as: "What are the inconsistencies with the data?" and "What else can we do with the data?" He also asked probe questions like, "How can you tell that, what observation?" and "Do you have any more to say?" After discussing the experiment the students were asked to put their conclusions in their own words.

A new behavior was observed during this visit. The teacher provided wait time for the students to respond. The students were working on calculations from their data. Participant C consistently waited for the forthcoming responses. The teacher also communicated to the students that it was alright if their calculations were inaccurate. He said to the students, "Nothing wrong with not being right—at least at this point." Participant C did give corrective feedback to students on their calculations, particularly when they were way off base with their results.

During the post-observation conference the questioning strategies were discussed. The researcher felt comfortable with the higher level questions asked. The researcher referred Participant C to Chapter IV "Organizing/Presenting Subject Matter" in the Handbook for Improving Instruction which deals with questioning strategies. The researcher also requested that Participant C view the video-taped presentation on Socioeconomic Status of Students.

Participant C made several entries in his journal dated after the second visit. The entry follows:

> I like to keep the students on their toes, so I do the unexpected. I don't want them to become bored with the subject matter, so if I see they aren't responding, I'll switch to something else or use a different approach.

Another entry was:

> Even though I know what I want the students to be able to do from an experiment, I recognize that I do not write my plans down in black and white. I've taught the material so many times, I have it in my head, but maybe it could be better if plotted out in written form.

The third observation was scheduled but postponed at the request of Participant C.

It was rescheduled in January after the Christmas break. The observation was of a pre-lab. The teacher follows the lab manual very closely in presenting the information. Another new behavior was observed. Participant C gave the students an overview of what was to be discussed in the lesson and used advance organizers by alerting students to the new concepts about to be discussed. He related the concepts to previous learning. He also alerted the students to safety precautions in conducting the experiments. The teacher used the chalkboard to list new terms and definitions. The student participation was teacher initiated. The two female students the researcher had suggested be moved closer to the front of the room were still at the back of the classroom. However they were called on and did respond.

During the post-observation conference the lesson was reconstructed. The researcher pointed out the effective behaviors of the overview of the lesson; the advance organizers; and relating the concepts to previous learning. Participant C indicated that the teacher's manual

was organized in such a way that giving an overview and the advance organizers seemed the natural thing to do. He had not come in contact with the term advance organizer and appeared pleased that it was considered an effective teaching behavior.

The researcher mentioned the fact that the two females were still sitting at the back of the room. Participant C's response was, "You observed them on a bad day, they usually take a more active role."

The researcher asked how the reading in the Handbook was coming, Participant C said that he had read Chapter IV and was continuing with other chapters not previously assigned. He indicated that he had not had an opportunity to view the video-taped presentation on Socioeconomic Status of Students, but he would view it. The researcher requested that he also view the "With it" Teacher. (To view the tapes participants went to the media center and asked the media specialist to put the tape on for them. It was possible to be done during a free period.)

Participant C stated that one of his goals for this class was to let some of the better students assume a leadership role and conduct the post-lab exercise. This usually was not possible until toward the end of the shcool year. Participant C wanted to know if the researcher would like to observe such a class. The researcher was agreeable. Participant C said that he would know when the students were ready; would start with an experiment easier for them; and would let me know when the observation could take place. From one of the journal entries Participant C made, it appeared that he was student oriented. He stated:

> Your most important daily goal should be to reach each student each day. This is a nearly impossible goal because it is two edged. The student must be receptive to be reached, but you must give him the opportunity. Make sure work completed is rewarded in some way. It turns a student off quickly if he has made an honest effort and gets no extrensic reward.

Following the viewing of the video-tapes, Participant C stopped by the researcher's office and wanted to discuss the tape on Socioeconomic Status of Students. He took strong exception to the research based information on the tape. (The tape reviewed research findings that successful teachers altered their teaching behaviors and expectations according to the level of Socioeconomic Status of Students.) He defended his position from "his experience" and the fact that he had been successful with many students who would be considered lower socioeconomic in status. He maintained that he held the same high expectations of all students and treated them all the same.

Concluding Observation

Participant C came to the researcher in early March, seven months after the initial observation, to set an appointment for the final observation. Permission was granted by Participant C for the high school principal to assist the researcher in collecting final data.

During the pre-observation conference Participant C gave the researcher the written objectives. They were:

A. Content objectives: Complete satisfactorily a study of chromotography as a separation technique

B. Process objectives: To make this session the most student centered I can with the leadership roles being assumed by individual students on a self-motivating basis.

C. Teacher objective: To observe carefully individual student contributions in a self-motivating environment.

Procedure: Role play in which I take the place of a student and react accordingly.

The high school principal focused on half of the class, charting student participation and keeping a log on what they said. The researcher did the same with the remainder of the class. The researcher also logged the teacher's verbal behavior.

The teacher gave the guidelines and expectations for the lesson. He asked for a student or students to volunteer to assume the leadership (teacher) role in the post-experiment discussion. The students who assumed this role had to be fairly accurate with their own experiment and had to know the appropriate questions to ask their classmates. Likewise they had to know if the responses fit within a range of acceptable responses. It took exactly three minutes for two girls to volunteer to be the leaders. At first students were hesitant to respond. There was a good bit of interaction going on between pairs of students who appeared to be comparing notes. Overt participation was not as great when the students were in charge. Participation was evident by observing students looking at strips of paper from the experiment and checking their lab book results.

The teacher did assume a student role, sat among the students, and participated in the discussion. In that role he raised some higher cognitive level questions which the students responded to.

After 18 minutes of discussion the student leaders requested that everyone write their own conclusions. The teacher reinforced to the

students saying: "It's perfectly okay to discuss results with one another, but don't be talked into something, make sure what you write down is your own opinion." Participant C, assuming the teacher role, reviewed the accurate accounting of the experiment and listed the written data on the chalkboard. He praised the student leaders for their efforts.

During rhe post-observation conference the teacher evaluated the use of the student leaders. He indicated that there were seven students who could have assumed the leadership role. The teacher seemed pleased with the results of the class, even though the student contributions through open participation were not quite what he wanted. A new observed behavior was teacher role playing a student.

The post-study questionnaire was given to Participant C during the post-observation conference. The post-study interview was set for three days later. The journal would be collected and read at this time.

Post-Study Questionnaire and Interview

The first question from the pre-study questionnaire was repeated on the post-study questionnaire. It asked, "Which of the following has helped you renew yourself professionally?" They were to list those items in order of importance. The researcher was looking for participants perceived importance of some of the components of the multi-dimensional observation/supervision process. Participant C listed them in the following order:

1. Experimenting with new methods and techniques
2. Observing a colleague
3. Travel

4. Self-assessment
5. Hobbies
6. Simulation/role playing
7. College course work
8. Professional reading
9. Discussing methods and techniques with colleagues
10. Feedback following classroom observation
11. Attending professional meetings

Experimenting with new methods and techniques moved from fifth place on the pre-study to first place on the post-study. Feedback following classroom observation was his tenth choice on the post-study but was one of his preferences when asked which component of the multi-dimensional observation supervision process was most beneficial in altering instruction.

Participant C's second choice on the post-study was not ranked at all on the pre-study. When asked why he had not ranked it previous to the study, but ranked it high on the post-study, his response was, "I had never really observed a colleague for my own benefit before this study. I've discovered that I can benefit from the 'new blood' within our staff."

No mention had previously been made of observing a colleague nor was anything recorded in Participant C's journal. He sat in on a Physics class with a teacher who had taught in a large metropolitan high school on the East coast.

The second post-study question was, "Which of the procedures listed above which we have gone through during the study have been most helpful to you?" His response was, "Discussing ways of doing things with Tom and Bill (two colleagues in the department). Role playing is something I have used before, but not to the extent used in this study."

The eleven principles and processes which emerged from the literature were formulated into a question on the post-study questionnaire. The question was: "Briefly state how the following concepts could be used to improve instruction and how you have used them to be a more effective teacher." The researcher categorized the responses according to the following codes: UC—understands concepts; IU—incomplete understanding; NR—no response. Participant C's composite from the pre- and post-study is shown below.

	Pre	Post
Levels of questioning	IU	IU
Methods of presentation	IU	IU
Pacing/variety of lesson	IU	UC
Student participation	IU	IU
Planning	IU	IU
Learning Environment	UC	UC
Student Socioeconomic Status	NR	UC
Corrective Feedback	IU	UC
Classroom Management	NR	IU
Motivation	IU	IU
Number of Student Practices	IU	NR

Of the three participants, Participant C appeared to have more knowledge of the principles and processes initially, but this knowledge was not greatly altered as a result of the case study. The eight IU's on the pre-study went to six on the post-study, and the one UC was raised to four on the post-study. However, six categories remained the same.

Question four on the post-study questionnaire related directly to the fourth question guiding the study. The respondents were asked to choose two or three components of the six components in the multi-dimensional observation/supervision process which were most beneficial in altering their instruction. Participant C chose the following:

Data from observation

Post-observation conference with feedback

The respondent was then asked which one of the above might work best in sustaining professional growth and why? Participant C's response was; "Periodic observation by peers of supervisory personnel makes one take stock. We all get into bad habits and the preparation for these special sessions makes us aware of them."

The participant was asked if it were possible for a principal or supervisor to influence his teaching. His response was, "Very much. It is the clear statement of purpose of observation that is essential."

Participant C was asked what he felt the benefits were of being a participant in the study. He commented, "To reinforce my confidence in those things I seem to be doing right. It made me aware of some habits or methods that could use some reevaluation."

Summary

A total of four observations were made of Participant C's IPS (Introductory Physical Science) class. All four were by appointment. Participant C did suggest the researcher visit when the students assumed a leadership role. A formal observation was conducted.

Participant C was able to maintain effective teaching practices such as: sharing objectives with students and reinforcing the purpose of lesson throughout the period; encouraging students to be on task; serving as facilitator to students' independent learning; using visual reinforcement; asking higher cognitive level questions; modeling lab

skills for the students; providing corrective feedback; and reinforcing with positive language.

Throughout the study Participant C added several other effective behaviors to his repertoire of teaching practices. They were: providing students with appropriate wait time when responding; using advance organizers when presenting new material to students; relating the new material to previous learning; role playing in a classroom setting; and providing variety in the instructional setting. There was consistency in teaching style from one observation to another.

The most obvious change which occurred with Participant C's teaching behavior was his written, detailed plans which were submitted to the high school principal each Friday. Previous to the study, written plans consisted of page numbers in the teacher's edition. Even though detailed plans were written and submitted to the principal, Participant C defended less detailed plans by saying, "I am always aware of that teachable moment. If I see an opportunity to give students something that was not called for in that lesson, I do it."

Classroom management was not a problem whatsoever for Participant C. The high school principal reported that he had never had a discipline problem to deal with from any of Participant C's classes. As far as classroom management is concerned, Participant C could probably be termed a "withit" teacher. He did appear to anticipate problems before they occurred.

A statement found in Participant C's journal seems to reflect a value he holds. He stated:

> It has been my experience that those who become involved in the total education process (sports, music, etc.) rather than mere subject area expertise get the most satisfaction from what they do.

Participant C is active in roles in addition to the classroom. He coaches girls' and boys' sports, attends musical performances of students and is generally supportive of student co-curricular activities.

There is an interesting point about Participant C's journal entries. None of the entries were introspective or reflective of the participant. Entries were "telling" what ought to be or "what was" from "experience."

Participant C plans to stay in teaching until retirement. He would be open to the idea of teaching at a different school but as he stated, "I do like it here."

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY OF THE STUDY

There have been many research studies on teacher effectiveness conducted over the past quarter of a century. Efforts during the past few years have yielded improved research designs for study of teacher effectiveness. These newer research designs have helped in obtaining more reliable research findings. Better learning situations for students could result from the incorporation of these research findings into individual classroom settings.

However, application of the teacher effectiveness research findings in classrooms is not widespread. Teachers need to understand what the effective classroom behaviors are and how and when to incorporate these behaviors into the learning situation. This case study provided research findings for the participants and helped bridge the gap from research findings to classroom implementation. An observation supervision process helped monitor the progress from awareness of research findings to classroom implementation.

The Purpose

The purpose of this case study was to investigate the alterations in teaching behaviors of three classroom teachers. Specifically this study dealt with alterations occurring as a result of participants being exposed to current research findings and various forms of

performance feedback. Effective teaching practices were identified from the research and shared with the participants. The major vehicle for altering the teaching behaviors was a multi-dimensional observation supervision process. This process included supplementary features such as video taped presentations on Socioeconomic Status of Students; Teacher Modeling; and The "Withit" Teacher and a handbook which delineated current research findings. The observation supervision included gathering objective classroom data and providing the participants with performance feedback.

The questions which guided the study were:

1. What empirical knowledge did the participating teachers have initially concerning instructional principles and processes?
2. Did the participants have increased knowledge as a result of the study?
3. What changes occurred in the participants instructional patterns as a result of the multi-dimensional observation supervision process?
4. Based on respondents perceptions, which components of the multi-dimensional observation supervision process seemed to have the greatest impact on their teaching behaviors?

Procedures

The case study was the research methodology used for conducting this research. This approach permitted an examination of daily classroom transactions. It allowed for an indepth look at the changes

occurring in the participant's teaching practices. Three participants were selected from a 42 member high school teaching staff. Each participant agreed to participate in the various components of the multi-dimensional observation supervision process established for the study. The participants were asked to keep journals recording their reactions to the study. Participants were given pre- and post-questionnaires and were interviewed to obtain data basic to the study.

The review of the literature provided current research findings on effective teaching practices. Recent research findings served as a basis for the knowledge the participants were to gain as a result of the case study. Current research findings were incorporated into a Handbook for Improving Instruction by Handler, Lahr, Bellon, and Bellon (1978). The researcher developed and recorded three video taped presentations which dealt with recent research findings. Participants were requested to view the video taped presentations and read the handbook.

The observation supervision process provided the teachers with feedback on their classroom transactions. Before each observation a conference was held with the participant. The participants shared the objectives for the lesson; the learner characteristics; strategies and materials to be used; and the means for evaluating the lesson. The data collected during the observation could include the teacher's physical or verbal behavior or the student's physical or verbal behavior. Following the observation a post-observation conference was held. At this time the lesson was reconstructed from the observer data. Patterns

were identified and judgments made as to which patterns were more and less effective. The less effective behaviors were written into goals for another lesson.

Data from the study were analyzed to determine what changes occurred in the participants instructional patterns as a result of the multi-dimensional observation supervision process. The participants' journals, post-study questionnaires and personal interviews provided data about which components of the multi-dimensional observation process created the most extensive alterations.

Findings

The questions guiding the case study along with the findings for each participant are summarized below:

Question I—What empirical knowledge did the participating teachers have initially concerning instructional principles and processes?

From the pre-study questionnaire Participant A had partial understanding of: methods of presentation; planning; socioeconomic status of students; corrective feedback; and motivation. She had no previous knowledge on: levels of questioning; pacing and variety of lesson; student participation; learning environment; classroom management; and number of student practices. No response was categorized as understands concept. It can be stated that Participant A had very little knowledge about the selected processes and principles.

Participant B gave three no responses: levels of questioning; socioeconomic status of students; and number of student practices.

Participant B had an incomplete understanding of: pacing and variety of lesson; planning; learning environment; corrective feedback; classroom management; and motivation. He answered methods of presentation and student participation sufficient to say he had a good understanding of the concepts. Participant B had some knowledge of the principles and processes.

Participant C responded to each topic. However, two categories were coded no response. One category was student socioeconomic status. His response was: "What does that mean?" The other category was classroom management. His response was: "Needs improvement." Participant C had a partial understanding of: levels of questioning; methods of presentation; pacing and variety of lesson; student participation; planning; corrective feedback; motivation; and number of student practices. His response for learning environment was coded understands concept. It can be stated that Participant C had little knowledge of principles.

In addition to the question on the pre-study questionnaire, the pre-study interview provided information for answering question I. Participants reported on their knowledge of what constituted effective teaching behaviors and how they had learned what the effective behaviors were. The researcher asked the participants if they knew whether the effective practices were research based. This was discussed during the pre-study interview.

Participant A reported that she felt her supervising teacher in college had shared effective teaching practices. Since the supervising

teacher was working on her doctorate, Participant A assumed that the effective behaviors the supervising teacher stressed were research based.

Participant B reported that he gained information on effective teaching practices from his cooperating teacher who was a choir director. The cooperating teacher was active in professional music organizations and read professional journals. Consequently Participant B felt that the instructional practices suggested and modeled were research based.

Participant C was influenced by the instructional techniques of his college Zoology professor. Participant C reported that the instructional practices of this Zoology professor were effective in positive learner outcomes. Participant C had no idea if the effective teaching practices were research based.

Question II—Did the participants have increased knowledge as a result of the study?

Participants A and B did show marked improvement in their knowledge of the principles and processes. Participant C did show increased knowledge but not as much. A breakdown of each Participants' responses follows:

Participant A—none of the responses were coded no response. The categories coded understands concept on the post-study were: levels of questioning; methods of presentation; pacing and variety of lesson; learning environment; classroom management; and motivation. Responses coded incomplete understanding were: student participation; planning; socioeconomic status of students; corrective feedback; and number of student practices.

Participant B did not respond to two topics: levels of questioning and methods of presentation. He explained that since they did not really apply to his discipline (choir) he would not respond to them. It should be noted that his response to methods of presentation on the pre-study had been coded understands concept. Topics which were coded incomplete understanding were: planning; learning environment; and motivation. Participant B responded sufficiently to the following to be coded understands concept. Those topics were: pacing and variety of lesson; student participation; socioeconomic status of students; corrective feedback; classroom management; and number of student practices.

Participant C had one no response. He did not answer number of student practices even though he did answer it on the pre-study and it was coded incomplete understanding. He partially answered the following: levels of questioning; methods of presentation; student participation; planning; classroom management; and motivation. His responses which were coded understands concept were: pacing and variety of lesson; learning environment; socioeconomic status of students; and corrective feedback.

The participant's journals provided information to help answer question II. Both Participant A and B made journal entries which indicated they did gain new knowledge from the study. The same cannot be said for Participant C from his journal entries.

Data from the classroom observations were also used in answering question II, particularly for Participant C. Participant C used

advance organizers by alerting students to the new concepts to be discussed. During the post-observation conference it was pointed out to him that this was an effective teaching practice. He had not heard of the term before.

Question III—What changes occurred in the participants' instructional patterns as a result of the study?

Participant A—the most obvious alteration in teaching strategy was with Participant A's questioning techniques. She was aware that by the nature of the class, opinion responses from students were appropriate. However, by planning ahead and anticipating those student opinion responses, she was able to extend the questions to a high level of cognition. The students were forced to justify their opinions, based on factual information. The second alteration the teacher demonstrated was in her grouping patterns. She found that she could more efficiently achieve lesson objectives through a different grouping strategy.

Participant B—The greatest change occurred with Participant B's relationship with the students. He replaced or tempered his use of the sarcasm with humor. In so doing he was better able to achieve the affective development of the students which he was seeking. Participant B learned to use teacher modeling more effectively, many times combining it with corrective feedback.

Participant C—This participant added several effective behaviors to his repertoire of teaching practices. He provided students with appropriate wait time when responding. This participant also used advance organizers when presenting new material to students and relating

the new material to previous learning. He introduced role playing in his class and provided variety in the instructional setting. The most obvious change which occurred with Participant C's teaching practices was his improved planning for instruction as verified by his written detailed plans which were submitted to the high school principal each Friday.

Question IV—Based on respondents' perceptions, which components of the multi-dimensional observation supervision process seemed to have the greatest impact on their teaching behaviors? The three participants listed their choices which are shown below.

Participant A did not rank order her responses but checked the following:

Data from observation
Post-observation conference with feedback
Self-assessment through the journal

Participant A was the only respondent who marked self-assessment through the journal as a significant component.

Participant B ranked his responses. His first preference was: Post-observation conference with feedback. His second choice was: Data from observation.

Participant C did not rank order his responses. He selected the following:

Data from observation
Post-observation conference with feedback

It is clear that all three participants perceived data from observation and post-observation conference with feedback as the

components of the multi-dimensional observation supervision process which seemed to have the greatest impact on their teaching behaviors. All three participants agreed that these two components could be beneficial in their future professional growth.

II. CONCLUSIONS

The following conclusions may be drawn from the findings of the case study.

1. All three participants demonstrated changes in their teaching behaviors. The changes reflected more effective teaching practices as described in research.
2. Feedback concerning the classroom observation and given during the post-observation conference was identified by participants as having the greatest impact on altering teaching behaviors.
3. The viewing of the video tapes and the readings did not prove as effective in altering teaching practices as did the one to one post-observation conference of the observation supervision process.
4. All three participants did show growth in their understanding of the principles and processes which were research based.
5. The teacher participants were able to utilize certain practices consistent with research findings without an understanding of underlying principles.

III. IMPLICATIONS

1. Research findings indicate that effective teaching behaviors can result in improvement of instructional outcomes. A supportive environment is needed for teachers to renew themselves professionally. Local Education Agencies have a responsibility to their teaching staffs for providing ongoing staff development programs and creating an environment of support. A knowledgable supervisor or administrator who models renewal activities can make a difference in sustaining a supportive environment.
2. It is important for the teacher to receive objective feedback. It is also important that the supervisor or administrator have a sound knowledge of instructional principles and processes based on research findings. They need to know the best means for implementing effective behaviors in the classroom. The supervisor or administrator should have good interpersonal skills to assist the teacher in the renewal process.
3. Procedures should be developed by Local Education Agencies to relate the feedback from classroom observations to research findings. The one to one post-observation conference can help bridge the gap between research findings and the practical classroom application.

IV. RECOMMENDATIONS FOR FURTHER STUDY

The results of this study indicate several areas that are worthy of further exploration.

1. A follow up case study could be conducted in the elementary school to find how closely the data matches the findings from this case study which was conducted in a secondary school. Many of the research studies which produced current findings were done in elementary schools.
2. The classroom observer/supervisor plays an important role in effecting teacher change. A study could be undertaken to look at the characteristics of the classroom observer/supervisor and how those characteristics might relate to effecting change in teacher behaviors.
3. This case study used three participants. A larger sample may have produced different conclusions. A longitudinal study could be undertaken using a larger sample to look at the process teachers go through to bridge the gap between research findings and implementation of those findings in the classroom.
4. Ordinarily pre-service teachers have little opportunity to practice and gain experience in sound instructional principles and processes before entering the teaching profession. A study could be undertaken to investigate the effective teaching practices pre-service teachers bring to the profession, and how they gained those effective teaching practices.

5. Socioeconomic status of students has been found to make a difference in the teaching style a teacher uses. An investigation would be appropriate to find the match between certain teaching styles and high or low socioeconomic status of students.
6. Many times teachers who want to renew themselves are influenced by a significant person. Further research is needed to investigate the important influence college cooperating and supervising teachers have in promoting effective teaching practices.

BIBLIOGRAPHY

BIBLIOGRAPHY

Arments, B. J. "Teacher Behaviors Related to Student Achievement on a Social Science Concept Test." Journal of Teacher Education, 1977, 28, 46-52.

Ausubel, D. P. Educational Psychology, A Cognitive View. New York: Holt, Rinehart, and Winston, 1968.

American Psychological Association. Publication Manual. Baltimore, Maryland: Garamond/Pridemark Press, Inc., 1974.

Bandura, A. Social Learning Theory. Englewood Cliffs: Prentice Hall, 1977.

Battiste, B. "The Effects of In-Service Self Concept Protocal Module on Verbal Behavior of Primary Grade Teachers." Unpublished doctoral dissertation, University of Florida, 1976. Dissertation Abstracts International, XXXVII (1976), 6414-A.

Bellon, J. J., Eaker, R. E., Huffman, J. O., & Jones, R. V. Classroom Supervision & Instructional Improvement: A Synergetic Process. Dubuque, Iowa: Kendall Hunt Publishing, 1976.

Bennett, N. Teaching Styles & Pupil Progress. Cambridge, Massachusetts: Harvard University Press, 1976.

Berliner, D. C. "Impediments to the Study of Teacher Effectiveness." Journal of Teacher Education, 1976, 27, 5-13.

Berliner, D. & Gage, N. L. "The Psychology of Teaching Methods." The Seventy-Fifth Yearbook of the National Society for the Study of Education. ed. N. L. Gage. Chicago: University of Chicago Press, 1976.

Bloom, B. S. Human Characteristics & School Learning. New York: McGraw-Hill, 1976.

Bloom, B. S. "Individual Differences in School Achievement: A Vanishing Point?" Phi Delta Kappan, 1971, 52, 97-101.

Bloom, B. S. "The New Direction in Educational Research: Alterable Variables." Phi Delta Kappan, 1980, 61, 382-385.

Borg, W. "The Minicourse as a Vehicle for Changing Teacher Behavior: A Three Year Follow-Up." Journal of Educational Psychology, 1972, 63, 572-579.

Borich, G. D. The Appraisal of Teaching: Concepts & Process. Reading, Massachusetts: Addison-Wesley Publishing Co., 1977.

Brandt, R. "A Conversation with Benjamin Bloom." Educational Leadership, 1979, 37, 157-161.

Brophy, J. E. "Reflections on Research in Elementary Schools," Journal of Teacher Education, 1976, 27, 31-34.

Brophy, J. E. "Stability of Teacher Effectiveness," American Educational Research Journal. 1973, 10, 245-252.

Brophy, J. E. & Good, T. L. Teacher-Student Relationships: Causes and Consequences. New York: Holt, Rinehart, and Winston, 1974.

Brophy, J. E. & Evertson, C. Learning from Teaching a Developmental Perspective. Boston: Allyn & Bacon, Inc., 1976.

Brophy, J. E. & Putnam, J. G. Classroom Management in the Elementary Grades. East Lansing, Michigan: Michigan State University, 1978.

Broudy, H. S. "Historical Exemplars of Teaching Methods," Handbook of Research on Teaching. ed. N. L. Gage. Chicago: Rand McNally, 1963.

Bunn, G. & Lopez, D. U. T. Thesis & Dissertation Manual. Knoxville, Tennessee: The University of Tennessee, Knoxville, 1976.

Bush, A., Kennedy, J., & Cruickshank, D. "An Empirical Investigation of Teacher Clarity," Journal of Teacher Education, 1977, 28, 53-58.

Carroll, J. "A Model for School Learning," Teachers College Record, 1963, 64, 723-33.

Cass, J. "An Environment for Creative Teachers," Saturday Review World, 1974, 1, 51.

Cicourel, A. V. Organizational Processes in Education: Field Research on Interactions Within Educational Organizations. Paper presented at the meeting of the National Institute of Education, San Diego, California, April 1975.

Coker, H. "Identifying and Measuring Teacher Competencies: The Carroll County Project," Journal of Teacher Education, 1976, 27, 61-63.

Cook, D. & LaFleur, N. A Guide to Educational Research, 2nd edition, Boston: Allyn & Bacon, Inc., 1975.

Cruickshank, D. "Synthesis of Selected Recent Research on Teacher Effects," Journal of Teacher Education, 1976, 27, 57-60.

Domas, S. & Tredeman, D. "Teacher Competence: An Annotated Bibliography," Journal of Experimental Education, 1950, 19, 101-218.

Dunkin, M. J. & Biddle, B. J. The Study of Teaching. New York: Holt, Rinehart & Winston, Inc., 1974.

Flanders, N. A. Analyzing Teaching Behavior, Reading, Massachusetts, Addison-Wesley Publishing Co., 1970.

Gage, N. L. "A Factorially Designed Experiment on Teacher Structuring, Soliciting, and Reacting," Journal of Teacher Education, 1976, 25, 35-38.

Gage, N. L. Handbook of Research on Teaching. Chicago: Rand McNally & Co., 1963.

Gage, N. L. Teacher Effectiveness & Teacher Education. Palo Alto, California, Pacific Books, Publishers, 1972.

Gage, N. L. The Scientific Basis of the Art of Teaching. College Press, New York, Teacher's College Press, 1978.

Gagne, R. M. The Conditions of Learning. New York: Holt, Rinehart & Winston, 1970.

Gall, M., et al. "The Effects of Teacher Use of Questioning Techniques on Student Achievement and Attitudes," San Francisco, California: For West Laboratory for Educational Research & Development, 1975.

Gall, M. D. & Gall, J. P. "The Discussion Method." The Seventy-Fifth Yearbook of the National Society for the Study of Education. ed. N. L. Gage. Chicago: University of Chicago Press, 1976.

Gambrell, P. "Effect of Instruction Based on Modeling Theory on Teaching Behavior of Pre-Service Teachers," Unpublished doctoral dissertation, Florida State University, 1976. Dissertation Abstracts International, XXXVII (1976), 6418-A.

Glaser, R. Training Research & Education. Pittsburgh, Pennsylvania: University of Pittsburgh Press, 1962.

Good, C. V. Essentials of Educational Research Methodology & Design, 2nd ed. New York: Appleton—Century—Crofts, 1972.

Good, C. V. Methods of Research, Educational, Psychological, Sociological. New York: Appleton—Century—Crofts, 1954.

Good, T. L., et al. Teacher Behavior & Student Outcomes in the Missouri Teacher Effectiveness Study. Columbia, Missouri, University of Missouri, 1975.

Good, T. L. & Biddle, B. J. & Brophy, J. E. Teachers Make a Difference. New York: Holt, Rinehart & Winston, 1975.

Good, T. L. & Brophy, J. E. Educational Psychology, A Realistic Approach. New York: Holt, Rinehart & Winston, 1977.

Goodlad, J. I. "Can Our Schools Get Better?" Phi Delta Kappan, 1979, 60, 342-47.

Goodlad, J. I. "Change in Elementary School Settings," The Elementary School Journal, 1977, 78, 95-104.

Goodlad, J. I. "What Goes On In Our Schools?" Educational Researcher, 1977, 6, 3-6.

Goodlad, J. I. & Klein, M. F. Behind the Classroom Door. Worthington, Ohio: Charles A. Jones Publishing Company, 1970.

Handler, J. R., Lahr, S. A., Bellon, J. J. & Bellon, E. C. Handbook for Improving Instruction. Knoxville, Tennessee: Department of Curriculum & Instruction, The University of Tennessee, 1978.

Hecht, L. "Measuring Student Behavior During Group Instruction," The Journal of Educational Research, 1978, 71, 283-289.

Hopkins, C. Educational Research: A Structure for Inquiry, Columbus, Ohio: Charles E. Merrill, 1976.

Hyman, R. R. Contemporary Thought on Teaching. New Jersey: Prentice-Hall, 1971.

Jones, R. D. "The Prediction of Teaching Efficiency from Objective Measures," Journal of Experimental Education, 1947, 15, 85-99.

Joyce, B. & Weil, M. Models of Teaching. Englewood Cliffs, New Jersey: Prentice-Hall, 1972.

Kounin, J. S. Discipline & Group Management in Classrooms. New York: Holt, Rinehart & Winston, Inc., 1970.

Laktasic, S. "Efficacy of Video-Simulated Observation in Teacher Training." Unpublished doctoral dissertation, University of New Mexico, 1976. Dissertation Abstracts International, XXXVII (1976), 6421-A.

Lawton, J. "The Use of Advance Organizers in the Learning & Retention of Logical Operations & Social Studies Concepts," American Educational Research Journal, 1977, 14, 25-43.

McDonald, F. J. "Evaluating Preservice Teachers' Competence," Journal of Teacher Education, 1978, 29, 9-13.

McDonald, F. J. "Report on Phase II of the Beginning Teacher Evaluation Study," Journal of Teacher Education, 1976, 27, 39-42.

McDonald, F. J. & Elias, P. "A Report on the Results of Phase II of the Beginning Teacher Evaluation Study: An Overview," Journal of Teacher Education, 1976, 27, 315-316.

McLeish, John. "Lecture Method." The Seventy-Fifth Yearbook of the National Society for the Study of Education. ed. N. L. Gage, Chicago: University of Chicago Press, 1976.

McMillan, James H. "The Effect of Effort & Feedback on the Formation of Student Attitudes," American Educational Research Journal, 1977, 14, 317-330.

Napell, S. M. "Updating the Lecture," Journal of Teacher Education, 1978, 29, 53-56.

Pennington, C. "Effect of an In-Service Program upon Classroom Behaviors and Attitudes of Teachers." Unpublished doctoral dissertation, University of Northern Colorado, 1976. Dissertation Abstracts International, XXXVII (1976), 2126-A.

Pritchard, F. "Effects of Training in Wait Time and Training in Questioning on the Classroom Question Behavior of Pre-Service Teachers." Unpublished doctoral dissertation, University of Maryland, 1976. Dissertation Abstracts International, XXXVII (1976), 3566-A.

Putnam, L. R. "Don't Tell Them To Do It . . . Show Them How," Journal of Reading, 1974, 18, 41-43.

Raulsten, J. "Comparison of Two In-Service Training Programs and the Effects on Selected Teacher Behaviors and Attitudes." Unpublished doctoral dissertation, University of Missouri, 1976. Dissertation Abstracts International, XXXVII (1976), 5760-A.

Reavis, C. A. "Clinical Supervision: A Review of the Research," Educational Leadership, 1978, 580-584.

Reid, E. Mastery Learning. Paper presented at the meeting of International Reading Association, Anaheim, California, May 1976.

Ronning, R. "Modeling Effects & Developmental Changes in Dealing with a Formal Operations Task," American Educational Research Journal, 1977, 14, 312-323.

Rogers, V. & Baron, J. "Teaching Styles & Pupil Progress," Phi Delta Kappan, 1977, 58, 622-623.

Rosenshine, B. "Classroom Instruction." The Seventy-Fifth Yearbook of the National Society for the Study of Education. ed. N. L. Gage, Chicago: University of Chicago Press, 1976.

Rosenshine, B. Teaching Behaviors and Student Achievement. England: National Foundation for Educational Research, 1971.

Rosenshine, B. "Teacher Behavior & Student Attitudes Revisited," Journal of Educational Psychology, 1973, 65, 177-180.

Rosenshine, B. "Recent Research on Teaching Behaviors & Student Achievement," Journal of Teacher Education, 1976, 27, 61-64.

Rosenshine, B. & Furst, N. "The Use of Direct Observation to Study Teaching." Second Handbook of Research on Teaching. Chicago: Rand McNally, 1973.

Sandefur, J. T. & Adams, R. A. "An Evaluation of Teaching: An Interim Research Report," Journal of Teacher Education, Western Kentucky University: 1976, 27, 71-76.

Shultes, R. C. "A Descriptive Study of the Implementation of the Synergetic Supervision Process in Selected School Districts." Unpublished doctoral dissertation, The University of Tennessee, Knoxville, 1978.

Silberman, C. E. Crisis in the Classroom. New York: Random House, 1970.

Smith, I. "Teaching with Discussion: A Review," Educational Technology, 1978, 18, 40-43.

Stake, R. E. "The Case Study Method in Social Inquiry," Educational Researcher, 1978, 7, 5-8.

Stallings, J. A. "How Instruction of Processes Relate to Child Outcomes in a National Study of Follow Through," Journal of Teacher Education, 1976, 27, 43-47.

Sullivan, C. G. Clinical Supervision & Curriculum Development. Alexandria, VA.: Association for Supervision & Curriculum Development, 1980.

Tikunoff, W. J., Berliner, D. C., & Rist, R. C. Special Study A: An Enthno-graphic Study of the Forty Classrooms of the Beginning Teacher Evaluation Study Known Sample. San Francisco, CA: West Laboratory, 1975.

Walberg, H. J. "The Psychology of Learning Environments," Review of Research in Education, 1976, 4, 142-78.

Walberg, H. J., Schiller, D., & Haertel, G. "The Quiet Revolution in Educational Research," Phi Delta Kappan, 1979, 61, 179-183.

Ward, B. "Minicourses & Their Application to Teacher Education," Journal of Teacher Education, 1974, 25, 344-349.

Ward, B. & Tikunoff, W. "The Effective Teacher Education Problem: Application of Selected Research Results & Methodology to Teaching," Journal of Teacher Education, 1976, 27, 48-52.

Wiley, D. E. & Harnischfeger, A. "Explosion of a Myth: Quantity of Schooling and Exposure to Instruction, Major Educational Vehicles," Educational Researcher, 1974, 3, 7-12.

Witkin, H. A., Moore, C. A., Goodenough, D. R. & Cox, P. A. "Field Dependent & Field Independent Cognitive Styles & Their Educational Implications," Review of Educational Research, 47, 1-64.

Zahounk, J. "Classroom Feedback Behavior of Teachers, Journal of Educational Research, 1968, 62, 147-150.

APPENDIX

APPENDIX

TO: Secondary Teachers

FROM: Sherry Lahr

RE: Observation Study

DATE: Friday, May 18, 1979

In the very near future, I will be starting my research study which is required for the completion of my degree. I would like to discuss possible participation with those teachers who are interested in professional growth. The teachers would be involved in a case study which included a multi-dimensional observation/supervision process.

The multi-dimensional, observation/supervision process consists of classroom observations with appropriate feedback, workbook exercises from the Handbook for Improving Instruction, and a self-analysis by keeping a journal, etc.

This is an opportunity to take a look at teaching behaviors and decide which behaviors are more appropriate for which situations. I believe that you would find the experience professionally and personally rewarding. If you think that you might be interested in participating, please see me for more details. Thank you for your consideration.

TEACHER PRE/POST CONFERENCE FORM

Name_____School_____

Date_____Period_____Observer_____

Pre-Obs. Conf._____Obs._____Post-Obs. Conf._____

PRE-CONFERENCE

Learning Context (Relationship to unit, area of study, program goals)

Objectives: (Content-Process)

Learner Characteractics/Evaluation: (Pre-assessment)

Strategies and Materials:

Observer Focus:

****

POST-CONFERENCE

Patterns Observed:

Goals for next lesson:

General comments/summary:

TEACHER OBSERVATION CHART

Date_____ Teacher_____

Charting Time_____to_____ Period_____

Subject/Grade_____Observer_____

KEY

O	Girl
	Boy
	Teacher or student movement
	Interaction between students
	Student volunteered
	Student asked question
/	Teacher initiated response
	Teacher initiated but no response
DK	Didn't know
////	Continuation of same

TEACHER EFFECTIVENESS FORM

Name_____ Date of Observation_____

Behaviors:	Observed evidence of behavior
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

PRE-STUDY QUESTIONNAIRE

Name_____

Teaching assignment_____

Total years in education_____College/University attended_____

Year graduated_____Degree held_____Additional hours___

I. Which of the following has helped you renew yourself professionally? List in order of importance to your professional growth (1-most important, etc.)

____a. Professional reading (journals, magazines, etc.)

____b. College course work

____c. Observing a colleague

____d. Discussing methods/techniques with colleagues

____e. Experimenting with new methods/techniques

____f. Attending professional meetings (conferences, in-service, etc.)

____g. Feedback from supervisor/administrator following classroom observation

____h. Travel

____i. Hobbies

____j. Self-assessment

____k. Simulation/role playing

II. How have your first two choices improved your competency?

III. What are some of your current practices which make you an effective classroom teacher?

IV. What attitudes do you hold toward the following concepts:

a. levels of questioning

b. methods of presentation

c. pacing/variety of lesson

d. student participation

e. planning

f. learning environment

g. student socioeconomic status

h. corrective feedback

i. classroom management

j. motivation

k. number of student practices

V. Do you feel that you have a good knowledge of what constitutes effective teaching behaviors? Please explain.

PRE-STUDY INTERVIEW QUESTIONS—EXTENSION OF QUESTIONNAIRE

1. Where and how did you learn what effective teaching behaviors were?

2. Was it based on empirical data?

3. Did a supervisor or principal influence your teaching? If so how?

4. Was there a person who motivated your professional renewal?

5. Were you more effective in the classroom as a result?

6. How do you perceive your role in the teaching/learning process?

7. What do you expect to learn from this experience?

POST-STUDY QUESTIONNAIRE

Name _____

I. Which of the following has helped you renew yourself professionally? Please list in order of importance to your professional growth (1-most important)

____a. Professional reading (journals, magazines, etc.)

____b. College course work

____c. Observing a colleague

____d. Discussing methods/techniques with colleagues

____e. Experimenting with new methods/techniques

____f. Attending professional meetings (conferences, in-service, etc.)

____g. Feedback from supervisor/administrator following classroom observation

____h. Travel

____i. Hobbies

____j. Self-assessment

____k. Simulation/role playing

II. Which of the procedures listed above which we have gone through during the study have been most helpful to you? Briefly explain how they helped you.

III. Briefly state how the following concepts could be used to improve instruction and how you have used them to be a more effective teacher.

a. levels of questioning

b. methods of presentation

c. pacing/variety of lesson

d. student participation

e. planning

f. learning environment

g. student socioeconomic status

h. corrective feedback

i. classroom management

j. motivation

k. number of student practices

IV. Choose two or three of the components of the multi-dimensional observation/supervision process which were most beneficial in altering your instruction.

_____a. Handbook for Improving Instruction

_____b. Data from observation

_____c. Post-observation conference with feedback

_____d. Support from other participants

_____e. Video-taped presentations

_____f. Self-assessment through the journal

V. Which one of the above might work best in sustaining your professional renewal? Why?

VI. To what extent is it possible for a supervisor or principal to influence your teaching?

VII. From your vantage point, what were the benefits, if any, of being a participant in this study?

VITA

Sherry Ann Lahr was born in Lykens, Ohio, on February 23, 1937. She is the daughter of the late Eugene and Ruth McCormick. She graduated from Lykens local schools in 1955.

She attended Ohio State University and Bowling Green State University in Bowling Green, Ohio, where she received her Bachelor of Science degree in Elementary Education in 1966; her Master of Arts degree in Reading in 1973; and her Educational Specialist degree in Administration and Supervision in 1975.

In 1978 she went to The University of Tennessee as a graduate assistant in the Department of Curriculum and Instruction. In August 1980 she received her Doctor of Education degree in Curriculum and Instruction.

She began her teaching career as a First Grade teacher in the Bucyrus City Schools, Bucyrus, Ohio. She was employed by the Crawford County Office of Education in Ohio as an Elementary Supervisor; Secondary Supervisor; and Assistant Superintendent. Presently she is Superintendent of Schools for the Buckeye Central Schools in New Washington, Ohio.

She was one of seventy-five women who were selected by the Ford Foundation/American Association of School Administrators as a grant recipient to attend a seminar on Advancing Women Professionally. The seminar was held in Dallas, Texas. Mrs. Lahr is a member of Phi Delta Kappa, American Association of School Administrators, Association of

Supervision and Curriculum Development, and numerous other professional organizations.

She is married to Chester M. Lahr and has two daughters, Yolanda and Laurie and a foster son, Tom Hoepf.