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Stimulation of Concern Levels for Students Preparing to Teach Handicapped Children Using Systematic Feedback of Practicum

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STIMULATION OF CONCERN LEVELS FOR STUDENTS
PREPARING TO TEACH HANDICAPPED CHILDREN
USING SYSTEMATIC FEEDBACK OF PRACTICUM

by

Roger N. Carlsen

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DEDICATION

To Nancy Carlsen, who sacrificed much of what she loved so that I could wander about on an educational odyssey and who has continued to encourage and inspire me to greater accomplishments.

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CHAPTER I

INTRODUCTION

Chapter I will present an overview of the theoretical underpinning which provides the rationale for engaging in this study. Following the introduction the balance of this chapter will present: (a) the assumptions and limitations of this study, (b) the key definitions, (c) hypotheses to be tested, and (d) a statement identifying the significance of this research.

The present study will attempt to determine whether the systematic feedback of practicum incidents can bring about a maturation of teacher concerns in preservice special education teachers. Fuller (1969) found that preservice teachers pass through a sequence of progressively more mature concerns about teaching as they progress through their teacher training program. She named this phenomenon the Developmental Concerns Theory. Later in 1974 Fuller reconceptualized this theory into the following four broad levels of concerns:

1. Concerns unrelated to teaching.

2. Concerns about self in relation to teaching.

3. Concerns about the teaching task.

4. Concerns related to whether one can impact on one's students (i.e., providing for the students' needs).

Fuller and Case (1970) identified seven different levels in which to categorize teacher concerns (see Appendix C). While individuals do not necessarily express concerns at only one level, it appears

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as though the majority of their concerns appear at a specific level. Further, more mature concerns (those regarding task or impact) "are characteristic of teachers who are both more effective and more experienced" (Fuller, 1970, p. 33).

Most educators, according to Hall (1976), prefer to believe that they function at the impact level, that is, for the purpose of benefiting their pupils. However, it is a basic finding of the research cited within this study that this simply is not an accurate belief.

Fuller (1970) reports that education students often consider the course material offered in education courses as "irrelevant." Indeed, if relevance is defined as a match between the level of concern the education student is experiencing and the level of concern to which the course content is addressed, it is not hard to see why so often students brand professional education programs irrelevant. Education course content is probably only relevant for those students with the most mature concerns (Fuller, 1970).

Fuller (1971) believes that teacher trainers were often the most successful teachers, that they probably possessed the most mature concerns, and that they geared their instruction at their own personal level of concern. This opinion is also supported by George (1978) who cites the work of earlier studies (Fuller, Peck, Brown, Menaker, White, & Veldman, 1969; Fuller, Pilgrim, & Freeland, 1967; Taylor, 1975; Yamamoto, Pederson, Opdahl, Dangel, Townsend, Paleologos, & Smith, 1969) which indicated that preservice teachers were being taught what their instructors believed they needed to know but not what the preservice teachers were concerned with learning.

Fuller (1970) provides an example of the preservice teacher whose professors attempt to provide instruction in measurement and evaluation when the student wonders whether or not she would pass the next day's quiz. In other words, while the course instructors attempted to train the student in educational methods (a concern she did not yet have), the student cogitated on concerns related to self. What teacher trainers fail to recognize is that preservice teachers have not yet resolved their personal or self-teaching concerns. Only when self concerns have been resolved can the higher level, more mature concerns at the task and impact level fully develop (Newlove & Hall, 1976).

Rather than simply accusing most preservice teachers of having self concerns, Hall (1976) suggests that we anticipate less mature concerns and initiate actions to accommodate and resolve them as rapidly as possible. Students should not be chided for self concerns; it is indeed only reprehensible when others fail to accept the legitimacy of these concerns. One's teachers have the responsibility to aid the student to resolve these self concerns in a constructive manner.

It has been demonstrated that more mature teacher concerns develop as a function of teaching experience (Fuller & Case, 1970). Newlove and Hall (1976) concur when they state that concerns vary between persons depending on the amount of knowledge and experience one has with teaching. Furthermore, they claim that it is not the reality of the experience; it is the person's perceptions of these experiences which matter most in the development of more mature

concerns.

Fuller (1970) claims that education students need to be aware of their own concerns and should be provided with feedback information so as to develop this awareness and subsequently develop more mature concerns.

The general purpose of the present study is to explore this idea and answer the question: Can specific feedback promote a more mature level of concern in preservice special education teachers? The feedback technique selected for this study utilized critical incidents (CI). A critical incident has been defined as "an observable human activity sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act" (Flanagan, 1954, p. 327).

Preservice students were asked to record critical incidents which occurred in a practicum setting. These CIs provided the vehicle for systematic student feedback.

<u>Purpose</u>

The specific question addressed in this study is: Can critical incidents, used as a feedback technique, promote a more mature level of concern in preservice special education teachers.

Fuller (1970) states that concerns can become more mature through a process involving assessment, arousal, awareness, and resolution of concerns. This fourfold process is utilized in the present study as follows:

Assessment of Concerns

This study utilized the Teacher Concern Checklist (TCCL) which can be found in Appendix B and a Q-sort procedure based on the Teacher Concern Statement (TCS) scorers manual (Fuller & Case, 1970). The Q-sort used in this study is a forced distribution sorting procedure for the ranking of exemplary teacher concern statements as taken from the TCS scorers manual. The seven levels of concern (Fuller & Case, 1970) are included in Appendix C and the instrument for recording the Q-sort are in Appendix D.

Arousal of Concerns

If concerns do not exist, they must be aroused. Newlove (1971) suggests that the preservice teachers be provided with a brief teaching experience to arouse such concerns. In her study this was accomplished via a regularly scheduled practicum.

Awareness of Concerns

Fuller (1970) claims that education students need to be made aware of their own concerns. In some instances preservice teachers must be provided feedback information. At other times one's concerns change without any apparent reason. For example, the preservice teacher may realize that she is more concerned with being liked than with classroom discipline.

The present study will use critical incidents (CI), which are samples of self-reported practicum behaviors as feedback for

preserve teachers during their first special education practicum course.

Resolution of Concerns

Fuller (1970) postulates that when earlier, less mature concerns are resolved--usually through becoming aware of the concern and eventually deciding what to do about it--more mature concerns spontaneously emerge. Thereafter, students' concerns become aroused through further educational experiences. The feedback from critical incidents provide each preservice teacher with an idea of how one's peers feel regarding some of the most effective and most ineffective practicum behaviors.

Assumptions and Limitations

The present study is limited to collecting and analyzing concerns submitted by preservice special education teachers enrolled in one course (SPED 531) over three successive terms. Inasmuch as control groups and treatment groups met during different semesters, the lack of random assignment of students must be assumed to be a limitation in this study.

Attendance was not controlled for in this study. It was assumed that attendance would be equal for each of the semesters. The public schools and the university do not celebrate spring recess during the same week. This caused a 1-week interruption in the practicum experience.

There was no accounting for the effect that courses taken concurrently had on the concerns of the students enrolled in SPED 531. The effects of one's outside activities, including other courses in which students were enrolled, could conceivably distort the conclusions of this study.

Because the author prepared the condensed versions of the critical incidents for both treatment groups, it is assumed that this factor will not affect the results between these groups. In addition, he administered the instruments used to evaluate the levels of concern in each SPED 531 section. Proficiency in the administration of the concerns battery (i.e., Teacher Concerns Checklist and Q-sort) was obtained prior to administering the tests to the SPED 531 students.

Definition of Terms

Concern: Something you frequently think about and would like to do something about. Fuller (1970) also called concerns dependable motives or the feelings an individual has. Fuller (1974) classified all concerns into one of three developmental levels: self, task, and impact.

Self concerns: When individuals are unable to anticipate the problems and frustrations involved in teaching, their concerns center mostly on themselves. An example of a self concern statement taken from the TCCL is, "I am concerned if [sic] students will like me" (George, Borich, & Fuller, 1974).

Task concerns: When individuals are concerned with tasks and processes involved in the teaching process, they are said to have task concerns. Examples of task concerns again taken from the TCCL are, "do I know the lesson," "can I control the class," or "do I have enough instructional material" (George et al., 1974). At this level the individual is not concerned with what the student is learning.

Impact concerns: Concerns about the effect certain actions might have on one's students are impact concerns. Examples taken from the TCCL are, "will I be able to diagnose student learning problems" or "will I be able to challenge unmotivated students" (George et al., 1974).

Critical incident technique: The developer of the critical incident (CI) technique, Flanagan (1954), defines it as "a set of procedures for collecting direct observations of human behavior" (p. 327).

Critical incident (CI): This is any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act. To be critical, an incident must have a clear purpose or intent and the consequences of the event leave little doubt concerning its effects (Flanagan, 1954, p. 327).

Feedback: Feedback is any kind of direct information from an outside source about the effects and/or results of one's behavior (Wolman, 1973, p. 143).

Hypotheses

The two hypotheses addressed in this study are:

1. Preservice teachers receiving feedback based on self reported CIs (mirror feedback) will develop more mature concerns than those students not receiving CI feedback.

Rationale: According to Fuller (1970) arousal and awareness based on feedback of preservice teacher/student interaction will tend to promote more mature concerns.

2. Preservice teachers receiving several types of feedback (mirror feedback, focused feedback, impact feedback, and opinion giving feedback) based on CIs will develop more mature concerns than students receiving no CI feedback or those students receiving CI mirror feedback only.

Rationale: Torbert (1972) claims that a person only receives the feedback when that person pays attention to it. By increasing the modes of feedback one fully utilizes the language of the senses, the language of the emotions, and the verbal language of communication thereby strengthening the focus of the feedback.

Significance of the Study

Previous research on the teachers' developmental concern theory (Fuller, 1974) used video feedback accompanied with a trained inter-action discussion leader to resolve student concerns. The use of video equipment and materials, the time involed in viewing preservice teacher/pupil interaction by the supervising teacher, and the low

ratio of field supervisors to practicum students during a time of tight budgetary allocation make such a concerns based teacher education program prohibitive. This study attempts to base its procedure on the findings of Fuller (1974) yet use a more parsimonious method of recording practicum incidents and providing feedback. In addition, no study has examined Fuller's developmental concern theory in relation to preservice special education teachers. The findings of this study will attempt to resolve this deficiency in the professional literature.

CHAPTER II

REVIEW OF LITERATURE

Chapter II presents a review of literature directly related to
the problem under investigation: Can critical incidents, used as a
feedback, promote a more mature level of concerns in preservice spe-
cial education teachers?

The concerns of persons preparing to be teachers and those of
persons who are already teachers have held the interest of researchers
over the years. Indeed, most teacher educators regard teachers' con-
cerns and attitudes toward their students and their skill in present-
ing material to the student as two critical components of effective
teaching (McDonald, 1978). The first section in this chapter then
will review the development of teachers' concerns theory which forms
the dependent variable in the author's research.

The critical incident technique will be the focus of the second
section of this chapter. This technique provides a systematic proce-
dure for obtaining objective information on performance criteria.
Although the use of the critical incident technique in the field of
special education has been almost nonexistent (Blackhurst, 1973), the
present study will utilize the critical incident technique in combina-
tion with feedback as the independent variables.

The third section of this chapter will examine specific feedback
strategies and will present the theoretical rationale for the selec-
tion of the feedback process used in this study. The function of the

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feedback within the developmental concerns context is to both arouse and heighten awareness of concerns within the group.

Thus, this chapter has been divided into three major sections: (a) developmental concerns, (b) the critical incident technique, and (c) feedback procedure. Following these major sections, a brief summary of the chapter will be presented.

Developmental Concern Theory

The concerns of preservice and in-service teachers has remained a phenomenon of interest for many years. Findings from many studies written within the past 50 years appear to support the supposition of developmental concerns.

Phillips (1932) between 1922 and 1932 gathered many instances of teacher concerns through interviews and correspondence with new teachers in England. The data amassed during those 10 years indicated that new teachers were concerned most with maintaining discipline, getting along with the parents of their pupils, and the inadequacy of teaching materials.

In another study done in England, Gabriel (1957) was able to divide the surveys submitted by 196 teachers into five groups according to length of teaching experience. Each group reported different concerns. Beginning teachers seemed more concerned with their supervisor's evaluations and of their class control than any of the groups with more teaching experience. The most experienced group of teachers was much less concerned with these matters. Instead, they expressed concern with how well they perceived the scholastic

progress of their students.

Travers, Rabinowitz, and Nemovicher (1952) administered a sentence completion survey to 120 elementary education majors before and after student teaching. Following student teaching, the preservice teachers became most concerned with student discipline and with being well liked by their students. Neither concern was found to be statistically significant.

Thompson (1963) administered a 35 item anxiety checklist to 125 general education majors just prior to their completing student teaching. Each student was asked to indicate anxieties that they had personally experienced before and during student teaching.

Student teachers identified only two areas where they felt anxieties had increased during student teaching. These were:

> 1. What should I do if my material has been covered and there is extra time?
>
> 2. What should I do if I make a mistake in a statement or a suggestion? (p. 436)

In contrast, the student teachers identified 10 areas where their concerns decreased during the student teaching experience. These were:

> 1. What will the critic teacher expect of me?
>
> 2. How should I dress?
>
> 3. Will I be required to turn in my lesson plans, and who will evaluate them?
>
> 4. Do I really know my subject matter?
>
> 5. Will the pupils like me and respond to my guidance?
>
> 6. What will these pupils be like?
>
> 7. Will I be able to do what is expected of me?

8. Will my teaching assignment be too much for me to handle?

9. What are the policies concerning classroom practices, the school, the faculty, and the curriculum?

10. How will the faculty and staff accept me? (p. 436)

Three areas of high anxiety were reported before and during student teaching. These were:

1. Will I be able to maintain desired standards of behavior?

2. How informal or formal should I be with students?

3. Will I be allowed to discipline students as I see fit? (p. 436)

Thompson's study indicated that more concerns began by overhearing a comment than from any other source and that more anxiety occurred before student teaching than during student teaching.

Robinson and Berry (cited in Fuller, 1969) used the Thompson (1963) checklist, again with general education student teachers. These student teachers expressed concern over grades given to them for their student teaching experience.

Alterman (1965) conducted a free response study of preservice general education teachers enrolled at Central Michigan University. More than 1,000 student teachers were requested to maintain logs from their student teaching experiences in which they would record their impressions and feelings. These students were then asked to evaluate their experience in terms of their felt needs or concerns. Alterman analyzed more than 200 randomly selected diaries from which seven major categories were formed. Although no statistical analysis of the data was presented, a breakdown according to the percentage of

these seven categories was provided. Four areas of concern account
for 78% of the concerns analyzed. These concerns included: instruc-
tional activities (38.5%), pupils' work (16.4%), daily assignments
(12.6%), self (10.5%), discipline and pupil behavior (8.4%), evalua-
tion of experience (6.9%), and supervisors, principals, and others
(6.8%).

Tripplett (1967), again using general education students, devised
a self-assessment form in which preservice teachers were asked to
rank 23 items according to what they felt were their greatest concern.
These rankings were completed before and after student teaching.
Analysis of the data indicated that the preservice teachers felt
their greatest concerns were in the following areas:

1. Instructional planning

2. Classroom management

3. Pupil evaluation

4. Construction of tests

5. Planning for handicapped children

These concerns remained relatively stable even after student teaching.

Erickson and Ruud (1967) reported the concerns of 90 preservice
home economics majors from North Dakota State University who were
examined shortly before their student teaching experience. The
results indicated that over 50% of the students were nervous and
insecure and 33% stated that they were confused and uncertain about
their chosen vocation. About 75% of the preservice teachers reported
that they were worried about how they would teach units and how they
would be evaluated, while only 23% expressed self-confidence in these

areas. The main differences between the preservice teachers and the experienced teachers, with whom they were compared, were fewer anxieties and greater self-confidence expressed by experienced teachers.

Murro and Denton (1968) conducted group counseling sessions with two groups of preservice teacher volunteers (n = 68). Each session was audio taped and later classified according to the concerns expressed. The authors identified two dominant concerns for these prospective teachers. These concerns were feelings of inadequacy about teaching and concern over the ability to handle personal emotions, thoughts, and life goals.

In 1969, Aspy reviewed teachers' concerns found in the literature and suggested that most preservice teachers operated at a survival level. Furthermore, he stated that prospective teachers merely coped with immediate problems and did not seem to grow professionally. Aspy then provided suggestions for a training program based on Maslow's (1954) levels of human needs.

While all of the above-mentioned authors focused their research on inquiry in the area of teacher and/or preservice teacher concerns, no theoretical base had emerged which would allow for the integration of various findings. Reexamining the work of Travers et al. (1952), Gabriel (1957), Thompson (1963), Robinson and Berry (cited in Fuller, 1969), and Erickson and Ruud (1967), Fuller (1969) suggested that these studies could be juxtaposed in a meaningful way and as a result she posited a developmental theory regarding teachers' concerns.

In exploration of this theory Fuller (1969) intensively examined the concerns of student teachers by gathering data from prospective

teachers over three successive semesters (n = 6, n = 8, and n = 11, respectively) during weekly 2-hour student teaching seminar sessions. A psychologist replaced the student teaching supervisor during the seminar sessions and "group counseled" the student teachers. The transcriptions and categorizations of these teachers provided Fuller with evidence that demonstrated initially quantifiable data supporting her conceptualization of developmental teachers' concerns. She found that student teachers during the early weeks of a semester submitted statements directed toward self-protection and self-adequacy. Only later did they submit statements focusing on their pupils' progress. Thus, categorization on the basis of self-adequacy and pupil-benefit formed the developmental pattern of concerns Fuller first posited. Fuller expanded her research to include 41 sophomore and junior education majors, all of whom had little or no actual teaching experiences.

In 1969, Fuller developed and used a form for soliciting Teacher Concern Statements (TCS) (see Appendix A). Her conclusions indicated that the entire preteaching period seemed to be a period of "non-concern with the specifics of teaching, or at least a period of relatively low involvement in teaching" (p. 219). She reported that during the first three sessions, more than 86% of the concern statements submitted by student teachers were primarily concerned with their own performance. Slightly less than 14% of the statements were concerned with pupil benefit. During the next three sessions, the distribution of the concern statements submitted shifted. Approximately 41% of the concern statements were for self benefit, 36% of the statements

identified student discipline as a concern, and 22% of the concern statements regarded concerns with what their pupils learned. Proportions of concern statements submitted during the later sessions (7 through 11) indicated an even greater shift in student teacher concerns. Self concerns accounted for only 35% of the concern statements, but concerns for pupil benefit accounted for almost 58% of all the statements submitted.

Although 76% of the student teachers indicated a concern over their own self-adequacy, Fuller concluded that preservice teachers develop increasingly more mature concerns such as improved class control, presentation of adequate subject materials, and their developing positive relationships with their students.

The developmental teachers' concerns theory first posited by Fuller (1969) was comprised of two poles on a theoretical continuum. This continuum ranged from concerns for self-benefit (characterized by self-survival statements) to concerns for pupil-benefit (characterized by statements about the needs of pupils).

Studies emanating from the University of Texas at Austin have successfully located regularities in the concerns of preservice general education students (Fuller, 1969; Fuller, Parsons, & Watkins, 1974; Hall & Loucks, 1978; Newlove & Hall, 1976). Between 1969 and 1972, Fuller and others from the University of Texas gathered and analyzed more than 1,500 "Teacher Concern Statements" submitted by preservice and in-service teachers in an attempt to identify all points between those poles cited above. As a result of these analyses using the critical incident technique, six categories were identified within

the developmental concern continuum. The first three categories representing self-benefit concerns were concerns about (a) role, (b) self-adequacy, and (c) being liked or liking. The second three categories represented pupil-benefit concerns. These were concerns about (d) teaching, (e) pupil needs, and (f) educational improvement.

Based on data from the "Teacher Concern Statements" (TCS) (Appendix B), Fuller et al. (1974) found the two-stage (self-adequacy, pupil-benefit) model first proposed by Fuller (1969) no longer adequate and a three-phase model was proposed. Results of the analyses supporting the three-phase model were published in three separate articles (Fuller, 1974; Fuller et al., 1974; Parsons & Fuller, 1974). The conclusion from these studies indicated that concerns changed, developmentally progressing from initial concerns unrelated to teaching (Today is a pretty day), through three stages. These stages are concerns about self in relation to teaching (Will I be able to do what is expected of me?), to task concerns about teaching (I'll need lesson plans for tomorrow), and finally to impact concerns (Are my students learning what they need?), which all studies show is the most mature level of teaching concern.

According to Fuller et al. (1974), preservice teachers do not make a distinction between concerns about teaching performance and concerns for pupil benefit. Albeit a three-phase developmental model exists, preservice teachers apparently have limited perceptual images and therefore remain unaware of the difference between the teaching task or process and that the purpose of education is to benefit pupils (Tom, 1976).

Tom (1976) claims that prospective teachers underestimate the role demands made on the teacher in addition to those made on the student. It is little wonder that education courses often fail even though the theoretical content may be of outstanding quality because the theoretical aspects involved in teacher preparation precede practicum, hence, preservice teachers are forced into adopting an impact-oriented teaching theory even though they possess student-oriented perceptual images.

Ingersoll (1975) surveyed and analyzed the concerns submitted by 745 elementary, junior high, and senior high school teachers from four separate school districts in an effort to identify topics for in-service. Differences in the responses between teachers of greater or lesser experience provide evidence of three phases of teachers' concerns and clearly support the need for differentiated in-service training. Further, he states, "use of the results of that instrument [Fuller's TCS] increases the relevancy of teacher training and concomitantly, teacher satisfaction" (p. 5). While Ingersoll provided additional support for Fuller's developmental concern hypothesis, he also called for the development of additional instrumentation to assess the concerns of both the school and the community.

In a study of the concerns submitted by student teachers, public school teachers, and other educational personnel (n = 362) from several teaching centers, McNergney (1977) identified patterns of perceived needs similar to the three stages of teachers' concerns (i.e., self, task, and impact) identified by Fuller. These data provided the information desired by educators from teaching centers, thus,

"enabling activities which were truly responsive to persons directly involved in the operation of cooperative teaching centers" (p. 8).

Newlove and Hall (1976) cite the work of Fuller and further state that "this developmental [concern] pattern holds for most process and product innovations" (p. 8) (e.g., a new curriculum package). They allege that earlier concerns (e.g., self-concerns) must be resolved or lowered in intensity before more mature concerns are able to increase in intensity. An individual need not have concerns at only one stage at a time. According to Hall and Loucks (1978), individuals have a concern profile with some levels being more intense than others.

When one examines the analysis and application of the developmental teachers' concerns theory, it rapidly becomes apparent that teachers' concerns have usually been assessed using structured instruments. Such instruments typically contained few items which permitted the teacher to report concerns about one's own feelings. Consequently, few studies identified concerns about self with the notable exceptions of the personal letters used by Phillips (1932) and the typescripts of Fuller's (1969) counseling sessions.

Fuller (1970) initially gathered concern statements by requesting students to record their concerns on a blank sheet of paper. All instructions were provided verbally. It is not until later that Fuller and Case (1971) further refined a more systematic procedure when they developed the Teacher Concern Statement (TCS) which is located in Appendix A.

This TCS formed the transitional bridge between the cumbersome typescript or the direct reporting of concerns taken from letters used in earlier research of teachers' concerns and the structured instruments which were developed later.

The TCS allowed the investigator to discover what teachers' concerns were during different points in their careers. It was developed through the following process. Preservice and in-service teachers were given 10 minutes to respond to the question, "When you think about your teaching, what are you concerned about?" Responses to this question were placed in one of seven different categories which had earlier been developed using a critical incident procedure (Flanagan, 1954). Each statement was coded according to "content unit" which was defined as each word group that expresses a <u>single</u> codeable concern. The nonteaching category was employed by coders but was discarded for analyses. From the resulting data, Fuller and Case (1971) formulated seven levels or stages of development of teachers' concerns. These are, (a) concerns not related to teaching, (b) an orientation toward teaching, (c) concern regarding class discipline, (d) concern about student/teacher relationships, (e) concern with student cognitive gain, (f) concern with student affective growth, and (g) interest regarding professional issues. A more complete summary of these teacher concern categories can be found in Appendix C.

In 1971, Fuller and Case, using data from a sample of 381 preservice and in-service teachers, presented evidence supporting the linear development of teachers' concerns as they related to five different levels of teaching experience. These five groups included

(a) undergraduates (n = 133) with no teaching experience, (b) under-
graduates (n = 47) with only one semester teaching, (c) undergraduates
(n = 120) with one semester of teaching observations, (d) undergrad-
uates (n = 53) with one semester of observation and one semester of
student teaching, and (e) experienced teachers (n = 28) with more
than one year's teaching experience. Undergraduates with no teaching
experience reported 85% of their concerns at the first three stages
of teacher concern. From an experiential level the percentages of
more mature teachers' concerns gradually became less self-oriented
and more oriented toward pupil benefit. Indeed experienced teachers
reported that 87% of their concerns in what Fuller and Case (1971)
regarded as the most mature levels of teachers' concerns.

In 1972, Parsons and Fuller concluded that the TCS was (a) too
costly in man hours and dollars and (b) it was unreliable because of
coder instability and interrater unreliability. Thus, they determined
that a structured, machine-scorable instrument to assess teachers'
concerns had to be developed. A quick scoring questionnaire, the
Teachers' Concerns Checklist, Form B (TCCL), (Fuller et al., 1974;
George et al., 1974; Parsons & Fuller, 1972) was developed from the
TCS data (see Appendix B). This instrument consisted of 56 Likert
scaled concern statements scored from 1 "not concerned" to 5 "very
concerned." The TCCL required about 10 minutes to complete and pro-
vided practitioners with five-scale scores.

Applications of Developmental
Concerns to Teacher Training

Most teacher educators are drawn from the ranks of the experienced, superior educators, or those who are most concerned with benefiting their pupils (Fuller, 1974). Therefore, teacher trainers should not assume that their students are interested in the same goals. The concerns-based approach to teacher education advises when students will be most responsive to certain types of information. The TCS along with the TCCL were being utilized at the University of Texas as instruments within the Concerns-Based Adoption Model as late as 1978 (Hall & Loucks, 1978).

The Concerns-Based Adoption Model focuses on the personal experiences of educational personnel as they adapt to newly presented educational innovations. The premise behind this model is that innovation adoption (teacher preparation is but one kind) is individualistic. Each person must decide the extent and manner to which the innovation will be accepted and used. Hall (1976) states that innovation adoption should not be thought of as a specific event or point in time, rather, it is a process that occurs over a span of time.

Just because information regarding the level of concern about an innovation focuses on the personal aspects of change and the perceived needs of the user of innovations, it cannot determine what a person is doing with regards to the innovation. A second dimension of the Concerns-Based Adoption Model, Levels of Use, focuses on what a person does with the innovation.

As early as 1970, Fuller pointed out that various kinds of inputs were needed in order to successfully use a concerns based strategy to train teachers. The University of Texas utilizes four steps as inputs in their teacher training model. These steps are as follows:

1. Assessment of concerns

2. Arousal of concerns

3. Awareness of concerns

4. Resolution of concerns

Within the concerns based teacher training model the assessment of one's concerns is accomplished through the use of TCS or TCCL. Arousal and awareness happen when feedback is relevant to one's internal goals. Resolution seems to occur through more cognitive experiences, namely, the acquisition of information, practice, and so forth (Newlove & Hall, 1976, p. 8).

The theory and application of developmental concern was never intended to be used in isolation, or do concerns exist at only one level at a time (Hall & Loucks, 1978). The application concern theory at the University of Texas has been used to assess the affective concern level of students and to then prescribe specific information or practice ("innovation bundles") for their students. Consequently, the program points out stages of concern for preservice teachers and presents material matched to the person's more intense concerns. For example, first year preservice teachers should not be presented with a workshop on criterion-referenced assessment of reading which would be an intervention targeted at the "impact" concern level. This type

of instruction would very likely not seem relevant to these students. Although higher level concerns appear to be easily aroused, if resolution of these concerns fails to occur within a brief period of time, one's concern levels drop to prearousal levels (Jones, cited in Fuller et al., 1974). Hall and Rutherford (1976) state that these students are likely to have their most intense concerns at the management or task level regarding such innovation. Hence, they suggest that a workshop on agenda setting and problem solving be presented.

Summary of Developmental Concerns Theory

The developmental teachers' concerns theory postulates three levels or stages of concern: <u>self</u>, <u>task</u>, and <u>impact</u>. Higher levels of concerns development cannot easily be engineered by an outside agent since having concerns and changing concerns is an impulse within each individual. Teacher educators often express the feeling that they and their students function at the impact-concern level. Research regarding developmental concerns theory indicates that almost everyone, when first confronted with a "new innovation," will have self-concerns and that such concerns are a part of change. Thus, it is the job of the teacher trainer or consultant to facilitate movement toward task and ultimately impact-related concerns. Self-concerns should be anticipated whenever new innovation is presented. Then actions must be planned and implemented to accommodate and re-solve self-concerns.

Teachers' concerns theory has contributed to successful programs in preservice teacher training (George, 1978), in-service teacher training (Ingersoll, 1975), educational-personnel training at teacher centers (McNergney, 1977), and various other educational programs involving innovations (Newlove & Hall, 1976; Rutherford, 1977).

Critical Incident Technique

In 1961, Flanagan, the developer of the Critical Incident (CI) Technique, defined a critical incident as "an observable human activity sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act" (p. 480). Later, Wolman (1973) defined the critical incident technique as "a method of studying organisms by observing selected samples of their behavior and making inferences about the total organism" (p. 370). In 1979, Cartwright and Forsberg interpreted critical incidents to be descriptions of real-life situations to be presented as simulations. Critical incident technique then is a method for describing and/or defining performance in behavioral terms (Flanagan, 1954).

There are, according to Flanagan (1954), two principles and five steps which should be remembered and applied when utilizing CI methodology. Principles to be remembered are, (a) only facts should be reported and (b) the incidents should significantly contribute to the success or failure of behaviors being analyzed. In addition, the following steps should be taken, thus providing maximum usable information and objectivity.

First, a statement must be developed to reflect the major pur-
pose for the investigation. Unless the respondents understand the
purpose for the study, it would be impossible for them to know whether
the event is effective or ineffective.

Second, specific plans must be made which will allow focus on
the crucial aspects under investigation. As part of the plan, spe-
cific instructions must be formulated so that a full description of
the directly observed incident can be recorded.

Third, incidents must be identified and collected, usually
through either (a) individual interviews, (b) group interviews, (c)
questionnaires, or (d) recording forms. Whichever method is used,
the respondents must identify antecedents, critical incidents, and
consequences resulting from the incident.

Fourth, separate incidents are sorted according to frames of
reference generated from previous research. Then the incidents are
inductively grouped together with other similar incidents, a proce-
dure known as category formulation. Finally, the incidents are
arranged into levels of general behavior. This involves vertical
sorting within categories according to general magnitude or level of
importance. The importance of an incident is not determined by the
number of incidents within a category, it is only an index of per-
ceived importance regarding a specific behavior or incident (Good &
Scates, 1954).

Fifth, the incidents must be interpreted and reported. Flanagan
(1962) indicated that errors often occur during this step, not during
the collection and analysis of incidents. To guard against this,

Flanagan suggests that a panel make the final analysis and prepare
the listing of critical competencies.

The studies cited provided only a sampling of the many applica-
tions of CI methodology. Fivars (1973) has published an extensive
bibliography of over 600 studies that have utilized CI techniques to
solve practical problems in education, health, community service, and
industry.

The following section will thus present CI as a method of evalua-
tion and assessment which can lead to the solving of practical prob-
lems. While feedback has not originally been a part of CI technique
or methodology, CIs have been used as feedback.

The examination of critical factors in human performance has
always been extremely important in the analysis of all professional
positions. Too often, open-ended questions merely elicited attitudes
or served to circulate stereotypes of second-hand and/or imagined
events.

An early attempt to apply CI methodology to behavioral problems
can be found in Clarke and Mollenkopf (1947). Critical incident
methodology was used at a military redistribution center in an attempt
to identify and define what the 490 men perceived to be an example of
a successful and unsuccessful military officer. Reports of 230 inci-
dents describing successful and unsuccessful "qualities of leadership"
were examined by one person who proceeded to underline those traits or
abilities that characterized successful and unsuccessful military
leaders. From these statements, 23 categories were formulated.

Later, three additional investigators, utilizing these existing categories, reclassified these statements. Following this classification by each of the investigators, all four of the investigators met and resolved areas of disagreement (pp. 32-54).

The United States Army Air Forces Aviation Psychology Program, under the direction of Flanagan, used CI in testing various areas of concern during World War II. These early applications led to an even more refined procedure for determining critical incidents. Initially, critical incidents were gathered from reports, logs, or cases. Later, individuals with firsthand knowledge of an incident were asked to respond to a specific question regarding certain behaviors the individual had either participated in or observed. Flanagan (1949) stated that the CI was a method for obtaining miniature cases which could then be inductively categorized so as to determine the behavioral dimensions of that case. In addition, Flanagan (1950) forecasted that CI methodology would be useful in the field of education when he wrote:

The critical requirements for various types of activities, when expressed in terms of behavior, become very useful for curriculum development, the development of achievement or evaluation measures, and the development of procedures for evaluating effectiveness of adults in these areas. (p. 323)

Flanagan (1954) claimed that the CI technique had many uses. He cited successful research, all conducted between 1946 and 1954, for each of the following purposes:

1. Measures of typical performance (criteria)

2. Measures of proficiency (standard samples)

3. Training

4. Selection and classification

5. Job design and purification

6. Operating procedures

7. Equipment design

8. Motivation and leadership (attitudes)

9. Counseling and psychotherapy (pp. 346-352)

Flanagan had great confidence in the ability of the CI technique to provide scientific data for many purposes. More recently, Flanagan approached Stufflebeam of Western Michigan University's Evaluation Center and proposed that the CI technique be used with the CIPP evaluation model (Stufflebeam, 1978).

According to Burns (1957), the first application of CI to educational research occurred when Domas (1950) developed a comprehensive list of behaviors illustrating teacher competence and lack of competence in the New England States. Approximately 1,000 critical behaviors from 198 teachers, principals, supervisors, and superintendents were gathered and analyzed. The results of this study, conducted under the joint sponsorship of the Education Research Corporation and Harvard University, were to be used to compare salary to competence. A complete categorization of incidents was never completed.

Jensen (1951) was successful in using the CI technique to define the behaviors and traits which he felt contributed to effective and ineffective teaching. A group of 144 educators submitted approximately 500 CIs which were classified under one of three general categories: (a) personal qualities, (b) professional qualities, and

(c) social qualities. Jensen concluded that the CI technique could profitably be used for teacher evaluation and as an aid in determining topics for professional in-service training.

In 1971, Reilly used the CI technique to collect descriptions of specific observable events which caused graduate instructors (n = 75) in English, psychology, and chemistry to raise or lower their estimate of the competence of graduate students. Except for only a few items dealing with experimentation or laboratory work, the incidents which were obtained appeared applicable across disciplines. Hence, these results offer at least an initial step toward an empirically based definition of criteria regarding graduate student performance. The ability of CIs to capture vital characteristics of a specific task have thereby been demonstrated.

Perry (1967) utilized the CI technique to identify critical behavior in resource or helping teachers in the state of Florida. A total of 411 teachers and 23 principals submitted CI statements. The three major areas of critical behavior identified were (a) curriculum materials and resources, (b) instructional principles and practices, and (c) human relations and communications. The specific requirements most often identified were as follows:

1. The ability to help staff locate and utilize teaching materials.

2. The ability to teach for illustration purposes.

3. The capability to test students.

4. Skill in making suggestions for ways of working.

5. The competency to plan programs and activities.

6. Talent in stimulating professional improvement.
(p. 46)

The author stated that the CI technique could help determine whether perceptions of various groups agreed. Both teachers and principals agreed on their perceptions of critical requirements for the role of resource teacher.

CI techniques can be used to locate differences in the perceptions of individuals and groups of persons. For example, Schaeberle (1972) investigated the nature of perceptions of elementary school teachers (n = 104) and their aides (n = 95) using CIs. Significant differences (p < .005) were found between the perceptions of teachers and their aides with regard to what teacher behaviors most hindered aide performance. Teachers perceived that they, at times, did not provide enough guidance, however, aides perceived teachers as having difficulties in personal relationships.

Several dissertations examining the perceptions of preservice teachers and their supervisors have been conducted during the past 5 years (Gruber, 1974; Hackley, 1976; Kruger, 1977). When Hackley (1976) used CIs to identify specific behavioral criteria for the selection and/or training of effective secondary school supervisor teachers, she was able to identify requirements in both the affective and cognitive domains. Although no statistical treatment of the incidents was conducted, this research provides an example of how the critical incident technique can be used to form criteria for job performance. Criteria for job performance based on the analysis of CIs have been called "critical behaviors" (Perry, 1967, p. 9).

Kruger (1977) examined the perceptions taken from CIs submitted by special education student teachers (n = 153). As a result of this investigation, it was recommended that supervisors:

1. Increase the number of observational visits.

2. Arrange more systematic schedules.

3. Prepare more relevant practicum sessions.

4. Increase involvement in the construction of daily plans.

5. Enter classrooms and participate in lessons in a more courteous manner. (p. 2046A)

Using Flanagan's CI procedures, Merrit (1955) gathered reports aimed at identifying critical teaching competencies from newly graduated teachers at San Francisco State College. The investigator then juxtaposed the critical incidents with existing behavioral objectives of a methods course at the college. Based on her examination, she concluded that "teacher education staff and graduates of its program tend to be in agreement concerning the competencies which led to effective teaching" (p. 377). Even though the teacher-training staff probably had strong influence on its teacher graduates' perceptions of what constituted effective teaching, these perceptions were nevertheless real.

Fuller et al. (1974) warn of the danger in assuming that preconceived statements be used to depict self-concerns. Until now, the discussion of CI has been confined to describing only the first of two steps involved in using CI methodology, the classification of critical incidents. Only when a proven classification system has been developed, one which insures a fairly satisfactory degree of

objectivity, can the practitioner move to the second step--improving performance based on the observed incidents.

Laktasic (1976) claimed the simulations developed from CIs allow teaching problems to be portrayed realistically, thus enabling persons training to become teachers to modify performance and more quickly relate theory to practice. He claimed that for simulations to be successful, they should be developed using three processes. First, research is needed. The use of CIs is suggested for use in capturing components and processes of the environment or stimulus situation. Second, a response system must be developed which will realistically represent the stimulus. Third, the simulation must stimulate the student to allow an expression of knowledge, skills, and ideas in a realistic but controlled environment.

Ingram and Blackhurst (1975) describe how the CI technique has been able to help identify competencies which students and professors perceived as necessary for effective instruction and advisement at the University of Kentucky. In addition, statements from this study "identify competencies required to effectively advise and instruct college students seeking a degree or teaching certification in special education" (p. 86).

There are advantages which should be remembered whenever one contemplates using CIs to examine human behaviors. Rutherford (1974) summarizes the following comprehensive list of advantages for using CI technique:

> 1. Genuinely _important_ situations for that position are sought out, those responsible for success or failure in the eyes of the reporter.

    2. _Specific_ requirements for the position are pro-
duced through statement in terms of the situations which
characterize the position.

    3. Requirements are _precise_ statements rather than
generalizations.

    4. Report is _comprehensive_ through a large number of
observers in varied circumstances freely reporting events.

    5. It is _relevant_ through freedom of choice and use
of actual experience. Distortion by limited personal view-
point, conversational stereotypes, or predetermined lists
is avoided.

    6. Relative _weighting_ is provided through indication
of those factors probably most frequently observed as
responsible for success or failure.

    7. Not requiring personal participation or long peri-
ods of observation, it is _economical_. Persons well
acquainted with the activity are utilized as reporters of
behavior they have observed.

    8. _Anonymity_ is assured by a melding of the elements
into statements of requirements. (p. 18)

There are also weaknesses that one should be aware of when one

contemplates using the critical incident technique. Corbally (1956)

claims that the use of critical incidents is extremely time consuming

and that delayed results often cause the incident to be unrecogniz-

able by the persons originally submitting the incident.

    In addition, Gropper (1956) states that CI methodology assumes

that observers can report incidents in which outcomes in terms of the

aims of the undertaking are clearly recognizable. He identifies two

problems. First, outcomes in education are often either deferred,

unrecognizable, or both. Second, one's aims are often unformed, con-

troversial, and misunderstood by others.

As one weighs the advantages and disadvantages for using CI methodology it appears that the advantages are more numerous. Using a procedure such as the CI technique to examine human behavior allows the researcher to examine the behavior without any preconceived instrumentation (Patterson, 1978). Furthermore, "often the best methods are the most difficult" (McKenna, 1976, p. 407).

Summary of Critical Incident Technique

The CI technique provides a systematic method for obtaining objective information regarding a human activity. The incidents should be sufficiently complete (i.e., include antecedents, incident, and consequences) to permit inferences and/or predictions to be made about the individual performing the act. The intent of the act must be fairly clear to the observer and the act must be vital enough that ineffective or effective performance might cause failure or success in the behavior being analyzed.

Finally, there are five main steps involved in using the CI technique:

1. Establishing the general aim of the activity.

2. Developing plans and specifications for the collection of CIs.

3. Collecting the reports or questionnaires of CIs.

4. Analysis of CIs to obtain data.

5. Interpreting and reporting data. (Flanagan, 1954, p. 352)

Feedback

The <u>Dictionary of Behavioral Science</u> (Wolman, 1973) defines feedback in social psychology to mean "any kind of direct information [stimuli] from an outside source about the effects and/or results of one's behavior" (p. 143). To fully understand feedback theory, however, one must remember that an individual only receives the feedback from information with which one is concerned or to which one pays attention. Feedback theory should, therefore, emphasize "self-regulation of behavior" within all phases of performance, development, and learning (Smith, 1977).

According to Powers (1973) an individual accepts the feedback/stimuli only when they are related to one's reference signals, "models inside the behaving system against which the sensor signal is compared" (p. 354). Consequently, each individual accepts feedback which that individual feels is relevant to his goals. Powers has called this goal-seeking behavior, that is, something toward which one has the appearance of working. One should understand that goal-seeking behavior and reference signals explain a great deal about the dynamics of inter-individual differences. Hence, identical stimuli can be perceived differently by separate individuals.

Skillings (1977) classified feedback into four different types: mirror feedback, focused feedback, impact feedback, and opinion giving feedback. Each of these types of feedback is described in the following paragraphs.

"Mirror feedback" is presented to an individual, the person receives a direct representation of particular behaviors. These behaviors are usually captured through the use of photographs, audio recordings, transcriptions of critical incidents, and/or video tape recordings. There is no editing, translation, or evaluation of the event. The function of this type of feedback is to reflect, or mirror behavior. Each individual is free to interpret the event based on one's internal reference signals.

"Focused feedback," the most common type of feedback, presents a particular behavior or portion of a behavior to an individual. In other words, there is an aim in the feedback presented. One example of focused feedback would be a class observing a video tape recording of a teaching incident. While viewing the tape, students or teacher could stop the tape and comment on any behavior. Another example would be the presentation of a critical incident which would be especially effective or ineffective. One's concern regarding the efficacy of a behavior would thus be the focus.

"Impact feedback" is a feedback which concentrates on the consequences of a behavior or incident. A good example of this type of feedback is the mother who tells her young child that the match is hot. A problem which usually occurs when using impact feedback is that the person providing the feedback may give personal opinions or draw personal conclusions. Thus, the person may say, "I feel unhappy when you laugh at me."

"Opinion giving feedback" is a feedback procedure where personal statements or interpretations are provided for the individual. Often,

discrepancies are pointed out by the person offering the feedback such as, "I think you laugh at me because you want me to feel unhappy."

Feedback is related to one's level of arousal. According to LeFrancois (1975), individuals attempt to maintain arousal levels that permit their most effective behavior as related to one's inner goals. If arousal level is too low, an individual will often attempt to increase it; if arousal level is too high, the individual will attempt to decrease it. Hence, we can often predict certain types of behaviors. For example, when an individual is frightened, it is quite normal to attempt to run away, thus removing the feedback of the frightening stimuli. When an individual is bored, quite the opposite occurs. One will attempt to increase feedback through a stimulating activity or perhaps the individual will daydream. An optimal level of feedback and arousal are, therefore, needed to insure maintenance of performance or individual changes (e.g., developmental growth).

Feedback should take place as soon after the behavior or event as possible. Increased detachment by the individual engaged in the behavior or incident occurs as the time between event and feedback increases (Kagan & Krathwohl, 1967).

According to Fuller and Manning (1974), individuals are aroused because they are fascinated by themselves. Apparently this is especially true when auditory or video representation of the individual is presented. Arousal occurring when the audio or video tapes of others are presented provide relatively low levels of arousal. If

individuals appeared bored with video or other feedback regarding other individuals, Yenawine and Arbuckle (1971) claimed that it was probably because mirror feedback of others is nothing new. Hence, "arousal may be amplified by one's expectation that he will find out something about himself which others know but which he does not know" (p. 501).

According to Garfield (1971), preteachers as a group are likely to profit from feedback (especially video feedback) because he states that they are the YAVIS (young, attractive or anxious, verbal, intelligent, and successful). The individual least likely to benefit from the video feedback is the HOUND (homely, old, unattractive, nonverbal, and dumb). When feedback of any type fails, the victim is most often the HOUND.

Nixon and Lock (1973) claim that CIs can provide feedback for teachers. Indeed, CIs were used by Cruickshank and Broadbent (1968) as one component in a teacher-training program. Analysis was made of CIs submitted by 163 first-year teachers. As a result of this analysis, the 32 statistically significant incidents were developed into simulations. These simulations (video tapes, role plays, and written materials) were then presented to an experimental group of 40 preservice teachers. When compared to a control group, Cruickshank and Broadbent concluded that simulation training was at least as effective as an equal amount of student teaching.

Workbooks have been designed which use previously generated CIs to help student teachers and paraprofessionals involved in early childhood programs (Croft, 1976) and preservice special education

teachers (Cartwright & Forsberg, 1979) focus on various incidents within their professions. Both workbooks present written scenarios which depict incidents likely to occur. Both authors claim that their books are designed for personal assessment.

In 1977, Altshuler utilized CI methodology as a self-reflection and evaluation instrument to assess adult education. Critical incident summary sheets were inserted in logs and used as a means to systematically track adult learning patterns. The feedback procedures, based on these sheets, provided self-evaluation for adults submitting incidents and detected learning patterns which were used by the teacher/facilitator.

By themselves, CIs constitute a form of mirror feedback and Cruickshank and Broadbent (1968), Nixon and Lock (1968), Croft (1976), Altshuler (1977), and Cartwright and Forsberg (1979) have clearly been able to use CIs as feedback.

Summary of Feedback

Feedback is any kind of information that a person receives from outside one's self which provides information on which the individual is concerned. The four kinds of feedback that this research is concerned with are: mirror feedback, focused feedback, impact feedback, and opinion giving feedback. To be most beneficial in the learning situation, feedback must provide a moderate (optimal) level of arousal.

Summary of Literature Review

The developmental concern theory first posited by Fuller in 1969 and reconceptualized in 1974, has considerable support. Apparently, most teachers develop concerns first for _self_, later for _task_, and finally (for some individuals) for _impact_ on one's students.

Several systems exist for gathering information about behavioral events or incidents. These include video and audio recordings, photographs, typescripts, and critical incidents. The critical incident technique, used in the present study, enabled preservice teachers to report behavioral episodes objectively. This technique traditionally includes recording of antecedents, the incident itself, and the consequence of the incident. To be _critical_ an incident must add to or subtract from the efficacy of the behavioral episode.

Various types of feedback (information outside an individual with which the individual is concerned) can be presented to the individual. These include: mirror feedback, focused feedback, impact feedback, and opinion giving feedback. Each individual receives and interprets feedback based on one's internal reference signal. Reference signals (i.e., a model inside an individual against which the feedback/stimuli is compared) are often closely related to the individual's concerns. Not only can the CI technique be used to record behavioral performance, the incidents themselves can be used as feedback.

After reviewing the literature in this chapter it became apparent that the CI technique was appropriate for gathering an objective

description of practicum events. Furthermore, the incidents provide a rich pool of raw data depicting realistic practicum situations. According to Cartwright and Forsberg (1979) CIs describe key situations and inform the individual of expectations for special educators.

CHAPTER III

METHOD AND PROCEDURE

Chapter III describes the method and the procedure used in this study. Included in the method section is a description of the subjects taking part in this study, the research design (i.e., the arrangement for gathering data), and a description of the instrumentation used to measure the concerns of preservice special education teachers. The second major section describes the treatment presented to the experimental groups and discusses how this procedure differs from the control group procedure.

Method

Subjects

All of the individuals in the experimental group (n = 30) and control groups (n = 53) were special education students enrolled in a practicum course SPED 531 at Western Michigan University. For the majority of special education majors at Western Michigan University, this course represents their inauguration into the departmental sequence.

The control groups consisted of four different sections of SPED 531. Three sections met during the fall 1978 semester, however, one instructor grouped two sections together. Thus, for the purposes of this study, two posttest-only control groups, C_1 with 26 students and

45

C_2 with 14 students, were used during the fall 1978. In addition, a pretest-posttest control group section C_3 with 13 students met during the spring of 1979.

The experimental groups of students were enrolled in SPED 531 during the winter 1979 term. Initially, there were three sections, however, the instructor who had previously combined two control groups also combined two experimental sections. Hence, two experimental sections E_1 with 19 students and E_2 with 11 students were formed. The concerns of both experimental groups were assessed before and after practicum. See Table 1 for a breakdown of all study participants.

The advanced experience of the subjects was determined by responses to the question, "Briefly state the types of experiences you have had with exceptional children," which was included on the teacher concern checklist (see Appendix B). Students were judged as having advanced experience if they stated that they had interacted with exceptional students. Experiences judged "advanced" included tutoring, teaching, aide work, regular volunteer experiences, and/or having an exceptional child. Individuals who stated that they had only observed exceptional children or who had less experience than that were judged "not advanced."

Design

The design used in this study is a modification of the Separate-Sample Pretest-Posttest design as has been documented in Campbell and Stanley in 1963 (see Table 2).

Table 1

Description of Total Sample, Academic Level,
Gender, Age, and Advanced Experience
With Exceptional Students

	$Control_1$ (n = 26)		$Control_2$ (n = 14)		$Control_3$ (n = 13)		Experimental$_1$ (n = 19)		Experimental$_2$ (n = 11)	
	M	F	M	F	M	F	M	F	M	F
Sophomore	0	0	0	0	0	1	0	0	0	0
Junior	0	22	2	10	1	11	2	17	1	9
Senior	0	3	0	2	0	0	0	0	0	1
Graduate	0	1	0	0	0	0	0	0	0	0
Advanced Experience	77%		86%		77%		84%		64%	
Mean Age in Years	21.81		21.00		21.75		22.00		21.00	
σ of Age in Years	4.15		1.88		4.37		3.27		2.31	

Note. $Control_1$ or C_1 = A section of students enrolled in SPED 531 during the fall 1978 term.

$Control_2$ or C_2 = A section of students enrolled in SPED 531 during the fall 1978 term.

$Control_3$ or C_3 = A section of students enrolled in SPED 531 during the spring 1979 term.

Experimental$_1$ or E_1 = A section of students enrolled in SPED 531 during the winter 1979 term.

Experimental$_2$ or E_2 = A section of students enrolled in SPED 531 during the winter 1979 term.

n = Number of students

σ = Standard deviation

M = Male

F = Female

Table 2

Research Design

$$R \quad X_0 \quad O_1$$

$$R \quad X_0 \quad O_2$$

$$R \quad O_3 \quad X_1 \quad O_5$$

$$R \quad O_4 \quad X_2 \quad O_6$$

$$O_7 \quad X_0 \quad O_8$$

Note. O_{1-8} = Pretest-posttest designation for administration of the Teacher Concern Checklist (TCCL) and the Q-Sort (QS).

X_0 = No critical incident feedback.

X_1 = Written feedback of critical incidents.

X_2 = Written feedback of critical incidents with discussion.

Campbell and Stanley state that their publication entitled, Experience and Quasi-Experimental Designs for Research, was never intended to provide a dogma of 13 acceptable designs. Instead, they hoped that it would encourage open-mindedness and provide some help to aid investigators understand the factors which cause designs to be deemed invalid. In other words, their material was initially written to help investigators become more aware of factors which jeopardize the validity of data-collecting arrangements. Therefore, a brief description of these factors and an account of how they operated in this study will be presented.

The eight different classes of variables affecting internal validity presented by Campbell and Stanley (1963) are: (a) the effects of history, (b) maturation, (c) testing, (d) instrumentation, (e) statistical regression, (f) selection bias, (g) experimental mortality, and (h) selection-maturation interaction. If these factors are not controlled in a design, they confound the interpretation of the effects of the experimental stimulus.

History refers to events which occur in addition to the experimental variable between the pretest and the posttest. Not all variables related to history can be controlled. Intrasession events such as the obstreperous joke would be one example of a historical event which may, in fact, modify the treatment. Because of using multiple experimental and control groups, the likelihood of unidentified historical events affecting the results became less likely. However, seasonal cycles remained uncontrolled in this design.

Maturation includes those processes within individuals (not due to outside events) such as fatigue or age but which influence the results of a treatment. Because of the equal duration of practicum and seminar sessions, it was unlikely that maturation invoked any distortion on the results of this study.

Testing describes the affect that the pretest might have upon one's posttest scores. This design accounted for testing by using posttest-only control groups thereby increasing the likelihood of determining whether in fact pretests influenced scores.

Instrumentation can be viewed as those changes occurring in the calibration of the measuring instrument. Examples of such changes

would be a rusty spring in a bathroom scale or perhaps changes in observers used to rate performance. It was improbable that the instrumentation used in this study effected the results of this study. Both the Teacher Concern Checklist and the Q-sort procedure were structured and consistently administered.

Statistical regression is a phenomenon which has been observed where scores taken during a second measurement tend to move toward the mean. This phenomenon can be especially devastating to the results of a study where groups of persons were selected for inclusion in a study because of their extreme (high or low) scale. Since all SPED 531 students over three semesters participated and all groups were assumed unbiased, any effect of regression toward the mean would be minimal and could be assumed equal among groups.

Selection bias refers to a difference which may have come about because of differential recruitment of subjects. Selection bias was controlled for because the recruitment of students remained constant over the semesters.

Experimental mortality refers to the production of differences between groups due to differential drop-out rates. For example, one should not compare the attractiveness of female college freshmen to female college seniors because freshmen are often deemed more beautiful. This should not be taken to mean that college training is debeautifying; instead it indicates that the more beautiful female is likely to get married prior to finishing school. The chance that experimental mortality effected this study was slight because assignments lasted throughout only one semester. Hence any drop-out problem

would be assumed to have been equal between sections.

Selection-maturation interaction often refers to what some persons have called spontaneous remission. In instances where extreme scores of a group were used for selection and grouping, gain may likely occur even without treatment. An additional situation could happen whereby a select group of students matured past the theoretical construct used as goals for one's instruction. That is, students could be admitted into programs in which they had advanced experiences. Perhaps individuals selecting teaching as their vocation develop more mature concerns toward teaching regardless of the feedback provided. This potential source of invalidity was not controlled for in this design.

In addition, there are four factors which jeopardize generalizability, representativeness, and external validity. Whereas the problems of internal validity can be addressed within the logic of statistical probability, "the problems of external validity are not logically solvable in any neat or conclusive way" (Campbell & Stanley, 1963, p. 17).

The first factor jeopardizing external validity is the reactive or interactive effect of testing. These factors modify the sensitivity and responsiveness of individuals, thus, producing an unrepresentative effect. If a pretest sensitizes the audience to a problem (serving as an advanced organizer) the test actually can become part of the educational treatment. It was possible that the reactive or interactive effect of testing produced results not due to treatment. However, it was unlikely that this effect would not be detected

through a comparison of the posttest-only and the pretest-posttest control groups.

Second, the <u>interaction effects of selection bias</u> and the experimental variable can refer to those situations when perhaps a characteristic of the school in which the experiment occurs, causes the treatment to become more effective. This factor was not controlled for in this design.

Third, <u>reaction effects of the experimental arrangement</u> remains a prominent source of unrepresentativeness due, for example, to the knowledge that the individual is participating in an experiment. Such knowledge often affects human subjects by generating higher order problem solving behavior based on clues which subjects "read into" the experimenter's intent. Professional ethics and Human Subjects Review Committees do not permit a study in which subjects were uninformed of their rights to agree or refuse to participate. Hence, this factor could not be controlled.

Fourth, <u>multiple-treatment interference</u> applies to those situations when prior or simultaneous treatments modify the performance of individuals. This occurs because, in most instances, previous experiences or simultaneous experiences are not erasable. These factors were not controlled for in this design. Although previous teaching experiences and special education course work were minimal, no restriction could be placed on the courses which one enrolled in concurrently with SPED 531.

Taking the factors mentioned in the previous paragraphs into account, all students used in this study were randomly assigned to

sections each semester by a departmental secretary. This procedure was facilitated by the fact that the Department of Special Education uses special permission "controlled" or (C) cards for admission into all courses and sections. Students were therefore required to contact the Department of Special Education before submitting class or section registration forms. The departmental secretary made assignments on an arbitrary basis and without any criteria. Although random selection between semesters was not done, a strong case can be made that each of the sections are an unbiased representation of the population (see Tables 3, 4, and 5). Indeed, the sections are not discernably unlike samples that would have been obtained had the sampling been carried out in a strictly random manner.

Popham and Serotnik (1973) state that random sampling cannot be statistically tested, and furthermore, one often has great difficulty in randomly assigning individuals within an educational situation. They claim that the job of the researcher is to make comparisons of various treatment conditions even though the investigator remains "at the mercy of his data" (p. 249). They also state that researchers should be permitted to use the phrase "assuming the sample at hand is not unlike that which would have been obtained had it been randomly sampled from the population of interest" (p. 249).

Further logical support for the position that each of the sections represented the same unbiased population is presented in Tables 3, 4, and 5. These data, and one way analysis of variance tables represent concern scores as taken from the TCCL in the areas of self, task, and impact prior to any SPED 531 practicum experience. These

data may not be used to prove total equality between sections. The correct interpretation is that the difference between the concern scores for each of the three groups (i.e., C_3, E_1, and E_2) is not greater than one might expect to find by chance alone ($\underline{p} > .05$).

Table 3

Summary Data and One Way Analysis of Variance
of Prepracticum Self-Concerns for
Sections C_3, E_1, and E_2

		C_3	E_1	E_2	
	n	12	18	11	
	$\bar{x}$	17.17	18.22	15.45	
	σ	4.04	3.90	5.52	
Source	ss	df	ms	F	P
Between	52.30	2	26.15	1.34	.275
Within	743.51	38	19.56		
Total	795.80	40			

Note. n = Number

$\bar{x}$ = Mean

σ = Standard deviation

C_3 = Control group number 3

E_1 = Experimental group number 1

E_2 = Experimental group number 2

Table 4

Summary Data and One Way Analysis of Variance
of Prepracticum Task Concerns for
Sections C_3, E_1, and E_2

		C_3	E_1	E_2	
	n	12	18	11	
	$\bar{x}$	14.42	12.78	11.18	
	σ	4.62	4.72	3.89	
Source	ss	df	ms	F	P
Between	60.14	2	30.07	1.49	.238
Within	765.66	38	20.15		
Total	825.81	40			

Note. n = Number

$\bar{x}$ = Mean

σ = Standard deviation

C_3 = Control group number 3

E_1 = Experimental group number 1

E_2 = Experimental group number 2

Table 5

Summary Data and One Way Analysis of Variance
of Prepracticum Impact Concerns for
Sections C_3, E_1, and E_2

		C_3	E_1	E_2
	n	12	18	11
	$\bar{x}$	21.25	18.44	18.73
	σ	2.60	4.75	5.61

Source	ss	df	ms	F	P
Between	62.34	2	31.17	1.53	.229
Within	772.88	38	20.33		
Total	835.22	40			

Note. n = Number

$\bar{x}$ = Mean

σ = Standard deviation

C_3 = Control group number 3

E_1 = Experimental group number 1

E_2 = Experimental group number 2

None of the F scores were significant at the .05 level thus indi-
cating that there were no statistically different self, task, or con-
cern scores prior to SPED 531 participation. Only one departure from
the theoretical requirement of homogeniety of variance has been de-
tected on impact concern scores ($\underline{p}$ < .05). No additional departures
were detected for scores in self concerns or task concerns. Norton

(cited in Lindquist, 1953) determined that the results of marked
hetrogeniety of variance produced only slight effect in the F distri-
bution. The effect of hetrogeniety of variance would mean that while
the researcher thought the test used an alpha level of .05 in fact it
was being made at the .07 level. As can be seen by examination of
Tables 3, 4, and 5 the F scores remained insignificant even when
using this consideration.

Because there was reasonable expectation that the sample used
in this study was representative and unbiased, parametric tests were
deemed appropriate for use in this study.

Instrumentation

The two instruments used in this study were the Teacher Concern
Checklist (TCCL) (Fuller et al., 1974; George et al., 1974; Parsons &
Fuller, 1972) and a Q-sort developed for this study and based on the
TCS scoring manual (Parsons & Fuller, 1972). Copies of these instru-
ments can be found in Appendices D and E, respectively.

Teacher Concern Checklist. The first page of the TCCL was de-
signed to obtain descriptive information regarding each study partici-
pant. All respondents were requested to disclose their gender, age,
academic level, level which they plan to teach, and experiences with
exceptional children.

Directions for completing the TCCL were then presented. Respond-
ents were provided a brief definition of what it would mean to be
"concerned" about a thing. In short, what one is concerned about is
what one often thinks about and would like to do something about.

What one believes is important is <u>not necessarily</u> what one is con-
cerned about.

The purpose of the TCCL was to assess the concerns of educators
at various points during their careers. This self-reporting instru-
ment of 56 Likert items contained three subscales used to measure
self-concerns, task concerns, and impact concerns.

Each respondent indicates on a five-point scale the degree to
which each of the 56 statements reflect one's personal concerns.
Choices range from "1" not concerned through "5" extremely concerned.
As reported in Chapter II, this experimental test has been used on a
sample of 680 preservice and in-service teachers. No normative data
are provided regarding the use of this test with special education
teachers. The instructions for the test can be given and the re-
sponses completed in approximately 15 minutes.

Borich and Madden (1977) and George et al. (1974) provide data
regarding the reliability and validity of the TCCL. Borich and
Madden indicate that the TCCL has an alpha coefficient of .86 for
self-concerns, .79 for task concerns, and .91 for impact concerns
indicating that there was a strong measure of internal consistency.
Furthermore, a test/retest correlation, following a 1 week interval,
indicated coefficients of .87, .80, and .77 for each of the factors
respectively.

The validity of the TCCL has been based on the earlier TCS
instrument. Statistically significant differences between preservice
and in-service teachers (p < .001) have been reported for self and
task concerns (Borich & Madden, 1977). No statistical significance

was cited for impact concerns. George (1978) stated two possible reasons to explain why no statistically significant differences for impact concern scores were found between preservice and in-service teachers. First, perhaps students responded as they thought they should respond instead of how they actually felt. Second, perhaps Fuller's (1974) theory was in error because the TCCL had not detected a difference between the impact concerns of in-service and preservice teachers. Since there has been considerable support for the developmental concerns theory (Fuller, 1969; Fuller & Case, 1970; Fuller et al., 1974; Hall, 1976; Newlove & Hall, 1976; Parsons & Fuller, 1972), this is extremely unlikely.

George (1978) stated that because preservice teachers chose teaching as a vocation they probably began with relatively high impact concerns and that the instrument was not strong enough to detect higher concerns. This appeared to indicate either a ceiling problem with the TCCL and/or preservice teachers and in-service teachers represent the same population when it came to impact concerns. Albeit problems were known to exist in the TCCL, because of the validity and reliability of the self and task concerns and the close relationship of the TCCL to Fuller's (1974) theory, this instrument was chosen to be used in this study.

Q-sort. A second instrument used in this investigation was a Q-sort of developmental concern statements. Q-sort techniques were originally developed by Stephenson (1953) as a method for measuring attitudes. In the Q-sort procedure, individuals sorted decks of cards each of which contained one concern statement into a pattern which

depicted one's attitude toward teacher's concerns. Following this sort, correlations among the responses of different individuals were calculated which compared the preservice teacher's concern statements with those posited by Fuller (1974).

For the purposes of this study a 25-item forced distribution Q-sort was used to measure the concerns of preservice special educators. This distribution of the 25 statements with frequencies 3, 3, 4, 5, 4, 3, 3, and scale values running consecutively from 1 through 7 used in this Q-sort are presented below. Each category represented one of the developmental concern levels presented by Fuller and Case (1970).

	Concerns least like mine					Concerns most like mine	
Category	1	2	3	4	5	6	7
Frequency of Q-cells to represent Fuller's concern levels	3	3	4	5	4	3	3

A forced distribution of Q statements will insure a normal distribution of statements. All items sorted were short, concise concern statements written to reflect the following areas: nonteaching concerns, orientation to teaching, control, student relationship, student cognitive gain, student affective gain, and personal growth and professional issues. These areas were those used in an earlier study by Fuller and Case (1971). All the areas isolated by Fuller and her associates were identified through the process of "category formulation" or sorting according to frames of reference. Thus the statements selected for use in the Q-sort were taken from the TCS manual

(Fuller & Case, 1970).

Nunnally (1978) states that when one uses Q-sorts, it is extremely important that statements cover <u>one</u> content domain and that this domain be covered <u>completely</u>. Fortunately, because of Fuller's previous work, the assumption of a reasonable statement sample can be supported.

The Q-sort technique, pioneered by Stephenson (1953), can be used to identify the perceptions of students, preservice teachers, in-service teachers, administrators, or any other individual or group of individuals (Kerlinger, 1973). He states that:

> [Q-sorts] can be particularly valuable in studies of attitude, value, belief, and perception change. The perceptions or judgments of desirable teacher characteristics and behaviors before and after, special training can be correlated with ideal perceptions of the trainers. (p. 593)

Q-sorts provide a comparative rating method which enables investigators to analyze intra individual perceptions rather than inter individual perceptions. In other words, the investigator who uses Q-sorts probably feels that it is more important to make comparisons among different responses (e.g., concern statements) <u>within</u> persons rather than <u>between</u> persons (Nunnally, 1978).

A Q-sort is a comparative rather than an absolute rating method, hence, analysis of the Q-sort provides the investigator with no information concerning the level of response to the stimuli. Nunnally (1978) suggests that the forced distribution in a Q-sort be considered an approximation to rank ordering in which a certain number of tied ranks is held constant for each sort. Because a forced distribution Q-sort is controlled, the number (N), Mean (M), and standard deviation

(σ) are equal for any group of correlations calculated from the same group of statements. These facts have allowed Cohen (1957) to compute a Pearsonian product-moment coefficient of correlation from a forced Q-sort.

This formula is: $r = 1 - \dfrac{\Sigma D^2}{2N_{\sigma}2}$

Where D^2 = difference squared, N = the number of statements to be sorted, σ^2 = the variance, and r = correlation.

This formula is similar to the formula for rank differences. If the rating categories used in this instrument are thought of as ranks, the numerator becomes exactly the same. In addition, the denominator need be calculated only once.

The denominator for this formula in this instance then becomes 172. For each Q-sort, the M = 4, σ = 1.85, and σ^2 = 3.44 all remain the same.

Stephenson (1953) and Kerlinger (1973) claim that a large number of sorting piles should be employed and that when using a forced distribution, it be somewhat flatter than a normal distribution. Thus, the forced distribution chosen for this study was slightly flatter than a normal distribution. The increase in the number of piles and statements can be considered the same as increasing the N in a traditional statistical test. The flattening of the forced distribution provides more extreme statements. In correlational studies extreme scores (i.e., statements) are important. Agreement between extreme scores when using the formula presented becomes far more statistically important.

Although Kerlinger (1973) recommends that a minimum of 40 statements be used in a Q-sort, Kroth (1973) and Nunnally (1978) present 25 item Q-sorts. The 25 statements used in the Q-sort for this study could not be easily added to because additional concern statements were not presented in the TCS manual. Therefore, any increase in the number of statements would cast a doubt on the construct validity of this Q-sort. The concept of "ideal" concerns (i.e., the developmental concern hierarchy presented by Fuller) could not be preserved.

The reliability of any Q-sort is exceedingly complicated because this procedure is ipsative (i.e., this method of measuring traits uses an individual's own behavior as a standard of comparison) rather than normative (i.e., a method of measuring traits by comparing one's behavior to that exhibited by others). The variability that one might claim is an indication of unreliability within standard normative procedures is often taken to be an indication of the sensitivity and discrimination power in Q methodology. Thus, the question of reliability concerning Q-sorts is always open to challenge.

The development and administration of the Q-sort used in this study followed the stages presented by Erickson and Wentling (1967). These stages are as follows:

1. Determine the standard on which to base the scoring. For this study the scoring will be based on agreement with categories and concern statements presented by Fuller and Case (1970).

2. Assemble attitudinal statements relevant to "teacher concerns." Usually 30 to 50 statements are used. Fuller identified six levels of concern and developed an instrument to measure the concerns

of teachers (TCS). In the scoring manual for the TCS, teacher con-
cern statements are provided. These statements were based on the
earlier work of Fuller regarding teacher concerns.

    3. Determine the number of response categories on which the
statements will be sorted. The Q-sort was divided into seven cate-
gories. Selection of categories was based on Kroth's (1973) applica-
tion of the Q-sort procedure originally developed by Stephenson (1953).

    4. Decide on the number of statements to be placed in each cate-
gory to insure that the final responses tend to cluster the state-
ments. The conceptual basis for selection of concern statements was
based on Fuller's developmental concerns theory. The statements them-
selves were selected from the TCS scoring manual (Fuller & Case, 1970).

    5. Present cards with each card containing one statement and
one identification number (chosen from the table of random numbers) to
each student. Present directions for sorting. Explain that the num-
ber on each card has only been provided for identification purposes.
Sort and record the number located on each statement on the form
board (see Figure 1).

Concerns
least like
mine

Concerns
most like
mine
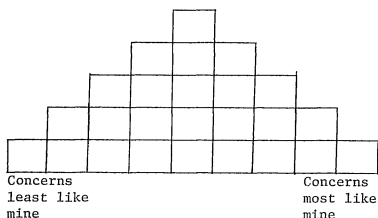
Figure 1. An example of the Q-sort form board.

Procedure

Five intact sections of SPED 531 students were approached and asked to participate in this study. Although the students were told there would be no penalty for nonparticipation, all SPED 531 students agreed to participate.

The two intact posttest-only control sections (C_1, and C_2) were administered the TCCL and Q-sort at the conclusion of their SPED 531 course. The remaining groups (C_3, E_1, and E_2) were administered the TCCL and Q-sort before and after their SPED 531 practicum.

Students regularly enrolled in SPED 531 receive two different types of experiences while participating in the course. First, each student is assigned to a practicum within an educational facility serving exceptional children and youth, and second, all students meet with their peers during regularly scheduled seminars.

A form (see Appendix G) recommending the activities and the sequence for field experiences with the practicum placement is given to both the cooperating teacher and to the SPED 531 practicum students. The major activities suggested for each student within the framework of the practicum placement and their sequence are outlined as follows:

1. Observation of educational activities.

2. Assisting the cooperating teacher.

3. Tutoring one student using directions provided by the cooperating teacher.

4. Tutoring a small group (up to 5) using directions provided by the cooperating teacher.

5. Interacting with a large group of students using directions provided by the cooperating teacher.

6. Implementing a lesson with one student using one's own strategy.

7. Implementing a lesson with a small group of students using one's own strategy.

8. Implementing a lesson with a large group of students using one's own plans.

This directive remained consistent for all SPED 531 students assigned to a practicum during the study and no controls or treatments were offered as part of this particular study.

According to the syllabus established for SPED 531 (see Appendix H and Appendix I), 10 common seminar activities are indicated for the seminar section of the course. These activities were included in _all_ sections of SPED 531 participating in the present study and cannot be separated from the treatment provided for the experimental groups. The common activities identified in the syllabus for the SPED 531 sections participating in this particular study are described as follows:

1. _Overview_. Discussion of the course syllabus was presented. In addition, practicum students were informed regarding what they could expect during their practicum participation.

2. _Logs_. Each SPED 531 student was required to submit logs each week describing practicum events or asking questions regarding these events. The instructor would read, comment on the logs, and return them to the students during the next seminar session. One

professor, for section C_2, instructed his students to record logs using two separate columns. Within the first column the event was described and within the second column the meaning of the event was discussed. In all other sections (i.e., C_1, C_3, E_1, and E_2) students recorded their feelings about what occurred during practicum.

3. <u>Flanders Interaction Analysis</u> (Flanders, 1963). Practicum students were provided instruction in the use of the Flanders Interaction Analysis instrument, a technique for observing and recording student/teacher interaction. Each practicum student was then assigned the task of conducting and submitting three observations using this instrument.

4. <u>Educational Resources Center Library</u> (ERC). Each SPED 531 student was provided instruction in how to use the ERC in order to gather information regarding special education. Following this presentation the students were given an ERC assignment which provided an opportunity for application of their skills in gathering educational information in the ERC.

5. <u>Writing Style</u>. Instruction and practice in professional writing style, using the American Psychological Association (APA) style, were provided for each practicum student. The students were provided instruction, simulations, and practice in the proper use of APA style.

6. <u>Audio Visual Training</u>. Following instruction in the use of audio visual equipment, students demonstrated competency by properly using five different types of audio visual equipment.

7. _Behavioral Objectives_. Special Education 531 students were provided instruction in writing and analyzing components of behavioral objectives. At the conclusion of this activity, a quiz was presented in which students had to score 70% or higher. Students who failed to achieve at least 70% were provided additional instruction regarding behavioral objectives and were then retested.

8. _Discipline and Classroom Management_. A lecture and discussion of successful and unsuccessful teacher management practices was presented.

9. _Seminars_. Two or three entire sessions were used to discuss events occurring in practicums and describing one's practicum situation to the entire seminar group. At the close of most group sessions, the instructor would ask students if they experienced anything that might interest others in the class. These sections remained relatively unstructured.

10. _Individual Appointments_. During the last week of the semester each SPED 531 student and his/her course instructor held a private meeting. During these meetings course experiences and the student's perceptions of special education were discussed.

Control group sections C_1, C_2, and C_3 were provided with the practicum and seminar experiences noted in the preceding paragraphs. None of the control groups was given instruction in CI methodology used in this particular study nor were they provided systematic or formalized feedback of incidents which occurred during their practicum. Although discussion of what could have been a critical incident may have occurred during the open seminar periods, these students did

not have a list of CIs which would have served to stimulate awareness and arousal. Furthermore, they rarely had access to complete or objective descriptions of critical behavior.

Treatment

As noted previously, all sections of SPED 531 involved in the present study participated in the practicum and course activities listed above. In addition to those activities, the experimental groups (E_1 and E_2) were given training in critical incident methodology and were provided specific feedback based on the critical incidents reported.

To facilitate testing, the two experimental groups were combined for their initial two seminar meetings. During the first session the author presented a brief overview of the study, obtained the consent of the participants to participate in the study, and administered the TCCL and Q-sort. One week later, during the second seminar session, the author provided a brief training period (10 minutes) of instruction in the use of critical incidents. CI reporting sheets (see Appendix E) were then distributed to the students and examples of effective and ineffective incidents were cited. The author entertained questions regarding CI gathering procedure from the students until there were no further questions.

Each student was then provided with a packet of CI recording forms and was asked to submit them weekly along with their usual practicum logs using the following procedural statements as a guide:

1. Describe only incidents that you have observed. Do not describe rumors, unfounded stories, or stereotyped ideas even if you believe them to be true.

2. When describing each incident it is important to describe it fully. Whenever possible write what occurred before, during, and after each incident. Tell what was said, what was done, and how the persons involved acted.

3. Do not state opinions in your incident. Should you desire to include your opinion, an area for recording concerns or opinions is located on the bottom of the CI recording sheet (see Appendix E). You may state your opinion in this area.

The students were informed that additional CI recording forms would be made available at future seminar sessions and could also be acquired at the Special Education office. Students from E_1 and E_2 submitted critical incident forms each week.

The author compiled these incidents and condensed them so that when possible the antecedent, incident, and consequence of each behavioral event was delineated.

Two examples of condensed CIs presented to treatment groups are as follows:

A teacher told the class that if they continued to say, "good-bye mommy" to her when they left the classroom, they could not have dessert after their lunch. One student said "bye mommy." The aide, who eats with the student, was instructed by the teacher to enforce the no dessert ruling. The aide allowed the student to have dessert.

During a one-to-one tutoring session, the student with whom I was working acted out. I took the book from the student, told the student I would return it if she

was good, and I went to help another student. Almost
immediately, the first student asked me for help. When
I returned to tutor the student, she remained on task.

A written list of all the CIs that were submitted by each student
and condensed by the author during the preceding 2 weeks were returned
to each student in both (E_1 and E_2) groups (see schedule in Appendix
F). In other words, each student received a list of all the CIs sub-
mitted by all students in both groups. During seminars, students in
Sections E_1 and E_2 were separated from each other and told by their
seminar instructor to judge the effectiveness of each CI as a tech-
nique to ensure their reading of each incident presented and to help
facilitate focus, arousal, and awareness. As the SPED 531 students
began this task they were requested by their instructor to think
about the following questions: As you proceed through this task,
whose perspective are you using as a criterion for judging the effec-
tiveness of the incident? For example, are you using your own per-
spective or someone such as the classroom teacher, the student, the
principal, or the child's parents? This activity was deemed impor-
tant, for without focus or awareness there is no feedback (Torbert,
1972).

While the students in Section E_1 were provided the condensed CIs
and were asked to individually judge the effectiveness of each con-
densed CI, they did not discuss the incidents in class. These stu-
dents then submitted their judgments and were thanked for their par-
ticipation. This treatment, therefore, approximated mirror feedback.

In addition to receiving the condensed CIs, experimental group
E_2 was provided time to discuss the incidents with the practicum

leader and their peers. Occasions arose when the practicum students discussed the effectiveness of the incident. Hence, the students in Section E_2 were provided with focused feedback, impact feedback, and opinion giving feedback in addition to mirror feedback. The feedback discussion sessions dealt with only a portion of the incidents because of time limitations. The feedback sessions lasted for 30 to 45 minutes on each feedback day (see schedule in Appendix F). The course instructor led the feedback session, however, the researcher also observed and participated.

Summary

Chapter III has described the method and the treatment utilized in this study. Within the method section the subjects used in this study were described. In addition, sources of invalidity were identified (Campbell & Stanley, 1963) and a discussion of how this study related to these sources of invalidity was presented. Both instruments used in this study were designed specifically for use with Fuller's (1974) developmental concerns theory. Within the treatment section a description of the control (nontreatment) group and the experimental (treatment) group was presented.

Chapter IV will present the results of the research.

RESULTS

Chapter IV has been divided into two main sections. Within the first of these sections a brief overview of this study is presented and the methods of analyses utilized in this study are described. In the second main section the hypotheses are restated and the specific findings are presented. Finally, a brief summation of the findings concludes Chapter IV.

This study was designed to determine whether the systematic feedback of practicum incidents can bring about a maturation of concerns in preservice special education teachers. The subjects participating in this study consisted of two general groups of students enrolled in an initial practicum in special education (SPED 531).

The three control groups (C_1, C_2, and C_3) were provided a traditional practicum and seminar experience which has been described in Chapter III and Appendix H. The experimental groups (E_1 and E_2) were provided similar practicum and seminar experiences but with the addition of the treatments as noted in Chapter III and Appendix I. The experimental groups were given instruction in how to gather critical incidents (CI) using a specified methodology. Furthermore the CIs that the experimental groups as individuals wrote and submitted were condensed by this researcher and distributed to the E_1 and E_2 sections as written feedback. Students in experimental group E_1 were requested to read the incidents but were not allowed an

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an opportunity to discuss CIs during the SPED 531 seminars. Thus, for this group the CIs served as a type of mirror feedback. Experimental group E_2 was provided a written feedback. In this treatment the E_2 group was asked to discuss the CI in class, thus additional types of feedback (i.e., focused feedback, impact feedback, and opinion giving feedback) were encountered by Section E_2 and not experienced by the E_1 group.

Methods of Analysis

Concerns of SPED 531 students were measured by two instruments designed to measure the teaching concerns of preservice and inservice teachers.

Q-Sort

The first instrument, the Q-sort, allowed this researcher to examine the concern statements as sorted by the various experimental and control groups of SPED 531 students and compare these sorting patterns with Fuller's (1970) developmental concern hierarchy. From the results of individual Q-sorts a Pearsonian product-moment coefficient of correlation was computed using the formula (see Chapter III for procedure) developed by Cohen (1957).

This formula is: $r = 1 - \dfrac{\Sigma D^2}{2N_\sigma 2}$

Where D^2 = difference squared, N = the number of statements to be sorted, σ^2 = the variance, and r = correlation.

According to Morsh (1955) the correlation obtained using a Q-sort

can be utilized as an index of each individual's concerns. The present study, however, was concerned with group concerns. Morsh (1955) has provided several methods for obtaining an index of the composite class opinion. The method utilized in this study consisted of the following four steps:

1. The individual correlations (based on Cohen's 1957 formula) were transposed to Fisher z values. This transformation was conducted using Table C which can be found in McNemar (1949, p. 349).

2. The Fisher z values within each section were summed.

3. The mean Fisher z for each section was determined.

4. The mean Fisher z obtained was transformed back again to a correlation (using Table C) which was considered as an overall index of concern for each section (Morsh, 1955, p. 393).

This procedure enabled the overall index of concern for each experimental and control group to be determined in this study.

To determine the significance of the difference among these coefficients, a multiple comparison procedure for contrasts among correlation coefficients was computed using an analog to the Fisher's Protected Least Significant Difference (Carmer & Swanson, 1973) test on means which Huitema presented in 1974. This comparison procedure has been demonstrated to be more powerful than Marascuilo's (1971) procedure which has been described as "essentially the correlation coefficient analog to Scheffe's (1953) widely known procedure for multiple comparisons among means" (Huitema, 1974, 336).

The formula used to test the equality of the five population correlation coefficients (C_1, C_2, C_3, E_1, and E_2) used the following

formula:

$$\sum_{1}^{J} \left[(n_j - 3) z_j^{\ 2} \right] - \frac{\left[\sum_{1}^{J} (n_j - 3) z_j \right]^2}{\sum_{1}^{J} (n_j - 3)} = \chi^2_{obt}$$

Where $\sum_{1}^{J}$ = the sum of all sections, $(n_j - 3)$ = the number of students in each section minus three, z = Fisher's z value representing the correlation and χ^2_{obt} = Chi square obtained value.

The obtained χ^2_{obt} can be compared with $\chi^2_{(\alpha, \ J - 1, \ \infty)}$ = χ^2 critical. (When α = the alpha level, $J - 1$ = the number of correlation coefficeints minus one, and ∞ = infinite degrees of freedom.) The χ^2_{obt} is rejected when it is equal to or greater than the χ^2 critical. If in the event significance is found, a multiple comparison procedure is available in Huitema (1974).

In addition to the task of determining the significance of the difference between individual correlation coefficients it was necessary to test the significance of the difference between combinations of correlation coefficients.

A second test using the results from the Q-sort procedure allowed the combining of multiple correlation coefficients. Thus the significance of the difference between the index of concern among various groups could be calculated. This amounted to a planned statistical comparison of the combined control groups (C_1, C_2, and C_3) and the combined experimental groups (E_1 and E_2). Furthermore a second planned comparison between control groups (C_1, C_2, and C_3) and the Experimental Group E_2 with Experimental Group E_1 removed was

conducted.

The procedure utilized to test contrasts among combined correlation coefficients used the following three steps:

1. The correlation coefficient representing the concerns of each experimental and control group was transformed to a corresponding Fisher z value (McNemar, 1949, p. 349).

2. The test statistic z for each planned contrast was computed using the following formula:

$$\frac{c_1 z_1 + c_2 z_2 + \ldots + c_K z_K}{\sqrt{\dfrac{c_1^2}{n_1 - 3} + \dfrac{c_2^2}{n_2 - 3} + \ldots + \dfrac{c_K^2}{n_K - 3}}} = z_{B,obt}$$

Where c_1 through c_K = the contrast coefficients associated with samples 1 through K (i.e., all SPED 531 sections), z_1 through z_K = Fisher's z transformation values associated with each correlation coefficient (i.e., for each SPED 531 section), z_B = the critical z value derived from the z Bonferroni Table (Dunn, 1961), and n_1 through n_K = the sizes associated with each sample (i.e., SPED 531 section).

3. Each z_{obt} value was then compared to the Bonferroni z Table for infinite degrees of freedom as found in Dunn (1961, p. 55). Ignoring the sign, the $z_{obtained}$ is compared to the $z_{critical}$ or $z_{B(\alpha, C)}$ using infinite degrees of freedom. The null hypothesis is rejected when it is equal to or greater than the z critical (Huitema, in press, chapter IV).

The Q-sort procedure was therefore used to compare and test the overall developmental concern patterns between experimental and

control groups.

Teacher Concern Checklist

The TCCL was utilized to test the main effects of three levels
of concern (i.e., self, task, and impact) among SPED 531 sections.
Scores taken from the TCCL were examined through a single-classifica-
tion analysis of variance (one way ANOVA) for each of the concern
levels (i.e., self, task, and impact). Because five sections of stu-
dents were used in this study, the t test, even though more powerful
that the one way ANOVA, had to be judged inappropriate for this study.
A one way ANOVA is appropriate to test significant differences
between the means of more than two groups. The one way analysis of
variance is initially used to determine the presence of a significant
difference between the means of these groups.

When the F_{obt} is equal to or greater than the $F_{critical}$ one has
the option of several methods for carrying out further pairwise anal-
ysis to determine the exact location of the statistically significant
difference. All TCCL scores were analyzed using the Western Michigan
University Computer Basic Statistics Program (BSTAT), option Number 3.
BSTAT is a program designed to give descriptive statistics and test
independent samples or correlated variables.

The accepted probability or likelihood that the results of the
statistical tests used would occur simply due to chance is known as
the alpha level, or the level of significance. The establishment of
a level of significance should be a function of the hypothesis to be
tested. In certain instances when the consequences of making a Type I

error (i.e., a true null hypothesis is rejected) are serious, researchers should establish a more stringent level of significance. When levels of significance are increased, however, the likelihood of a Type II error (i.e., a true null hypothesis is rejected) are also increased. The educational decisions that would be made based on the results of this particular research would probably not be immediately implemented but would rather lead to additional study of the problem. Furthermore, traditionally the 5% level of significance is used in behavioral science research (Tuckman, 1972). This traditional use of the .05 level of significance has tended to provide a unified meaning to the statement statistical significance (Popham & Sirotnik, 1973). Therefore, the alpha level or level of significance utilized to determine if statistical significance for all analyses included in this study was established by the author to be the .05 level. In other words, the accepted probability or likelihood that the results would occur simply due to chance was set equal to or less than 5% ($\underline{p} \leq .05$).

Results of Analysis

The analysis of the data relating to the two hypotheses is partially dependent upon some common data as found in Table 6. Data in Table 6 were derived in accordance with the procedure cited earlier in this chapter (i.e., Cohen, 1957; McNemar, 1949; Morsh, 1955). These data were necessary to test the significance among correlative coefficients using the Huitema and Bonferroni formulas. More specifically, the summations $n - 3$, $(n - 3)z$, and $(n - 3)z^2$ were necessary

for the calculations of the above mentioned tests (see Appendix J).

These calculations were used to test Hypothesis 1a, 1c, and 2 as de-

scribed in the following sections.

Table 6

Summary Data of Correlations for
Sections C_1, C_2, C_3, E_1, and E_2

Section	n	r	z	n − 3	(n − 3)z	(n − 3)z²
C_1	26	.58	.66	23	15.18	10.02
C_2	14	.59	.67	11	7.37	4.94
C_3	13	.56	.63	10	6.30	3.97
E_1	19	.52	.58	16	9.28	5.38
E_2	11	.63	.74	8	5.92	4.38
				Σ = 68	Σ = 44.05	Σ = 28.69

Note. n = Number of students in each section

r = Correlation or Index of Concern

z = Fisher z value

Σ = Summation

n − 3 = Number of subjects minus three

(n − 3)z = Number of subjects minus three multiplied by Fisher z

(n − 3)z² = Number of subjects minus three multiplied by Fisher
z squared.

Hypothesis 1

The first general hypothesis tested was: Preservice teachers

receiving feedback based on self-reported CIs will develop more mature

concerns than those preservice teachers receiving no CI feedback.
The first hypothesis was tested in two ways. The initial testing of
the null hypothesis was directed toward scrutinizing the overall
index of teacher concern for each section as determined by the Q-sort
procedure presented earlier in this chapter. The second way this
hypothesis was tested was directed at examining the differences be-
tween self-concerns, task concerns, and impact concerns based on data
from the TCCL. From this hypothesis three null subhypotheses were
formulated. The specific subhypotheses and a discussion of what they
were designed to test were:

$\underline{1a}$. There will be no statistical difference between the concern
indices for any SPED 531 section. This was designed to determine
whether there was a statistical difference in the correlational Q-
sorts submitted by the experimental and control groups. Stated mathe-
matically, the null Subhypothesis 1a became $H_0 : \rho_1 = \rho_2 = \rho_3 = \rho_4 = \rho_5$
where ρ_1, ρ_2, ρ_3, ρ_4, and ρ_5 = correlation coefficients (see Table 6)
for each of the sections C_1, C_2, C_3, E_1, and E_2, respectively.

Using Huitema's (1974) comparison procedure presented earlier in
this chapter, the $\chi^2_{obt} = .15$ was evaluated with $\chi^2_{(.05,4,\infty)} = \chi^2_{critical} =$
9.49. The null hypothesis was retained and thus the pairwise compari-
son of sections were unnecessary.

$\underline{1b}$. There will be no statistical difference between the self,
task, or impact concerns for any SPED 531 section. This subhypothesis
was designed to determine whether any level of concern (self, task, or
impact) as measured by the TCCL would differ among sections.

Subhypothesis 1b was tested using TCCL scores. The mathematical expression of null Subhypothesis 1b became $H_0 : \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$ where μ_1, μ_2, μ_3, μ_4, and μ_5 = mean for each of the sections C_1, C_2, C_3, E_1, and E_2, respectively.

Results of the TCCL scores, presented in Tables 7, 8, and 9 indicated no significant statistical significance for any of the main effects (i.e., self, task, or impact).

1c. There will be no significant difference between the concern indices of the combined control groups and the combined experiemntal groups. This was designed to determine whether the combined Q-sort correlation of the control groups differed significantly from the combined Q-sort of the experimental groups.

Finally, the concerns of the combined control groups and the combined experimental groups was conducted. The mathematical expression of this null Subhypothesis 1c became:

$$H_0 : \frac{\rho_1 + \rho_2 + \rho_3}{3} - \frac{\rho_4 + \rho_5}{2} = 0.0$$

Where ρ_1, ρ_2, ρ_3, ρ_4, and ρ_5 = correlation coefficients (see Table 6) for each section C_1, C_2, C_3, E_1, and E_2, respectively.

The calculations of this proof (see Appendix J) resulted in $z_B = .04$ which, when compared to $z_{B(05,2,\infty)} = 2.24$, indicated no significant difference between the control and experimental groups. Thus the null subhypothesis was retained. Since all the null subhypotheses were retained, the first general hypothesis cannot be supported.

Table 7

Summary Data and One Way Analysis of Variance
of Postpracticum Self-Concerns for
Sections C_1, C_2, C_3, E_1, and E_2

	C_1	C_2	C_3	E_1	E_2
n	23	14	13	19	11
$\bar{x}$	18.52	17.14	15.92	18.05	16.00
σ	2.59	3.30	5.87	3.44	3.03

Source	ss	df	ms	F	P
Between	87.88	4	21.97	1.64	.174
Within	1007.32	75	13.43		
Total	1095.20	79			

Note. n = Number

$\bar{x}$ = Mean

σ = Standard deviation

C_1 = Control Group 1

C_2 = Control Group 2

C_3 = Control Group 3

E_1 = Experimental Group 1

E_2 = Experimental Group 2

Table 8

Summary Data and One Way Analysis of Variance
of Postpracticum Task Concerns for
Sections C_1, C_2, C_3, E_1, and E_2

	C_1	C_2	C_3	E_1	E_2
n	23	14	13	19	11
$\bar{x}$	13.43	11.78	12.46	13.00	12.18
σ	3.89	4.25	2.82	4.32	3.57

Source	ss	df	ms	F	P
Between	29.51	4	7.38	.49	.742
Within	1126.88	75	15.03		
Total	1156.39	79			

Note. n = Number

$\bar{x}$ = Mean

σ = Standard deviation

C_1 = Control Group 1

C_2 = Control Group 2

C_3 = Control Group 3

E_1 = Experimental Group 1

E_2 = Experimental Group 2

Table 9

Summary Data and One Way Analysis of Variance
of Postpracticum Impact Concerns for
Sections C_1, C_2, C_3, E_1, and E_2

	C_1	C_2	C_3	E_1	E_2
n	23	14	13	19	11
$\bar{x}$	21.47	20.71	19.69	21.63	21.64
σ	2.94	2.52	3.33	2.83	3.04

Source	ss	df	ms	F	P
Between	39.66	4	9.91	1.16	.336
Within	642.33	75	8.56		
Total	681.99	79			

Note. n = Number

$\bar{x}$ = Mean

σ = Standard deviation

C_1 = Control Group 1

C_2 = Control Group 2

C_3 = Control Group 3

E_1 = Experimental Group 1

E_2 = Experimental Group 2

Hypothesis 2

The second general hypothesis was: Preservice teachers receiving several types of feedback (i.e., mirror feedback, focused feedback, impact feedback, and opinion giving feedback) based on CIs will develop more mature concerns than those students not receiving CI feedback and those students receiving only feedback from written CIs (mirror feedback alone).

The specific null hypothesis tested was: There would be no statistical difference between the concern indices of the combined control groups (C_1, C_2, and C_3) and the experimental group (E_2) receiving multiple feedback.

Hypothesis 2 was designed to determine whether there was a statistical difference in the correlational Q-sorts submitted by the experimental and control groups. Stated mathematically this null hypothesis became:

$$H_0 : \frac{\rho_1 + \rho_2 + \rho_3}{3} - \rho_5 = 0.0$$

Where ρ_1, ρ_2, ρ_3, and ρ_5 = correlation coefficients (see Table 6) for each of the sections C_1, C_2, C_3, and E_2, respectively.

The calculation of this test (included in Appendix J) resulted in $z_B = .23$. When compared to the $x_{B(.05,2)}$ or $z_{B\ critical} = 2.24$, the null hypothesis was retained. There is no statistically significant difference between the combined control groups and the experimental group which received multiple types of feedback.

Summation

None of the hypotheses tested were found statistically signifi-
cant at the .05 alpha level. Nevertheless, Figures 2, 3, and 4 are
presented as purely expository devices to aid in the summary and
discussion of this study which is included in Chapter V. Control
Groups C_1 and C_2 were not included in Figures 2, 3, and 4 because no
prepracticum TCCL scores were available for these groups.
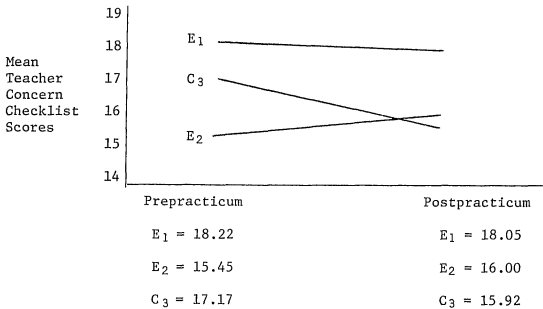
	Prepracticum	Postpracticum
	E_1 = 18.22	E_1 = 18.05
	E_2 = 15.45	E_2 = 16.00
	C_3 = 17.17	C_3 = 15.92

E_1 = Experimental Section 1

E_2 = Experimental Section 2

C_3 = Control Section 3

Higher mean scores indicate more self-concerns for the group.

Lower mean scores indicate lower self-concerns for the group.

Figure 2. Mean TCCL self-concern scores for all SPED 531 students
who had concerns measured before and after practicum.

Figure 2 indicates that only Control Group C_3 moved in the direction hypothesized by Fuller (1974). While apparently only a slight change occurred in the self-concerns of Experimental Group E_1, Experimental Group E_2 moved in a direction contrary to that posited by Fuller.

	Prepracticum	Postpracticum
	$E_1 = 12.78$	$E_1 = 12.18$
	$E_2 = 11.18$	$E_2 = 13.00$
	$C_3 = 14.42$	$C_3 = 12.46$

E_1 = Experimental Section 1

E_2 = Experimental Section 2

C_3 = Control Section 3

Higher mean scores indicate more task concerns for the group.

Lower mean scores indicate lower task concerns for the group.

Figure 3. Mean TCCL <u>task</u> concern scores for all SPED 531 students who had concerns measured before and after practicum.

Figure 3 indicates that both experimental groups developed as Fuller (1974) had hypothesized. Control Group C_3, however, moved in a direction contrary to that posited by Fuller.

	Prepracticum	Postpracticum
	$E_1 = 18.44$	$E_1 = 21.63$
	$E_2 = 18.73$	$E_2 = 21.64$
	$C_3 = 21.25$	$C_3 = 19.69$

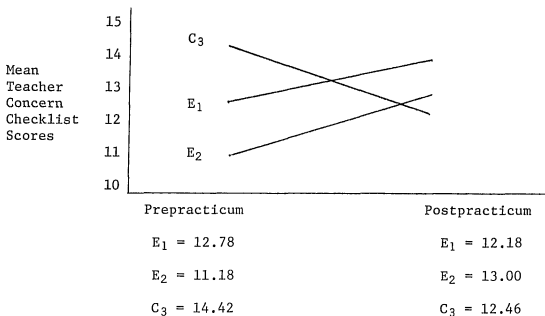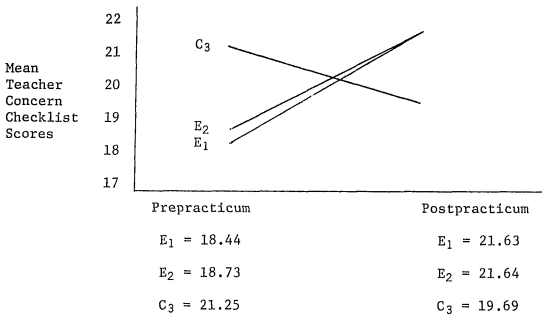E_1 = Experimental Section 1

E_2 = Experimental Section 2

C_3 = Control Section 3

Higher mean scores indicate more impact concerns for the group.

Lower mean scores indicate lower impact concerns for the group.

Figure 4. Mean TCCL _impact_ concern scores for all SPED 531 students who had concerns measured before and after practicum.

Figure 4 indicates that both experimental groups were developing concerns related to pupil benefit as Fuller (1974) had hypothesized. Control Group C_3, however, moved in a direction contrary to that posited by Fuller.

Figures 2, 3, and 4 indicate nonmonotonic development in the concerns of experimental groups (E_1 and E_2) and Control Group C_3. These phenomena will be discussed in Chapter V. In addition, Chapter V will present assumptions and limitations of this study, an

interpretation of the results included in Chapter IV, the conclusion of this study, and finally, implications and recommendations for future research.

CHAPTER V

SUMMARY AND DISCUSSION

Chapter V presents a discussion of this study and its findings. This chapter has been organized into the five following topics: Summary of the Study, Assumptions and Limitations, Interpretation of Results, Conclusions and Implications, and Recommendations.

Summary of the Study

Research findings in the professional literature have indicated that teacher concerns follow a developmental pattern. Fuller (1973) provided a "recipe" (pp. 16-17) for teacher trainers who wished to help facilitate the development of more mature teacher concerns in their students. Included in the recipe were: assessment of concerns, arousal of concerns, awareness of concerns, and resolution of concerns. Further, she developed an instrument, the Teacher Concern Checklist (TCCL) to provide a vehicle for such assessment. Parsons and Fuller (1974) stated that the TCCL had practical utility in a concerns based teacher education program. They stated that "by identifying the concerns felt by preservice and in-service teachers about their teaching, we hope to give teacher educators access to knowledge about the internal motivation in order to help them teach teachers what they need to know" (p. 13).

The present study provided two experimental groups of special education students (n = 19 and n = 11) with training in how to gather

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critical incidents (CI) and systematic feedback in the form of con-
densed CIs which described practicum events. It was hypothesized
that this feedback would promote more mature teacher concerns. The
concerns of the students from these two experimental groups were com-
pared to the concerns of three control groups (n = 26, n = 14, and
n = 13) of preservice special education students who received no
training in gathering CIs and who were not provided with systematic
feedback of CIs.

No significant differences were found in the mean concern indices
between sections as measured by a Q-sort procedure. In addition, no
mean differences in mean concern scores were found for any level of
concern (i.e., self, task, and impact) as were measured by the TCCL.
Thus, no statistically significant support was found for Fuller's
(1974) Developmental Concern Theory. Serendipitous observations
(i.e., desirable discoveries which were made by accident), however,
would seem to indicate a potential for further investigation.

Assumptions and Limitations

Preresearch assumptions and limitations were presented in Chap-
ter I. The following discussion will discuss some of these assump-
tions and limitations and, in addition, others encountered during the
completion of this study.

Attendance was not controlled for in this study. It was assumed
that attendance patterns would be equal during each of the semesters
during which the study was ongoing. Because of a snow storm during
the winter term, public schools were cancelled, thereby reducing the

practicum experience by one session. In addition, the public schools were closed for spring break during Western Michigan's winter term. Thus, the experimental (E_1 and E_2) groups had less exposure to practicum experiences than the control groups.

There was no accounting for the effect of certain unplanned-for intervening variables. For example, courses taken concurrently with SPED 531 could have affected the results of the study. Indeed, more that 27% of the E_2 group was reported to have failed a companion course during the winter term. None of the E_1 students failed the course even though all students were taught by the same instructor. The effects of failure could conceivably have distorted the concerns that these students would have expressed had they not failed.

It was assumed that the attrition rate had a negligible effect on the results of this study. Five students were lost from the post-test-only control groups (11%), one person was lost from the pretest-posttest control group (7.6%), one person was lost from the E_1 treatment group (5%), and none were lost from the E_2 treatment group.

The Experimental Group E_1 was not allowed to discuss CIs during seminars. However, there were no controls over the students discussing CIs outside seminars.

Interpretation of Results

The assumption in Hypothesis 1 was that preservice teachers receiving feedback of CIs would develop more mature levels of concern. Therefore Hypothesis 1 stated that preservice teachers receiving feedback based on self-reported CIs will develop more mature concerns than

those preservice teachers receiving no CI feedback and was divided into three subhypotheses.

Subhypothesis 1a stated that there would be no statistical difference between the concern indices for any SPED 531 section. The difference between SPED 531 sections in the critical area of overall teacher concerns index was found to be not significant at the .05 level. These results indicated that no single section of SPED 531 was determined to have an overall concerns index significantly different from the concerns expressed by other SPED 531 preservice teachers. In other words, the feedback from CIs was not a significant factor in promoting a statistically different level of concern.

Subhypothesis 1b stated that there would be no statistical difference between the self, task, or impact concerns for any SPED 531 section. The differences between SPED 531 sections in the three critical areas of (a) self-concern, (b) task concern, and (c) impact concern were found to be not significant at the .05 level. Not only were there no overall differences in the concerns of SPED 531 sections but no statistical differences in the self-concerns, task concerns, or impact concerns were detected.

Subhypothesis 1c stated that there would be no significant difference between the concern indices of the combined control groups compared to the combined experimental groups. As in Subhypotheses 1a and 1b, no significant difference was detected.

Hypothesis 2 assumed that the preservice teachers in experimental sections of SPED 531 (i.e., receiving multiple types of feedback) would, through increased arousal and awareness, resolve more of

their self-concerns and therefore develop more mature concerns.

Hypothesis 2 stated that preservice teachers (E_2) receiving mirror feedback, focused feedback, impact feedback, and opinion giving feedback would develop more mature concerns than the combined control groups (C_1, C_2, and C_3) and the mirror feedback only (E_1) experimental group.

However, the use of CIs describing practicum events, which were condensed and utilized as feedback, apparently did not promote more mature concerns any more than did the former SPED 531 procedure. This interpretation of these data could lead teacher educators to a state of desuetude regarding critical incidents as a potential source of feedback. In spite of this, one should not be dissuaded from further investigation for, according to Gay (1976), failure to reject the null hypothesis does not necessarily mean the research hypothesis was wrong. Rather, the study may not have represented a fair test of the hypothesis.

Conclusions and Implications

It was expected that the feedback procedure employed in this study would facilitate more mature concerns in the experimental sections than would occur in the traditional control groups. No statistical evidence, however, was found that feedback based on CIs promoted more mature concerns. Albeit no statistical significance was detected, the serendipitous aspects of the study will be discussed in the following paragraphs.

A plotting of the mean pretest-posttest TCCL scores indicated that a nonmonotonic direction occurred between Control Group C_3 (the only control group assessed for prepracticum concerns) and at least one experimental group at all concern levels. These data were presented in Chapter IV, Figures 2, 3, and 4. Indeed the nonmonotonic direction occurred with both experimental sections (E_1 and E_2) for task and impact concerns. Analysis of the mean index of concerns (i.e., correlation scores based on Q-sort procedure) for these sections sustained the indication of a nonmonotonic trend. These results appear to indicate that a trend was beginning to emerge which should at least stimulate interest in further investigation of teacher concerns. This trend appears to indicate that the development of concerns in the experimental sections support the ongoing development of more mature concerns as postulated by Fuller (1974), but with one exception. This exception occurred in the direction of self-concerns expressed by the E_2 group. This discovery should not be too surprising, because within this section of SPED 531, 27% of the students were failing the companion special education course. Furthermore, the increased anxiety of this state of affairs could also have contributed to the apparent increases in task and impact concerns noted in Figures 3 and 4. Certainly other interpretations of these results are possible, however, the interpretation presented above does fit Fuller's (1974) model. Moreover, Figures 3 and 4 appear to indicate that the Control Group C_3 is developing concerns in the areas of task and impact contrary to what Fuller had postulated. One can only speculate why there appears to be a disordinal development of concerns

between the experimental groups (E_1 and E_2) and Control Group C_3.

Even though neither the TCCL or Q-sort detected significant differences between the sections of SPED 531, both instruments appeared to provide essentially the same results. Only five statements are used in the TCCL to assess each of the three levels of concern and given the Likert response format this means that each individual may only score in a range from 5 through 25. Likert (1932) scales typically contain 20 or more statements of belief, each of which are worded from strongly agree to strongly disagree. Only five items for each concern level are contained in the TCCL. Such a range could indicate a problem with the TCCL's ability to detect significance. Furthermore, both experimental groups (E_1 and E_2) have mean scores of almost 22. This would appear to indicate a possible ceiling effect. Indeed the TCCL has apparently been able to measure self and task concerns, but it has repeatedly been unable to detect differences in impact concerns (George, 1978).

Through the use of Q-sort methodology, both of these problems (i.e., lack of power and ceiling effect) appear solvable. Since some of the statements taken from the TCS scorers manual appear weakly stated and are grammatically incorrect, the use of critical incidents can help to resolve this through the generation of a new pool of concern statements. While the Q-sort methodology used in this research does not at the present time assess specific levels of concerns as does the TCCL, by weighting highly favored statements and changing the scoring procedure perhaps this problem could be resolved. In any case, a more sensitive assessment instrument is necessary to conduct

this type of research.

Recommendations

Based upon this investigation, recommendations for further research are as follows:

1. Because of unplanned limitations of the present study a replication of the study should be instituted with greater control placed on intervening variables such as seasonal variables and a close monitoring of courses taken concurrently.

2. Efforts should be undertaken to develop a more sensitive instrument to measure teacher concerns. The Q-sort appears to hold promise in this regard. The similarity between the TCS (Appendix A) and the CI reporting sheets (Appendix E) could possibly aid the researcher in such a task.

3. Studies should be conducted to determine whether the concerns of preservice special education teachers differ from those expressed by preservice education teachers of the nonhandicapped.

4. A longitudinal study should be made to determine the long range pattern and rate of concerns development regarding special education preservice teachers.

5. A study should be undertaken to determine if differences in self, task, and impact concerns have an effect on the classroom performance of persons preparing to become special education teachers.

6. A follow-up study of those students participating in this study should be conducted. Even though concern scores for individual students are not available, mean scores of sections and treatment can

be utilized.

     7. Research is needed to determine whether course SPED 531 offered during the spring term is equivalent to the same course offered during the fall or winter terms.

REFERENCES

Alterman, R. A. Using student diaries to develop an evaluative
instrument for teacher education programs. *Journal of Educational
Research*, 1965, *58*, 369-372.

Altshuler, E. *S(L)EA: Significant (learning) event analysis*.
Ontario: Institute for Studies in Education, 1977. (ERIC Docu-
ment Reproduction Service No. ED 138 791)

Aspy, D. Maslow and teachers in training. *Journal of Teacher Educa-
tion*, 1969, *20*, 303-309.

Blackhurst, A. E. *Methodologies for determining competencies*. Paper
presented at the meeting of The Council for Exceptional Children
Annual Convention, Dallas, 1973. (*Exceptional Children*, 1975, *42*
(2), 85-93)

Borich, G. D., & Madden, S. K. *Evaluating classroom instruction: A
sourcebook of instruments*. Reading, Mass.: Addison-Wesley, 1977.

Burns, H. W. The critical incident technique as an instrument of
educational research: A philosophical analysis (Doctoral disserta-
tion, Stanford University, 1957). *Dissertation Abstracts*, 1958,
18 (2), 520. (University Microfilms No. 58-4236)

Campbell, D. T., & Stanley, J. C. *Experimental and quasi-experimental
designs for research*. Chicago: Rand McNally, 1963.

Carmer, S. G., & Swanson, M. A. An evaluation of ten pairwise multiple
comparison procedures by Monte Carlo methods. *Journal of the Ameri-
can Statistical Association*, 1973, *68*, 66-74.

Cartwright, C., & Forsberg, S. *Exceptional previews: A self-
evaluation handbook for special education students*. Belmont,
Calif.: Wadsworth, 1979.

Clarke, W. C., & Mollenkopf, W. G. Combat leadership: An analysis
of instances of leadership in superior and subordinates. In
F. Wickert (Ed.), *Psychological research on problems of redistribu-
tion* (Report No. 14). Washington, D. C.: U. S. Government Printing
Office.

Cohen, J. An aid in the computation of correlations based on Q-sorts.
Psychological Bulletin, 1957, *54* (2), 138-139.

Corbally, J. E. The critical incident technique and educational
research. *Educational Research Bulletin*, 1956, *35*, 57-62.

Croft, D. J. Be honest with yourself: A self-evaluation handbook for early childhood education teachers. Belmont, Calif.: Wadsworth, 1976.

Cruickshank, D. R., & Broadbent, F. W. The simulation and analysis of problems of beginning teachers. Brockport: State University of New York, 1968. (ERIC Document Reproduction Service No. ED 024 637)

Domas, S. J. Report of an exploratory study of teacher competence. Cambridge, Mass.: New England School Development Council, 1950.

Erickson, J. K., & Ruud, J. B. Concerns of home economics students preceding their student teaching experiences. Journal of Home Economics, November 1967, 59, 732-734.

Erickson, R. C., & Wentling, T. L. Measuring student growth. Boston: Allyn and Bacon, 1967.

Fivars, G. The critical incident technique: A bibliography. Palo Alto, Calif.: American Institutes for Research in the Behavioral Sciences, 1973.

Flanagan, J. C. A new approach to evaluating personnel. Personnel, 1949, 26, 35-42.

Flanagan, J. C. The critical requirements approach to educational objectives. School and Society, 1950, 71, 321-324.

Flanagan, J. C. The critical incident technique. Psychological Bulletin, 1954, 51, 327-358.

Flanagan, J. C. The critical incident technique. In H. B. English (Ed.), Collier's Encyclopedia, 1961.

Flanagan, J. C. Measuring human performance. Pittsburgh: American Institute for Research, 1962.

Flanders, N. A. Intent, action, and feedback: A preparation for teaching. Journal of Teacher Education, 1963, 14, 251-260.

Fuller, F. F. Concerns of teachers: A developmental conceptualization. American Educational Research Journal, March 1969, 6 (2), 207-226.

Fuller, F. F. Personalized education for teachers: An introduction for teacher educators. Austin: Research and Development Center for Teacher Education, The University of Texas, 1970. (ERIC Document Reproduction Service No. ED 048 105)

Fuller, F. F. Relevance of teacher education: A teacher concern
    model. Austin: Research and Development Center for Teacher
    Education, The University of Texas, 1971.

Fuller, F. F. Personalizing teacher education. Austin: Research
    and Development Center for Teacher Education, The University of
    Texas, 1972.

Fuller, F. F. Achieving affective competencies through the teacher
    concerns-self confrontation model of personalized teacher educa-
    tion. Chicago: American Educational Research Association, 1974.
    (ERIC Document Reproduction Service No. ED 090 221)

Fuller, F. F., & Case, C. A manual for scoring the teacher concern
    statements (revised). 1970. (ERIC Document Reproduction Service
    No. ED 079 361)

Fuller, F. F., & Case, C. A manual for scoring the teacher concerns
    statement. Austin: Research and Development Center for Teacher
    Education, The University of Texas, 1971.

Fuller, F. F., & Manning, B. A. Self-confrontation reviewed: A
    conceptualization for video playback in teacher education.
    Austin: Research and Development Center for Teacher Education,
    The University of Texas, 1972.

Fuller, F. F., Parsons, J. S., & Watkins, J. Concerns of teachers:
    Research and reconceptualization. Chicago: American Educational
    Research Association, 1974. (ERIC Document Reproduction Service
    No. ED 091 439)

Fuller, F. F., Peck, R. F., Brown, O. H., Menaker, S. L., White, M.,
    & Veldman, D. J. Effects of personalized feedback during teacher
    preparation on teacher personality and teaching behavior.
    Austin: Research and Development Center for Teacher Education,
    The University of Texas, 1969. (ERIC Document Reproduction
    Service No. ED 028 148)

Fuller, F. F., Pilgrim, G. H., & Freeland, A. M. Intensive individ-
    ualization of teacher preparation. In B. L. Taylor (Ed.), Mental
    health and teacher education, 46th yearbook of the Association of
    Student Teaching. Dubuque, Iowa: William C. Brown, 1967, 262-
    328. (ERIC Reproduction Service No. ED 011 603)

Gabriel, J. An analysis of the emotional problems of the teacher in
    the classroom. London: Angus and Robertson, 1957.

Garfield, S. L. Research on client variables in psychotherapy. In
    A. E. Bergin & S. L. Garfield (Eds.), Handbook of psychotherapy
    and behavior change: An empirical analysis. New York: John
    Wiley, 1971.

Gay, L. R. Educational research: Competencies for analysis and application. Columbus, Ohio: Charles E. Merrill, 1976.

George, A. A., Borich, G. D., & Fuller, F. F. Progress report on the teacher concern checklist. Austin: Research and Development Center for Teacher Education, The University of Texas, 1974.

George, A. A. Measuring self, task, and impact concerns: A manual for the use of the teacher concerns questionnaire. Austin: Research and Development Center for Teacher Education, The University of Texas, 1978.

Good, C. V., & Scates, D. E. Methods of research: Educational, psychological, sociological. New York: Appleton Century-Crofts, 1954.

Gropper, G. L. A study of the critical requirements of conference behavior (Doctoral dissertation, University of Pittsburgh, 1956). Dissertation Abstracts, 1957, 17 (6), 1402. (University Microfilms No. 57-2254)

Gruber, S. E. Regional differences in the ranking of SEST project critical competencies for special education supervisors (Doctoral dissertation, University of Denver, 1974). Dissertation Abstracts International, 1975, 35 (8), 5167A. (University Microfilms No. 75-2202,251)

Hackley, M. M. A critical incident study to identify specific criteria for the selection and development of effective secondary school supervising teachers (Doctoral dissertation, East Texas State University, 1976). Dissertation Abstracts International, 1976, 37 (5), 2795A. (University Microfilms No. 76-24,532)

Hall, G. E. The study of individual teacher and professor concerns about innovations. Journal of Teacher Education, 1976, 27 (1), 22-23.

Hall, G. E., & Loucks, S. Teacher concerns as a basis for facilitating and personalizing staff development. Teachers College Record, September 1978, 80, 11; 36-53.

Hall, G. E., & Rutherford, W. L. Concerns of teachers about implementing team teaching. Educational Leadership, December 1976, 34 (3), 226-233.

Huitema, B. E. Three multiple comparison procedures for contrasts among correlation coefficients (Reprint). Social Statistics Section of the American Statistical Association, 1974, p. 336-339.

Huitema, B. E. _Bonferroni statistics: Quick and dirty methods of simultaneous statistical inference_. In press.

Ingersol, G. M. _Assessing inservice training needs through teacher responses_. Washington D. C.: Paper presented to American Educational Research Association, April 1975. (ERIC Reproduction Service No. ED 104 820)

Ingram, G. F., & Blackhurst, A. E. Teaching and advising competencies of special education professors. _Exceptional Children_, 1975, _42_ (2), 85-93.

Jensen, A. C. Determing [sic] critical requirements for teachers. _Journal of Experimental Education_, 1951, _20_, 79-86.

Kagan, N., & Krathwohl, D. R. _Studies of human interpersonal process recall stimulated by videotape_. East Lansing: Michigan State University, 1967. (ERIC Document Service Reproduction No. ED 017 946)

Kirlinger, F. N. _Foundations of behavioral research_ (2nd ed.). New York: Holt, Rinehart and Winston, 1973.

Kroth, R. The behavioral Q-sort as a diagnostic tool. _Academic Therapy_, 1973, _8_ (3), 217-330.

Kruger, M. E. Critical incidents affecting the supervision of special education student teachers (Doctoral dissertation, Lehigh University, 1977). _Dissertation Abstracts International_, 1977, _38_ (4), 2046A. (University Microfilms No. 77-20,717)

Laktasic, S. G. _Simulation: What is it_. 1976. (ERIC Document Reproduction Service No. ED 126 057)

LeFrancois, G. R. _Psychology for teaching: A bear ~~always~~ usually faces the front_ (2nd ed.). Belmont, Calif: Wadsworth, 1975.

Likert, R. A technique for the measurement of attitudes. _Archives of Psychology_, 1932, _140_ (Monograph). Reprinted in G. F. Summers (Ed.), _Attitude measurement_. Chicago: Rand McNally, 1970.

Lindquist, E. F. _Design and analysis of experiments in psychology and education_. Boston: Houghton Mifflin, 1953.

Marascuilo, L. A. _Statistical methods for behavioral science research_. New York: McGraw-Hill, 1971.

Maslow, A. _Motivation and personality_. New York: Harper, 1954.

McDonald, F. J. Evaluating preservice teachers' competence. _Journal of Teacher Education_, 1978, _29_ (2), 9-13.

McKenna, R. F. Piaget's complaint--and mine: Why is there no science of education? *Phi Delta Kappan*, 1976, *57*, 405-409.

McNemar, Q. *Psychological statistics*. New York: John Wiley, 1949.

McNergney, R. F. *Assessing perceived needs for training preservice teachers, inservice teachers and other educational personnel in cooperative teaching centers*. New York: American Educational Research Association, April 1977. (ERIC Document Reproduction Service No. ED 135 779)

Merrit, E. P. Critical competencies for elementary teachers in selected curriculum areas. (Doctoral dissertation, Stanford University, 1955). *Dissertation Abstracts*, 1955, *15*, 377. (University Microfilms No. 00-11,161)

Morsh, J. E. The Q-sort technique as a group measure. *Educational and Psychological Measurement*, 1955, *15*, 390-395.

Muro, J. J., & Denton, G. M. Expressed concerns of teacher education students in counseling groups. *Journal of Teacher Education*, 1968, *19*, 465-470.

Newlove, B. W., & Fuller, F. F. The 15-minute hour: A brief teaching experience. *Journal of Teacher Education*, 1971, *22* (3), 335-350.

Newlove, B. W., & Hall, G. E. *A manual for assessing open-ended statements of concern about an innovation*. Austin: Research and Development Center for Teacher Education, The University of Texas, 1976.

Nixon, J. E., & Lock, L. F. Research on teaching physical education. In R. M. W. Travers (Ed.), *Second handbook of research on teaching*. Chicago: Rand McNally, 1973.

Nunnally, J. M. *Psychometric theory* (2nd ed.). New York: McGraw-Hill, 1978.

Parsons, J. S., & Fuller, F. F. *Concerns of teachers: Reliability, bipolarity and relationship to teaching experience*. Paper presented at the meeting of American Educational Research Association, 1972.

Parsons, J. S., & Fuller, F. F. *Concerns of teachers: Recent research on two assessment instruments*. Chicago: American Educational Research Association, 1974. (ERIC Document Reproduction Service No. ED 093 987)

Patterson, E. Personal communication, 1978.

Perry, I. L. Critical behaviors of resource or helping teachers as perceived by elementary school teachers and principals (Doctoral dissertation, Florida State University, 1967). _Dissertation Abstracts_, 1968, _28_, 4860A. (University Microfilms No. 68-7795.

Phillips, M. Some problems of adjustment in the early years of a teacher's life. _British Journal of Educational Psychology_, November 1932, _2_, 237-256.

Popham, J. W., & Serotnik, K. A. _Educational statistics: Use and interpretation_ (2nd ed.). New York: Harper & Row, 1973.

Powers, W. T. Feedback: Beyond behaviorism. _Science_, January 1973, _179_, 351-356.

Reilly, R. R. _Critical incidents of graduate student performance_. Princeton, N. J.: Educational Testing Service, 1971. (ERIC Document Reproduction Service No. ED 058 313)

Robinson, E., & Berry, C. A. _An investigation of certain variables related to student anxieties before and during student teaching_. Granbling La.: Grambling College, 1965. (Mimeo) (_American Educational Research Journal_, March 1969, _6_ (2), 207-226.)

Rutherford, R. S. _An application of critical incident procedures for an initial audit of organizational communication_. Paper presented at the Annual Meeting of the International Communication Association, New Orleans, April 17-20, 1974. (ERIC Document Reproduction Service No. ED 098 624)

Rutherford, W. L. _An investigation of how teachers' concerns influence innovation adoption_. Austin: Research and Development Center for Teacher Education, The University of Texas, 1977.

Schaeberle, D. L. A study of critical incidents perceived as affecting the performance of elementary school teachers and teacher-aides (Doctoral dissertation, Lehigh University, 1972). _Dissertation Abstracts International_, 1973, _33_, 3969A. (University Microfilms No. 73-4279,189)

Scheffé, H. A method for judging all contrasts in the analysis of variance. _Biometrika_, 1953, _40_, 87-104.

Skillings, G. F. _A review of the history and application of videotape self-confrontation in therapy and human relations training_. Unpublished master's thesis, Western Michigan University, 1977.

Smith, K. U. Feedback learning theory as the foundation of educational, training and rehabilitative technology. _Educational Technology_, October 1977, pp. 18-20.

Stephenson, W. The study of behavior. Chicago: University of
    Chicago Press, 1953.

Stufflebeam, D. Personal communication, 1978.

Taylor, P. H. A study of the concerns of students on a postgraduate
    certificate in education course. British Journal of Teacher Edu-
    cation, 1975, 1 (2), 151-161.

Thompson, M. L. Identifying anxieties experienced by student teachers.
    Journal of Teacher Education, 1963, 14, 435-439.

Tom, A. R. Student teaching: First course in teacher education?
    Teacher Education Forum, 1976, 4 (5), 1-12. (ERIC Document
    Reproduction Service No. ED 128 300)

Torbert, W. R. Learning from experience toward consciousness. New
    York: Columbia University Press, 1972.

Travers, R. M. W., Rabinowitz, W., & Nemovicher, E. The anxieties of
    a group of student teachers. Educational Administration and Super-
    vision, 1952, 38, 368-375.

Tripplett, D. W. Student teachers rank their needs. Michigan Educa-
    tional Journal, 1967, 45, 13-14.

Tuckman, B. W. Conducting research. New York: Harcourt Brace
    Jovanovich, 1972.

Wolman, B. B. Dictionary of behavioral science. New York: VanNostrand
    Reinhold, 1973.

Yamamoto, L., Pederson, D. J., Opdahl, R., Dangel, H., Townsend, C. E.,
    Paleologos, M. B., & Smith, N. As they see it: Culling impressions
    from teachers in preparation. Journal of Teacher Education, 1969,
    20, 465-475.

Yenawine, G. D., & Arbuckle, D. S. Study of the use of videotape
    and audiotape as techniques in counselor education. Journal of
    Counseling Psychology, 1971, 18 (1), 1-6.

APPENDICES

Appendix A

Concerns Statement Form

109

CONCERNS ABOUT TEACHING

NAME_____   DATE _____

COURSE NO. _____   Time: 10 minutes

    The purpose of this form is to discover what teachers are con-
cerned about at different points in their careers. With this
information teacher educators can include in teacher education what
teachers feel they need.

TEACHING EXPERIENCE: Have you taught? _____   If so, what and
how long? (Include Sunday School, summer camp, tutoring, student
teaching, etc.) _____

_____

_____

_____

_____

WHEN YOU THINK ABOUT YOUR TEACHING, WHAT ARE YOU CONCERNED ABOUT?
(Do not say what you think others are concerned about, but only
what concerns you <u>now</u>.) Please be frank.

SATISFACTIONS OF TEACHING

What are the advantages of teaching for you? What are the
satisfactions of teaching?

Appendix B

Teacher Concerns Checklist

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TEACHER CONCERNS CHECKLIST

Frances F. Fuller

Research and Development Center for Teacher Education
The University of Texas at Austin

1. Name_____ Male_____ Female_____ Age_____

2. Briefly, state the types of experiences you have had with excep-
   tional children.

3. If you are a student: Freshman_____ Sophomore_____ Junior_____
                          Senior _____ Graduate _____

4. The level you plan to teach (if student) or are now teaching (if
   inservice):
   Preschool_____ Elementary_____ Junior High_____ Senior High_____
   College_____ Other _____

DIRECTIONS: This checklist is designed to explore what teachers are
concerned about at different points in their careers. There are, of
course, no right or wrong answers; each person has his or her own con-
cerns.

We consider you to be "concerned" about a thing if you think about it
frequently and would like to do something about it personally. You
are not concerned about a thing simply because you believe it is
important--if it seldom crosses your mind, if you are satisfied with
the current state of affairs, do not say you are concerned about it.
You may be concerned about problems, but you may also be concerned
about opportunities which could be realized. You may be concerned
about things you are not currently dealing with, but only if you
anticipate dealing with them and frequently think about them from
this point of view. In short, you are concerned about it if you often
think about it and would like to do something about it.

On the following pages, you will find statements about some things
related to teaching. Read each statement. Then ask yourself: WHEN
I THINK ABOUT MY TEACHING, HOW MUCH AM I CONCERNED ABOUT THIS?

If you are not concerned about that now, circle "1."

If you are a little concerned, circle "2."

If you are moderately concerned, circle "3."

If you are <u>very concerned</u>, circle "4."

And if you are <u>extremely concerned</u>, circle "5."

Be sure to answer every item.

Read each statement, they ask yourself:

WHEN I THINK ABOUT MY TEACHING, HOW MUCH AM I CONCERNED ABOUT THIS?

          1 = Not concerned   5 = Extremely concerned

1 2 3 4 5   Lack of respect of some students.

1 2 3 4 5   Standards and regulations set for teachers.

1 2 3 4 5   Selecting and teaching content well.

1 2 3 4 5   The mandated curriculum is not appropriate for
                 all students.

1 2 3 4 5   Whether students are learning what they should.

1 2 3 4 5   Whether the students really like me or not.

1 2 3 4 5   Increasing students' feelings of accomplishment.

1 2 3 4 5   The nature and quality of instructional materials.

1 2 3 4 5   Where I stand as a teacher.

1 2 3 4 5   Motivating students to study.

1 2 3 4 5   Working productively with other teachers.

1 2 3 4 5   Lack of instructional materials.

1 2 3 4 5   Rapid rate of curriculum and instructional change.

1 2 3 4 5   Feeling under pressure too much of the time.

1 2 3 4 5   The routine and inflexibility of the situation.

1 2 3 4 5   Becoming too personally involved with students.

1 2 3 4 5   Maintaining the appropriate degree of class
                 control.

1 2 3 4 5   Acceptance as a friend by students.

1 2 3 4 5   Understanding the principal's policies.

1 2 3 4 5   The wide range of student achievement.

1 2 3 4 5   Doing well when a supervisor is present.

1 = Not concerned   5 = Extremely concerned

1   2   3   4   5   Meeting the needs of different kinds of students.

1   2   3   4   5   Being fair and impartial.

1   2   3   4   5   Diagnosing student learning problems.

1   2   3   4   5   Getting a favorable evaluation of my teaching.

1   2   3   4   5   Being asked personal questions by my students.

1   2   3   4   5   Too many noninstructional duties.

1   2   3   4   5   Insuring that students grasp subject matter
                      fundamentals.

1   2   3   4   5   Working with too many students each day.

1   2   3   4   5   Challenging unmotivated students.

1   2   3   4   5   The values and attitudes of the current genera-
                      tion.

1   2   3   4   5   Adapting myself to the needs of different stu-
                      dents.

1   2   3   4   5   Whether students can apply what they learn.

1   2   3   4   5   Understanding the philosophy of the school.

1   2   3   4   5   Students who disrupt classes.

1   2   3   4   5   Instilling worthwhile concepts and values.

1   2   3   4   5   How students feel about me.

1   2   3   4   5   Student health and nutrition problems that affect
                      learning.

1   2   3   4   5   The psychological climate of the school.

1   2   3   4   5   Clarifying the limits of my authority and respon-
                      sibility.

1   2   3   4   5   Assessing and reporting student progress.

1   2   3   4   5   Chronic absence and dropping out of students.

1   2   3   4   5   Lack of academic freedom.

1 = Not concerned   5 = Extremely concerned

1 2 3 4 5   Teaching required content to students of varied
                  background.

1 2 3 4 5   Student use of drugs.

1 2 3 4 5   Feeling more adequate as a teacher.

1 2 3 4 5   Guiding students toward intellectual and emo-
                  tional growth.

1 2 3 4 5   Being accepted and respected by professional
                  persons.

1 2 3 4 5   Adequately presenting all of the required material.

1 2 3 4 5   Slow progress of certain students.

1 2 3 4 5   My ability to present ideas to the class.

1 2 3 4 5   Helping students to value learning.

1 2 3 4 5   Whether each student is getting what he needs.

1 2 3 4 5   Increasing my proficiency in content.

1 2 3 4 5   Recognizing the social and emotional needs of
                  students.

1 2 3 4 5   The wide diversity of student ethnic and socio-
                  economic backgrounds.

Please use the rest of this page for any comments. These may be about
the questionnaire in general, about specific items or about any addi-
tional concerns you may have.

Appendix C

Overview of Concern Codes

119

Overview of Concern Codes

1. Non-Teaching Concerns

Statement contains irrelevant information or personal con-
cerns which are unrelated to teaching.

2. Orientation to Teaching

Concern with familiarizing oneself to teaching situations.
These concerns are related to the following:

a. Education and/or teaching generally.

b. Content and/or situations such as physical environment
of the classroom.

c. Concern with authority figures and/or their acceptance.

d. Teaching procedure.

e. General student acceptance.

3. Control

Concern about class discipline and control of students.
Concern about authority as a teacher and/or the alienation of
one's students.

4. Student Relationship

Concern about personal, social, and emotional relationships
with one's students.

5. Student Gain: Cognitive

Concern with student gains in knowledge, comprehension,
application, synthesis and evaluation and/or teaching methods for
achieving these.

6. <u>Student Gain: Affective</u>

Concern with student gain in awareness, interest in learning and growth in values and character, or the teaching procedures for achieving these.

7. <u>Personal Growth and Professional Issues</u>

Concern with personal and professional development, ethics, educational issues, resources, community problems, or other events which influence student gain.

Clearly, data presented by Fuller and Case (1971) supported the validity of the TCS and the scoring categories used with it.

Appendix D

Q-Sort

122

Name _____

Class _____

Date _____

There are no right or wrong answers in this Q-sort. We are inter-
ested in identifying the concerns of college students who are training
to be teachers of the handicapped.

Directions: Arrange each teacher concern statement so that one
and only one statement can be recorded in each statement box below.
Please notice that concern statements placed farther to the left on
the recording form should indicate those concerns that are least like
yours; while concern statements placed farther to the right should
indicate those concerns that are most like yours. You may re-sort
the statements until they best represent your current concerns. When
you are satisfied with your sort, please record one identification
number in each statement box below. (These numbers were randomly
assigned to each statement card and should have no meaning for your
sort.)

Q-sort statement recording form:

Concerns   Concerns
least like   most like
mine   mine

1. My pen doesn't write very well. (29)

2. My parent(s) want me to get a teaching certificate. (83)

3. Today is a pretty day. (99)

4. Will I be able to handle unforeseen experiences or situations? (81)

5. Do faculty and staff accept me? (08)

6. I am concerned if students like me. (69)

7. It is imperative that students respect me and my authority. (12)

8. I'm concerned that students won't like me if I teach them something they don't like. (07)

9. I guess that discipline must be caused by respect for the teacher and this is something to aim for. (03)

10. I wonder what students will do to try me out. (86)

11. How formal or informal should I be with students? (45)

12. I think that I can become so involved with individual students and their problems that I almost forget the other pupils. (55)

13. I think the more you know about the students the better you can teach them. (25)

14. I am concerned about becoming too personally involved with the children. (15)

15. What goes on in the students' minds? What are they thinking? (97)

16. Right now my chief concerns seem to be am I getting across to the students? (51)

17. Will I be able to present information in a manner to provide the greatest possible learning situation? (94)

18. Students need some sense of accomplishment and every child has a potential in at least one area. (40)

19. I want to be sure my students understand the fundamentals. (54)

20. I am concerned with keeping the children's interest and enthusiasm for participation high so that they can see a need for learning. (24)

21. Can I help provide a stable background for the students' development? (80)

22. I want students to realize why they are learning and to enjoy it. (43)

23. The school lunch program needs to be extended to breakfast; hungry children can't learn. (58)

24. I want to see an increased emphasis placed on the social and emotional development of the child. (27)

25. I am concerned with trying to improve myself as a teacher. I think all teachers should attend workshops, etc., so that we can be in touch with new ideas. (38)

Appendix E

Critical Incident Reporting Forms

126

Form A for Reporting an EXTREMELY EFFECTIVE Incident

1. What were the general circumstances leading to the incident? Briefly describe.

2. What was clearly done which made this an EXTREMELY EFFECTIVE incident? (What happened? Who did or said what?)

3. What occurred, if anything, as a consequence of this incident?

4. Do you have any concern or belief regarding this incident?

Form B for Reporting an EXTREMELY INEFFECTIVE Incident

1. What were the general circumstances leading to the incident? Briefly describe.

2. What was clearly done which made this an EXTREMELY INEFFECTIVE incident? (What happened? Who did or said what?)

3. What occurred, if anything, as a consequence of this incident?

4. Do you have any concern or belief regarding this incident?

Appendix F

Schedule

Schedule

Fall 1978 Term

December   11   Collect logs from C_1 and C_2

Winter 1979 Term

January   8   Q-S and TCCL administered to C_1, C_2, E_1, and E_2
                 sections of SPED 531

           15*   Presentation of instructions for recording critical
                 incidents to E_1 and E_2. Following this session both
                 experimental groups will submit CI forms along with
                 their logs.

           22*   Feedback based on CI will be offered to E_2 in written
                 and oral form while E_1 will be offered written feed-
                 back only.

           28*

February   5*   Feedback of CI (see January 22)

           12*

           19*

           26*   Feedback of CI (see January 22)

March   5   No classes--Western Michigan University spring break

           12*   Feedback of CI (see January 22)

           19*

           26*   Feedback of CI (see January 22)

April   2*

            9*   Q-S and TCCL administered to E_1 and E_2 sections

           16

Apring 1979 Term

April   30   Q-S and TCCL administered to section C_3

June   18   Q-S and TCCL administered to section C_3

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*Logs submitted.

Appendix G

Suggested Field Experience and Sequence

131

WESTERN MICHIGAN UNIVERSITY

Special Education 531--Practicum in Special Education
Suggested Field Experience and Sequence

I. Observation
   A. Objectives
      1. To enable student to describe teacher's methods in
         handling following classroom activities
         a. Inappropriate behavior
            (1) Physical techniques
            (2) Verbal techniques
               (a) Reflect feelings (supportive)
               (b) Evaluative--"name calling"
               (c) Punitive (sarcasm, ridicule, etc.)
               (d) Other

         b. Instructional patterns
            (1) Group teaching
               (a) Time spent
               (b) Areas taught
            (2) Individual teaching
               (a) Time spent
               (b) Areas taught
            (3) Movement patterns--planned
               (a) Time spent in seat
               (b) Time spent in motoric activities
               (c) Relation of amount of time in seat to
                   amount of time in movement
         c. Use of materials
            (1) Teacher directed
            (2) Pupil initiated
            (3) Teacher's attitude toward misuse of material
      2. Based on information gathered, student should be able
         to report in written and graphic form-pattern of class-
         room teaching.

II. Teacher Assisting Activities
   A. Objectives
      1. Enable student to integrate himself into identified
         classroom patterns.
   B. Suggested activities--under teacher's direction
      1. Non-contact
         a. Bulletin
         b. Reproducing material
         c. Clerical duties
         d. Marking papers
         e. Making teaching materials

    2. Child contact
       a. Passing and collecting supplies for group lessons
       b. Joining in group activities
          (1) Music
          (2) P.E.
       c. Aiding in checking on individuals work writing group
          lesson
          (1) Handwriting
          (2) Math
          (3) Art

III. One to One--under teacher's directions
    A. Objectives
       1. To allow student the experience of interacting, with one
          child--to carry out teacher's goal
    B. Suggested activities
       1. Individual tutoring
       2. Story reading
       3. Writing down child's own stories
       4. Game playing
          a. Board games
          b. Card games
          c. Outdoor games
       5. Walks
       6. Clerical activities (with child)
          a. Sorting papers
          b. Arranging closets

IV. One to small group (up to 5)--under teacher's directions
    A. Objectives
       1. To allow student the experience of interacting with
          small group--to carry out teacher's goal
    B. Suggested activities
       1. Tutorial work in academic areas
       2. Story reading
       3. Dramatizations
          a. Plays
          b. Puppet shows
       4. Group story writing
       5. Game playing
          a. Board
          b. Cards
          c. Outdoor
       6. Working with mechanical teaching devices
          a. Tape recorder
          b. Film strip
          c. Overhead projector

V. One to large group--under teacher's direction
    A. Objective
       1. To allow student experience of interacting with large
          group--to carry out teacher's goal

B. Suggested activities
1. Presentation of art lesson
2. Film showing
3. Directed classroom game
4. Introduce academic group lesson prepared by teacher
5. Line children up
6. Leading group singing

VI. One to One--student directed
A. Objective
1. Allow student experience of planning and implementing a lesson for one child
B. Suggested activities
1. Same as III

VII. One to small group--student directed
A. Objective
1. Allow student experience of planning and implementing a lesson for a small group
B. Suggested activities
1. Same as IV

VIII. One to large group--student directed
A. Objective
1. Allow student experience in planning and implementing a total class presentation
B. Suggested activities
1. Same as V

Appendix H

Special Education 531--Syllabus
Control Groups C_1, C_2, and C_3

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WESTERN MICHIGAN UNIVERSITY
Department of Special Education

Special Education 531
Control Groups C_1, C_2, and C_3

The major goal of this course is to provide the student with an opportunity to participate in an educational program with exceptional children. For some of you this may be your first opportunity to work with handicapped youngsters; for others, it may be your first opportunity to work with these children within a school setting. For all of you, it should be an opportunity to consider your own feelings, values, and attitudes toward working in this field. We will ask you to keep a log of your experiences and reactions and will discuss these with you.

Ancillary to the major goal will be a number of activities which are designed to add to your competence as a beginning teacher. These will focus on:

1. Developing skill in observational techniques and teaching style.

2. Developing skill in writing and analyzing objectives.

3. Developing skill in the use of A-V processes, materials, and equipment.

4. Developing skill in utilizing the ERC for information regarding exceptional children.

5. Developing skill in professional writing style.

Individual guidelines for each of these activities will be provided with the requirements and due dates.

Grading:

All students completing all of the assignments and satisfying the following requirements will receive a grade of A. For those who do not meet the requirements or fail to complete all assignments at competency level an INCOMPLETE or F will be given (an INCOMPLETE is generally given when the student must repeat the practicum portion of the course) and the course must be repeated.

1. Complete the practicum assignment--making up absences as deemed necessary--and receive an evaluation of 4 or higher on the evaluation completed by the supervising teacher.

2. Complete the Audio-Visual sequence--attendance at the two sessions and check out on 5 pieces of equipment in the self-instructional lab.

3. Attend the sessions on the use of the ERC.

4. Complete all written assignments:

    a. Behavioral Objectives Test

    b. APA Manual Simulation

    c. ERC Assignment

    d. Three (3) Flanders Interaction Analyses

    e. Daily Log--due each week

Class Schedule
Control Groups C_1 and C_2

Session	Activity
1	Overview
	Labor Day--No Class
2	Classroom Management
3	Flanders
4	Seminar
5	Behavioral Objectives
6	Seminar
7	APA Manual
8	Seminar
9	ERC Presentation
10	A-V Sequence
11	A-V Sequence
12	Seminar
13	Seminar
14	Individual Appointments

Appendix I

Special Education 531--Syllabus
Experimental Groups E_1 and E_2

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WESTERN MICHIGAN UNIVERSITY
Department of Special Education

SPED 531--Practicum in Special Education
Experimental Groups E_1 and E_2

Course Description and Objectives

This course is designed to provide the student with an opportunity to participate in an educational program with exceptional children. In addition to your placement within a school setting, the following activities have been designed into the course to enhance your teaching skills:

1. Developing observational techniques.

2. Writing and analyzing objectives.

3. Instruction in the use of the ERC for gathering information regarding special education.

4. Instruction in the use of A-V materials and equipment.

5. Developing professional writing skills.

Grading

The satisfactory completion of the following assignments and requirements will earn a grade of CREDIT or NO CREDIT. Failure to meet or complete the requirements will result in a grade of NO CREDIT, or an INCOMPLETE. (An incomplete is generally given when the student must repeat the practicum portion of the course.)

1. Complete the practicum assignment--making up absences--and receive an evaluation of four (4) or higher on the evaluation completed by the supervising teacher.

2. Complete the A-V sequence (attendance at the two sessions and check out successfully on five (5) pieces of equipment in the self-instructional lab).

3. Attend the session on the use of the ERC.

4. Complete the following written assignments:

   a. Behavioral objectives test.

b. Style Manual (Department of Special Education).

c. ERC assignment.

d. Three (3) Flanders Interaction Analyses.

e. Logs and Critical Incidents submitted every Friday.

CLASS SCHEDULE

	Session	Activity
January	1	Overview
	2	Placement--Evaluation and Course Requirements, Instruction in Logs, and Instruction in CI.
	3	Flanders and Feedback
	4	ERC
February	5	Style Manual and Feedback
	6	A-V
	7	A-V--Three (3) Flanders DUE
	8	Seminar and Feedback
March		Semester Break
	9	Behavioral Objectives and Feedback
	10	Behavioral Objectives--Quiz--Discipline
	11	Seminar and Feedback
April	12	Classroom Management and Feedback
	13	Seminar
	14	Individual Appointments

Appendix J

Calculations for Subhypotheses 1a, 1c, and 2

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Calculations for Subhypotheses 1a, 1c, and 2

Subhypothesis 1a:

$H_0 : \rho_1 = \rho_2 = \rho_3 = \rho_4 = \rho_5$

$$28.69 - \frac{(49.05)^2}{68} = 28.69 - 28.54 = .15$$

$$\chi^2_{obt} = .15 < \chi^2_{(.05,4,\infty)} = 9.49$$

$\therefore$ The null is retained.

Subhypothesis 1c:

$$H_0 : \frac{\rho_1 + \rho_2 + \rho_3}{3} - \frac{\rho_4 + \rho_5}{2} = 0.0$$

$$\frac{1/3(.66) + 1/3(.67) + 1/3(.63) - 1/2(.58) - 1/2(.74)}{\sqrt{\dfrac{(1/3)^2}{23} + \dfrac{(1/3)^2}{11} + \dfrac{(1/3)^2}{10} + \dfrac{(1/2)^2}{16} + \dfrac{(1/2)^2}{8}}} =$$

$$\frac{.22 + .22 + .21 - .29 - .37}{\sqrt{.0048 + .010 + .011 + .016 + .03}} = \frac{.01}{268} = .04$$

$$z_{B,obt} = .04 < z_{B(.05,2,\infty)} = 2.24$$

$\therefore$ The null is retained.

Hypothesis 2:

$$H_0 : \frac{\rho_1 + \rho_2 + \rho_3}{3} - \rho_5 = 0.0$$

$$\frac{1/3(.66) + 1/3(.67) + 1/3(.63) + 0(.58) - 1(.74)}{\sqrt{\dfrac{(1/3)^2}{23} + \dfrac{(1/3)^2}{11} + \dfrac{(1/3)^2}{10} + \dfrac{0^2}{16} + \dfrac{1^2}{8}}} =$$

$$\frac{.22 + .22 + .21 + 0 - .74}{\sqrt{.0048 + .010 + .011 + .125}} = \frac{.09}{.388} = .232$$

$$z_{B,obt} = .23 < z_{B(.05,2,\infty)} = 2.24$$

$\therefore$ The null is retained.