

UTILIZATION OF A SEMANTIC DIFFERENTIAL TO MEASURE
THE EFFECT OF THE STUDENT TEACHING EXPERIENCE
ON THE ATTITUDES OF SPECIAL EDUCATION
TEACHER TRAINEES TOWARD SELECTED
CONCEPTS

By

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CHAPTER I

THE NATURE OF THE PROBLEM

Introduction

Everyone entering the teaching profession has many reasons for choosing to spend six or seven hours a day with young people. These reasons are often highly complex. Prospective teachers, especially those who might choose or be assigned to work with handicapped children, need to examine and be aware of their own attitudes. Good teaching requires an understanding and respect of the strengths of one's students and one's self.

Previous research studies of various magnitudes have confirmed the assumption that the teacher has a profound influence on student behavior and achievement, and the attitude of the teacher can either impede or facilitate a student's success in school. One of the most commonly quoted research studies related to this topic was conducted by Rosenthal and Jacobsen (1968). The findings of this study indicate that teacher expectations have a significant effect on student performance. In their investigation, Davidson and Long (1960) support the fact that students are highly sensitive to the attitudes of teachers. In his review of research, Aiken (1970) confirms the importance of teacher attitudes; he indicates that while a teacher with a positive attitude may have little influence, the teacher with a negative attitude can have an adverse

effect.

For teacher trainees, the student teaching experience is a time of integration when concepts that have been learned in the academic courses can be reorganized, modified, and adjusted. It is a time when attitudes are re-evaluated and re-enforced (Steeves, 1965). Lipscomb (1966) suggests that the knowledge, the skills, and the attitudes toward children which are gained during this time are of vital importance.

The teacher's interaction with the student is believed to be an important aspect of the learning process. Therefore, it is generally felt in the teacher education community that direct experience with students plays a crucially important role in the education of future teachers. The more the prospective teachers can participate in guided interaction with students, the more successful they are likely to be when they themselves are in classrooms directing that process (Elliot, 1978).

Teachers typically remember their student teaching experience as having played a profoundly influential role in their preservice preparation. According to Hunter and Amidon (1966), it may well be that student teaching is the single most important experience in teacher education in terms of influencing the classroom behavior of future teachers. Elliot (1978) indicates that at the present time there is an increasing emphasis being placed on the value of teacher preparation field experiences such as student teaching. However, the value of this new emphasis is yet to be determined.

The focus of this investigation was on the following questions: Do teacher trainees' attitudes change as a result of the student teaching experience? If so, will the change be in a negative or positive

direction?

Statement of the Problem

Prior to their student teaching experience at Oklahoma State University, special education teacher trainees have minimal practical experience working with children and appear to be quite idealistic. What changes in attitude occur due to an extended period of contact with the realities of the special educator's world of work? What attitudinal changes occur during this period of on-the-job training, the student teaching experience?

This investigation proposed to determine whether there was a significant change in teacher trainee attitudes after participating in the special education student teaching experience which is the culmination of the undergraduate special education program at Oklahoma State University. An experimental group of special education teacher trainees participated in an eight-week student teaching experience. A control group of special education teacher trainees attended on-campus classes at the university during the treatment period.

A semantic differential was developed and piloted to measure the attitudes of teacher trainees toward regular classroom teachers, special education and support teachers, students, routine paperwork, administrators, and classroom discipline. The semantic differential was administered to the experimental and control groups to determine whether there was a significant change in attitude after their respective treatments. Pretest scores and post-test scores were recorded and analyzed for both groups.

Significance of the Study

This study should lead to a better understanding of attitudinal changes that take place during the student teaching experience. Moreover, it could provide insight into the influence that the student teaching experience has on the attitudes of a specific group of educators, special education teacher trainees.

If there is a significant change in teacher trainee attitudes following the student teaching experience, what factors could have brought about these changes? Does this indicate that special education teacher trainees need further preparation and practical experience before entering the student teaching block? This study attempted to answer these questions. In addition, the data provided by this study may add to that basic pool of knowledge from which an attitudinal classification can be built. It may also prove useful to special education teacher training departments when reviewing and/or revising their teacher training programs or counseling with prospective special education teachers. In this way, we may look forward to having the best prepared and most competent individuals available for employment as special education teachers in the future.

Hypotheses

The investigation will test the following null hypotheses:

1. There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward

regular classroom teachers.

2. There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward special education and support teachers.
3. There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward students.
4. There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward routine paperwork.
5. There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward administrators.
6. There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward classroom discipline.

Definition of Terms

Attitude. Attitude is a learned, implicit process which is potentially bipolar, varies in intensity, and mediates evaluative behavior. In terms of the semantic differential, it is the projection of a point in the multidimensional semantic space onto the evaluative dimension of that space (Osgood, Suci, and Tannenbaum, 1957).

Attitude toward regular classroom teachers. A subject's global attitude toward any regular classroom teachers with whom there has been professional contact as measured by the semantic differential developed by the researcher.

Attitude toward special and support teachers. A subject's global attitude toward special and support teachers with whom there has been professional contact as measured by the semantic differential developed by the researcher.

Attitude toward students. A subject's global attitude toward any children observed or taught in a classroom situation as measured by the semantic differential developed by the researcher.

Attitude toward routine paperwork. A subject's global attitude toward such tasks as grading written assignments, lesson planning, and collecting and organizing materials as measured by the semantic differential developed by the researcher.

Attitude toward administrators. A subject's global attitude toward any administrators, such as the building principal, with whom there has been professional contact as measured by the semantic differential developed by the researcher.

Attitude toward classroom discipline. A subject's global attitude

toward a teacher's effectiveness in individual and group management as measured by the semantic differential developed by the researcher.

Semantic differential. A method of observing and measuring the psychological meaning of concepts as points in what Osgood et al. (1957) call "semantic space." It consists of a number of scales together with the concepts to be rated with the scales. The scales are seven-point rating scales which are bounded on either end by bipolar adjectives. The semantic differential can indicate one's global attitude toward certain concepts.

Scales. As defined by Osgood et al. (1957), scales are bipolar adjective pairs which have relevance and representativeness to the concepts used in the semantic differential.

Concepts. Osgood et al. (1957) define a concept as the stimuli which is relevant to the research problem and is rated with the bipolar adjectives.

Evaluation factor. Of the three basic general factors of meaning which are assessed by the semantic differential, the evaluation factor is the label given the most dominant factor. It is the dimension of the semantic space with which attitude is usually identified. The attitude of a person toward a concept is defined as an evaluative orientation of the person toward the concept; an evaluative orientation or attitude is described in terms of a "good-bad" continuum. Factor analysis has found certain scales to have high evaluative loadings (Osgood et al., 1957).

Student teaching experience. A teacher preparation experience that occurs away from the university classroom in a location that provides guided observation or interaction with students and/or cooperating teacher (Elliot, 1978).

Limitations

In assessing the results of this study, the following limitations were considered:

1. Threats to internal validity are inherent in the Non-equivalent Control Group Design for intact groups (Campbell and Stanley, 1966) which was utilized in this investigation. Due to the type of experimental design used, interaction between selection, history, maturation, testing, and other sources of internal validity may be present. Therefore, when considering the results from this study, findings should be treated with circumspection.
2. This investigation was limited to data obtained from junior and senior special education teacher trainees at Oklahoma State University. Limitations should be exercised when generalizations are drawn to other populations.
3. When administering a self-report attitude scale, it is assumed that the subjects will relate information in a relatively serious and honest manner. The pretest was administered to both the experimental and control groups during regular college sessions. However, the experimental and control groups were administered the post-test at the end of the semester preceding the taking of a final examination. This could have influenced the teacher trainees' responses, as they may have been more concerned with doing well on their final exam than concentrating on the accuracy of their responses on the semantic differential.

CHAPTER II

SELECTIVE REVIEW OF LITERATURE

Introduction

As stated in Chapter I, the purpose of this study was to examine certain attitudes toward selected concepts held by special education teacher trainees and to construct and utilize a semantic differential to determine whether changes in those attitudes occurred as a result of participation in the student teaching experience. Literature pertaining to teacher attitudes, attitude changes, the student teaching experience, and the use of the semantic differential technique for measuring attitudes was reviewed. However, only that portion needed to support this study is contained in this chapter.

The literature included has been divided into three areas:

(1) that related to general teacher attitude, (2) that related to studies that have been conducted to support the hypothesis that change of attitude does take place during a teacher trainee's experience in the classroom, and (3) that literature evaluating the use of the semantic differential for measuring attitude.

Literature Related to General Teacher Attitudes

Knowledge of teacher attitudes is important, as these attitudes have an affect upon the academic achievement of students and, more

importantly, in the development of student self-concepts (Rosenthal and Jacobsen, 1968). Although researchers have attempted to clarify the relationship between teacher attitudes and student achievement and self-concept, it has been difficult to demonstrate a consistent correlation.

This study assumes that the attitudes of teachers toward students do make a difference in the success roles of these students. Accepting this premise of teacher attitudes and student success, it would then be useful as a starting point to know those attitudes that teachers hold.

From their exploration into student and teacher arithmetic attitudes, Anttonen and Deighan (1971) reported a significant increase in negativity from the third to the sixth grade toward mathematics. As the subject becomes more difficult for children, and for teachers, the students begin to feel frustrated and hence more negative. They surmised that it is also quite possible that this attitudinal change merely reflects the cumulative impact of instruction by teachers with negative attitudes toward teaching arithmetic.

In teaching it may be the subject itself, as in the preceding example, which elicits negative or positive attitudes, or it may be the technique or model adopted for instruction which may precipitate negative attitudes. Scherwitzky (1974) found this to be true of teachers' attitudes toward particular approaches that are used in the teaching of reading. As an example, a teacher might believe that the phonetic approach for beginning readers is far more effective than the see-and-say method.

There is evidence that teacher competency and a good background in subject knowledge effects teacher attitude and therefore student achievement (Higdon, 1972). In the elementary grades particularly, teachers

who have had more than the minimum required number of courses in their formal training tend to have more positive attitudes toward the subject and tend to make better teachers. However, the teachers with the highest scores in such courses are not necessarily the most effective in the classroom.

Mallula (1978) attempted to describe the relationship between teacher competency and teacher attitude. His study specifically examined teacher competency in teaching reading in the content area. Those variables which were taken into account were: number of years' experience teaching in the content area, amount of teaching in the content area, amount of time spent reading professional journals, and the number of courses taken in reading. It was determined that the attitude of the more competent teachers was significantly more positive than the attitude of the less competent teachers towards incorporating the reading skills with the content. These results further substantiate the evidence that level of competency affects teacher attitudes.

Many research studies have directed their efforts toward identifying the personality characteristics of superior teachers. However, findings in this area are ambiguous. Van de Walle (1973) concluded that teachers with a relaxed, informal attitude toward arithmetic are more successful with third-grade students, but this characteristic makes little difference at the sixth-grade level. Shrigley's (1974) findings support the position that the teacher's enthusiasm and personal relationships in the classroom are far more important than subject matter knowledge.

It is recognized that teachers do have emotional reactions to certain characteristics of their students and their life styles and that

these reactions or attitudes predispose teachers to behave differently toward their students (Stern and Keislar, 1977). Helton and Oakland (1977) provided evidence for differential teacher behavior toward students identified as the objects of the teacher attitudes of attachment, rejection, concern, and indifference. Results from their study indicated that students' personality characteristics most strongly influence teachers' attitudes of attachment and rejection, academic ability most strongly influences teachers' attitudes of concern, while academic ability and personality characteristics influence teachers' attitudes of indifference.

An indication of general teacher morale and attitude can be inferred from the information contained in Coleman's (1966) report, Equality of Educational Opportunity. Coleman reported that forty-three percent of the elementary teachers and fifty-seven percent of the secondary school teachers maintained that in view of their present knowledge about teaching they would not have entered the teaching profession. Another finding was that only thirty-nine percent of the elementary teachers and thirty-four percent of the secondary teachers questioned intended to remain in education until reaching retirement age. It therefore appears that a sizable segment of teachers are dissatisfied with teaching and not fully committed to it as a career. This lack of commitment must have an adverse effect upon the overall attitudes of teachers in the schools.

Two important points were derived from a review of the recent research on teacher attitudes which was conducted by Stern and Keislar (1977): (1) Teacher attitudes are important and do make a difference in the teaching-learning process; (2) Attitudes can be changed, although

certain attitudes are more resistant to modification than others.

Sherif (1967) suggests that attitudes can be altered, but once formed they require a regulatory function such that, within limits, they are not subject to change with each "up and down" of everyday life function or with every variation in the stimulus condition. Numerous studies have been conducted to support or reject the contention that attitudes can undergo change. A few of these are reviewed here in an effort to establish the possibility of the occurrence of changes in teacher attitudes.

Goldstein (1978) determined from her research that the better one's knowledge of a situation, the better the attitude toward the specific incident involved. Consistent within this finding was the evidence from her study that the attitudes of educators toward the mentally retarded are often affected by the knowledge the educators have of them and their potential. Further, the comparison of sophomore and senior college students within the area of special education itself also indicated that knowledge acquisition occurred and served to improve attitudes even among students whose initial interest was positive. With regard to the effect of contact and knowledge on attitudes, Harasymiw and Horne (1976) obtained results similar to those of Goldstein. Their study measured teacher opinions and attitudes on issues concerning integration of special education students into the regular classroom. Results confirmed that teacher attitudes and opinions were modified through an inservice program which provided these teachers with new knowledge about the handicapped, classroom experiences in working with special needs children, and the support of administrators and resource personnel. In another study, Browning (1978) investigated whether Reality Therapy

classroom management techniques could be used effectively to improve teacher attitudes. Those teachers exposed to twenty hours of Reality Therapy displayed a significantly positive attitude change after the inservice education and implementation of Reality Therapy practices in their classrooms.

Not all studies have recorded changes in attitude after subjects have received further training or information. The results of Sztogryn's (1978) study are in contrast to those previously discussed. Teachers in his investigation received twelve hours of training in humanistic education techniques. However, the humanistic education program developed by the experimenter was ineffective in changing teachers along any of the attitudinal dimensions studied.

In her review of the validity of research findings regarding teacher attitudes, Taddeo (1977) contends that research on teacher attitudes is deficient and research results inconsistent as the topic has not received its due importance. Getzels (1969, p. 513) states that "the inconsistent nature of the results is the single consistent conclusion that can be drawn from the work in this domain."

In summary, the literature reviewed reveals the importance of teacher attitudes and indicates that teacher attitudes can be changed under certain circumstances. However, knowledge concerning this subject area is still far from complete, and further research is needed to discover how and why attitudes are being altered.

Literature Related to Teacher Trainee Attitudes

During the Student Teaching Experience

Student teaching is that segment of the professional preparation

common to almost every teacher education institution. It constitutes, perhaps, the most significant step in the sequence of professional courses leading to initial teacher certification (Oestreich, 1974). Professional educators and students alike have come to realize the value and importance of the student teaching program in the preparation of prospective teachers. Student teaching is an experience which allows the student to apply most of the knowledge and theory he or she has been able to acquire. It is the experience which is often described as the practical portion of teacher preparation; it is the activity or experience approach to professional growth toward a teaching career; it is "learning by doing" (Lipscomb, 1966).

As a result of the student teaching experience, the beliefs and attitudes of teacher trainees often undergo a pronounced change. Student teachers in Fink's (1975) study became significantly more custodial both during and after the student teaching experience. Student teachers reported using control measures that were less humanistic than they considered desirable previously. When conscious of being observed, student teachers displayed more humanistic control behaviors than they reported using. Deviant pupil behavior encouraged increased custodialism on the part of the student teachers.

In an effort to determine whether attitudinal change had occurred, Lipscomb (1966) explored the attitudes of elementary student teachers before and after their student teaching experience. In viewing the group as a whole, it was found that the total amount of attitudinal change was significant at better than the 0.001 level of confidence. However, the direction of attitudinal change was not reported in the study.

Using the Minnesota Teacher Attitude Inventory for measuring elementary and physical education student teacher attitudes, Stillwell (1978) assessed the attitudes of the student teachers toward methodology, discipline, teacher-student relationships, and students before and after their student teaching experiences. Stillwell reported a significant change in the attitudes of the elementary and physical education student teachers toward these selected areas of teaching as a result of their student teaching experience. He concluded that both groups of student teachers changed in a negative direction as a result of student teaching.

Research by Jacobs (1968) indicated that after completing professional education courses, pre-service teachers moved toward a more liberal-democratic view of teaching practices. However, the student teaching experience resulted in attitude changes from the more liberal-democratic views, developed in the professional courses, to a more rigid and formalized set of attitudes toward teaching.

Several other studies have shown some indication that following the student teaching experience that teacher trainees become less concerned with pupil freedom and more concerned with establishing a stable, orderly classroom (Combs, 1972; MacDonald and Zaret, 1971). In their investigation of differing types of internship situations, Wilbur and Gooding (1977) concluded that a majority of the student teachers in their study developed more aloofness and more authoritarian views concerning the teaching-learning relationship.

A number of studies have been conducted which indicate the tremendous impact the student teaching experience has, not only upon teacher trainees' attitudes, but upon their personality structure and self-concept. Such factors as viewing teaching as a profession, workload,

and confidence in professional preparation were determined by Arneson (1976) to be indicators of changes in student morale and self-concept. Results from this investigation showed a majority of student teachers were sensitive to derogatory statements about themselves and defensive and anxious as teaching involvement increased. Over two-thirds of the student teachers in this exploratory study experienced a depression state at some point in the experience. The effects of this period of depression on a student teacher's attitude has yet to be determined.

Ellison's (1977) study was conducted to determine whether changes in self-concept and concerns with being an effective teacher occurred in student teachers as a result of their participation in a student teaching program. One of the major findings from Ellison's study was that the total group of student teachers seemed to have more positive self-concepts immediately prior to student teaching than immediately upon completion of the student teaching experience. Ellison's investigation included both special education and elementary education student teachers. It was determined that there were only minor differences between the two groups, and that concerns with being an effective teacher may be affected by, but not necessarily determined by, a positive or negative view of oneself.

An investigation by Del Popolo (1960) lent support to its main hypothesis, that a significant relationship does exist between an individual's personality structure and his opinions and attitudes toward pupil-teacher relationships and his observable behavioral traits in a classroom setting. Authoritarian students tended to get significantly lower scores than equalitarian students on an inventory of attitudes and opinions about pupil-teacher relationships, and they also tended to

display behavioral traits during student teaching which imply an inability to establish harmonious pupil-teacher relationships. On the other hand, equalitarian students tended to display behavioral traits which are felt to be conducive toward the establishment of harmonious pupil-teacher relationships. In his study Del Popolo also concluded that the student teaching experience with its day-to-day contact with pupils and school problems tends to influence a little the idealistic approach toward children held by student teachers.

Petrusich (1969) conducted a study with elementary student teachers using an anxiety scale to measure various aspects of their personalities. It was found that after the student-teaching experience, the student teachers showed increased levels of paranoid insecurity and lowered levels of ego strength. The only interpretations possible were that either some of the student teachers had suffered tremendously ego-shattering experiences or that many of them had encountered minor, though telling, situations of the same nature.

The majority of student teachers in Wish's (1976) study reported experiencing the phenomenon of reality shock. Student teachers were especially concerned over the discrepancies which existed between their expectations for, and the realities of, the teacher work role and discipline-related problems. The student teachers indicated that they perceived their professional preparation as "idealistic" and cited the need for earlier and more experience with children in the schools (prior to student teaching) and for preparation for handling discipline problems. Some of the student teachers perceived rapport with the new members of their role set as being negative; however, the majority reported positive perceptions.

Kulwin (1978) attempted to describe the influence that advice related by veteran teachers had on the way neophyte teachers think, feel, and act. The study discovered that neophyte teachers experience a process of work induction which makes them receptive to advice passed on by more experienced colleagues. The beginning teachers must seek help from other members of the teaching staff and are limited by the amount and type of interchange which can occur in a normal school day and by fears of revealing themselves as incompetent teachers. Neophyte teachers pose questions to and receive advice from their veteran colleagues in general and unspecific terms. Although exposed to numerous pieces of advice, neophyte teachers were influenced by venerable pieces of advice; advice which "stood the test of time" and can be implemented into a teacher's repertoire of teaching practices, that concerned themselves with teacher-student, teacher-parent, and teacher-administrator relationships.

Johnson (1969) conducted a research study to determine if a change in student teacher dogmatism during the student teaching experience was a function of the degree of dogmatism of the cooperating teacher. The Rokeach Dogmatism Scale was administered to a group of student teachers and their respective cooperating teachers. The results indicated that the attitudes of the student teachers did change, and most of the change was in the direction of the attitudes held by the cooperating teacher.

In summary, the student teaching experience is recognized as being a major influence upon the behavior of teacher trainees. The fact has also been substantiated that attitudes of teacher trainees toward education can be significantly modified through experiences in the schools. However, it is apparent that much research and experimentation are still

needed in this area.

Literature Evaluating the Use of the Semantic Differential

In the area of attitude measurement it was found that a variety of techniques have been utilized. Clifton, Hollingsworth, and Hall (1952) used the projective approach; Rotter and Willerman (1947) developed the incomplete sentence method; Wandt (1952) found that verbalized attitudes could be measured by disguised items; and Lipscomb (1966) developed a situational type teacher attitude scale. Many studies concerning the attitudes of teachers such as the one done by Boehm (1978) were based on the Minnesota Teacher Attitude Inventory. The semantic differential has also been used to measure attitudes (Osgood et al., 1957). Of these and other attitudinal measuring techniques available, the semantic differential technique was chosen as the most appropriate instrument with which to measure student teacher attitudes.

The semantic differential can be applied to a variety of research problems. It has been shown to be sufficiently reliable and valid for many research purposes (Kerlinger, 1973). Important considerations are that the instrument is easy to construct, is easy to standardize, is relatively inexpensive, and that it is easy to tabulate the results (McDowell, 1974).

Language meaning or attitude strength is measured in direction and degree on the semantic differential, which is a seven-point scale from 1 (extremely negative) through 4 (neutral) to 7 (extremely positive) on which subjects indicate their responses to a concept. The attitude of a person toward a concept is defined as an evaluative orientation of

the person toward the concept; an evaluative orientation is described in terms of a "good-bad" continuum. An evaluative orientation, or attitude, is to be thought of as distinct from other dimensions of orientation, such as activity, "active-passive," or potency, "strong-weak" (Osgood et al., 1957). Other researchers have also demonstrated the presence of the evaluative dimension or factor in the semantic differential scales which are utilized to measure attitude (Brinton, 1961; Fishbein and Raven, 1962; Husek and Wittrock, 1962).

Intensive cross-cultural and factor analytic work resulted in the establishment of the three general factors of meaning which are assessed by the semantic differential technique. The three factors of meaning are: the evaluative factor, the potency factor, and the activity factor. These three factors have held up with amazing consistency during over ten years of research (Nelson, 1971; Kerlinger, 1973).

A semantic differential for measuring attitudes associated with reading and the teaching of reading was constructed and tested by Schofield and Start (1976). It was chosen by these researchers because it was recognized as an indirect instrument for tapping attitudes and hence less open to faking a "good" response. It also allowed for the inclusion of qualitative content to the concept of reading. The researchers concluded that there were significant and substantial correlations between a number of the reading attitude measures. All correlations ranged between 0.72 to 0.83. Overall, these correlations suggest a good internal consistency within the semantic differential data analyzed. Factor analytic techniques revealed that the ten scales included in the semantic differential were measuring a single evaluative dimension, which in turn suggests that these scales remained stable over concepts.

The instrument demonstrated a good degree of internal consistency over two ways of analyzing the same data.

Nowacek (1976) reviewed various techniques available for measuring attitudes. His findings were as follows: (1) Self-report measures of attitude (e.g., Thurstone technique, Likert scale, direct statement) were the most frequently used. These measures, however, were found to be susceptible to a lack of consistency between the reported attitude and actual behavior. (2) The physiological measures (e.g., pupulography) require laboratory facilities which frequently are not available. (3) Indirect measures (e.g., projective, error choice) can in some cases pose serious ethical problems for researchers. (4) Direct observation techniques require considerable time and resources. (5) The semantic differential was the one technique which incorporated desirable features of many techniques.

Nowacek's (1976) study was designed to investigate the validity of the semantic differential as a measure of students' attitudes toward school subjects. The criterion against which his semantic differential was to be validated consisted of an index which incorporated the three components of attitude: affective, behavioral, and cognitive. The results show that the evaluative dimension alone of the semantic differential provided maximum predictive relationship with the index. Using the semantic differential data, the percent of students' attitudes correctly predicted was about 60 percent. These results showed that the semantic differential does not have the expected predictive power as a measure of high school students' attitudes toward science, English, and math.

In another study to determine the validity of the semantic

differential, positive correlations were found between the Minnesota Teacher Attitude Inventory and the semantic differential constructed by Boehm (1978) to measure the attitudes of special education majors and elementary education majors. However, although there were positive correlations between the two instruments, the relationship was not found to be strongly predictive.

A number of other researchers have found the semantic differential to be a valid indicator of attitude. Using a combination of the Minnesota Teacher Attitude Inventory and a semantic differential which was designed to measure teacher attitudes, Freeman (1976) found the semantic differential to be a valid instrument for attitudinal measurement. A semantic differential was developed and used by Berns (1978) to determine Ohio high school distributive education teacher-coordinators' and students' attitudes toward eighteen teaching techniques. Berns found the semantic differential to yield valid information and to be a valid instrument for measuring attitude. Schmadeka (1976) found the instrument valid for the purposes of his study of the attitudes of career education participants and non-participants toward career education. Washington (1974) developed a semantic differential that was judged to be a valid reflection of receptivity to, or tolerance for, change of attitude.

Research by Smith (1975) was concerned with establishing a reliable and valid semantic differential with which to measure the attitudes toward mathematics held by students enrolled in mathematics courses at the college level. The validity and reliability of Smith's instrument were supported by the statistical findings of the study.

A semantic differential was constructed by Weddington (1975) for

use in the evaluation of faculty attitudes in the two-year college. The semantic differential was validated in this study and was recommended, or an adaptation of it, for use in further research on faculty attitudes in the two-year college.

One important point concerning the use of the semantic differential technique was brought out in a study by Weksel and Hennes (1965). According to these two researchers, there is some controversy, not over whether scores on the semantic differential indicate the direction or polarity of one's attitude, but whether the scores validly indicate attitude intensity.

According to Osgood et al. (1957), the semantic differential yields information about the direction of an attitude on a favorable-unfavorable continuum. This score is usually referred to as the polarization score or attitude polarity. Then the degree of favorableness or extremeness or polarity is equated with attitude intensity. Weksel and Hennes (1965) argue that the polarization score does not represent attitude intensity. Taylor (1971) concludes in his discussion of the topic that the question of whether or not factor scores validly indicate intensity of attitude is a question for further research.

In his chapter on the semantic differential, Kerlinger (1973) cites several studies that support the validity of using the instrument for measuring attitude change. The semantic differential was also utilized in Browning's (1978) study of the changes in teacher attitudes after exposure to Reality Therapy classroom management techniques. Browning's instrument appeared to be an accurate measure of attitude change.

In Callahan's (1976) study attitudes of student teachers in the elementary and secondary teacher training programs at the University of

Oregon were assessed at the onset and conclusion of the student teaching experience. A semantic differential provided data for determining if any attitude shift occurred, and if so, the direction of the shift. On the basis of the instruments used and statistical analysis performed, Callahan concluded that the semantic differential employed in this study successfully measures attitude and attitude shift.

Validity of the differential attitude scales appears to be high, based on high correlations with scores gathered by the traditional Thurston and Guttman types of scales. In comparing a series of semantic differential scales with Thurston scales, the correlation coefficients which were obtained were 0.90 or better. The validity of the evaluative factor of the semantic differential was tested against a scale of the Guttman type. The correlation between the two instruments was 0.78 and was significantly greater than chance ($p > 0.01$). It is apparent that whatever the Thurston and Guttman scales measure, the evaluative factor of the semantic differential measures the same thing to a considerable degree (Osgood et al., 1957).

In summary, the semantic differential has been used in over 500 studies and has proven to have construct, concurrent, and predictive validity (Smith, 1966). Available research using the semantic differential technique has been reviewed, and each of the researchers has indicated that although the instrument is not perfect, it is reliable as a measurement of attitude.

CHAPTER III

METHODOLOGY

Introduction

This investigation is involved with the measurement of teacher trainee attitudes toward the concepts of regular classroom teachers, special and support teachers, students, routine paperwork, administrators, and classroom discipline. The study proposed to analyze the data through a descriptive design. Reliability coefficients, means, and standard deviations of the data were explored. The analysis of covariance was used to analyze the data for significant differences between the attitudes of an experimental group and a control group of special education teacher trainees.

Pilot Study

Sixty-one junior and senior education majors who were enrolled in two sections of the Education of the Exceptional Child class at Oklahoma State University participated in the pilot study. The pilot study was initiated in order to determine those semantic differential scales which were to be used for teacher trainee attitude evaluation. An item analysis was conducted to identify those scales (bipolar adjectives) that elicited the best responses, those responses with consistent systematic variance. Results were used to construct the final semantic

differential which was administered to the experimental group and the control group.

Population and Sample Identification

The population in this study consisted of all special education teacher trainees at Oklahoma State University. The sample contained sixty-four junior and senior special education teacher trainees. Thirty-three of the subjects were teacher trainees participating in the spring 1979 special education student teaching block. These subjects made up the experimental group. Thirty-one of the subjects were junior and senior special education teacher trainees enrolled in an Adaptive Physical Education course. These students remained on campus and attended classes at Oklahoma State University throughout the semester. These subjects made up the control group. Both the experimental group and the control group were intact groups.

Research Design and Variables

The research design used in this study was the Non-Equivalent Control Group Design (Campbell and Stanley, 1966). This is a design composed of intact groups.

The independent variables in this study were the separate treatments which were administered to each of the two groups of subjects. Treatment for the groups consisted of the following:

1. Experimental Group: Senior special education students who participated in an eight-week special education teaching experience in various Oklahoma schools.
2. Control Group: Junior and senior special education students

who attended classes on campus during the eight-week treatment period. These students had not yet participated in their student teaching experience.

The dependent variable was the attitudes of the special education teacher trainees toward those selected concepts which were measured by the semantic differential.

Instrumentation

The instrument which was utilized in this study to measure the attitudes of the student teacher trainees was developed from the semantic differential technique (Osgood et al., 1957). This technique was chosen because it is recognized as an indirect instrument for tapping attitudes and, according to Osgood et al. (1957), has proven to be sufficiently reliable and valid to measure attitude change. (See Chapter II for a detailed review of the semantic differential.)

The semantic differential is a technique for observing and measuring the psychological meaning of concepts. Each page of the semantic differential consists of a different concept to be judged. Beneath the concept is a series of descriptive scales with which to rate the concept. Each scale is a bipolar adjective pair which is defined by a mid-point of neutrality and is composed of seven discriminable steps.

Osgood et al. (1957) invented the semantic differential to measure the connotative meanings of concepts as points in what is called "semantic space." Underlying this technique is the basic assumption that the semantic space, having an unknown number of dimensions, can represent the meaning of any word or concept as a particular point.

Osgood et al. (1957) performed a number of factor studies which

dealt with three sources of variability--subjects, scales, and concepts judged. The purpose of this factoring work was to discover the system of factors which together account for the variance in meaningful judgments. This research indicates that there are three dominant, independent dimensions which are used in judging concepts. These dimensions are the activity factor, the potency factor, and the evaluative factor. These factors may be called clusters of adjectives.

The potency factor consists of adjectives that seem to share strength or potency ideas. "Strong-weak" and "rugged-delicate" are examples of the potency factor. Adjectives of the activity factor seem to express motion and action. Examples of the activity factor are "fast-slow" and "hot-cold."

According to Osgood et al. (1957), the cluster which has been found to be the most effective in measuring attitudes consists of adjectives that are evaluative such as "good-bad" and "pleasant-unpleasant." The evaluative factor contains this cluster of adjectives. Empirically tested bipolar adjective pairs that are evaluative were used in this study.

The instrument was constructed with six concepts measured on twenty-three scales. The scales used were chosen because they had previously been found to load highly on the evaluative dimension (Husek and Wittrock, 1962; Osgood et al., 1957). Scales were randomly reversed to counteract the possibility of a response set. Each concept measured on the twenty-three seven-point scales formed one page of a booklet. These semantic differential booklets were collated in counterbalanced order so that each concept followed every other concept an equal number of times to prevent any systematic bias occurring as a function of concept

sequence.

The concepts that were rated with the twenty-three bipolar adjective pairs were selected because of their interest to the investigator and their relevance to the research problem.

Procedure

The final form of the semantic differential was constructed using the results of the pilot study. The semantic differential was then administered as a pretest to the experimental group and the control group during the eighth week of spring semester 1979. This is the week preceding the student teaching experience for those teacher trainees in the experimental group.

Test booklets were given separately to the experimental group and the control group, the instructions were read aloud, and the subjects' questions answered. After completing the booklet, the subjects were asked to turn it over and write the last four digits of their social security number, but not their name, on the booklet. The procedure for each group took approximately twenty minutes. All subjects were given sufficient time to complete the booklet.

At the conclusion of the eight-week treatment period, the semantic differential was readministered to both groups. The pretest and post-test were used to determine if there was a significant difference between the attitudes of the special education teacher trainees in the experimental group and those in the control group after treatment periods were concluded. A copy of the semantic differential and the instruction page are found in the Appendix.

Data Analysis

Data were collected and analyzed to determine if there were any significant differences between the attitudes of the two groups of teacher trainees after the eight-week treatment period. Once testing was completed, the scoring procedure described by Osgood et al. (1957) was utilized to obtain scores for each concept on the pretest and post-test. This procedure is as follows:

The raw data obtained with the semantic differential are a collection of check-marks against bipolar scales. To each of the seven positions on these scales a digit was assigned. These digits were 1, 2, 3, 4, 5, 6, and 7. An origin in the center of the semantic space corresponds to the neutral "4" position on the scales. A person's score on an item is the digit corresponding to the scale position checked. These digit scores are the basic data from which all operations and analyses follow.

The mean and the standard deviation were employed to represent individual and group measures. The analysis of covariance was also used to analyze data from the intact groups. Correlation coefficients were obtained using Cronbach's Alpha (Mehrens and Lehman, 1975, p. 99).

$$\alpha = \frac{n}{n - 1} \left[1 - \frac{\sum S_i^2}{S_x^2} \right]$$

where

n = number of items

S_i^2 = variance of a single item

S_x^2 = variance of the test

The results of all computations are summarized in the tables included in Chapter IV.

CHAPTER IV

RESULTS

Introduction

The presentation of results is divided into three main sections. The first section deals with the findings of the pilot study. The results of the internal consistency reliability for each of the selected concepts and the total semantic differential are presented. The second section deals with a comparison of the results from the pretests and post-tests of the experimental group, those special education teacher trainees participating in student teaching, and the control group, those teacher trainees who did not participate in student teaching. The third section includes the results from the testing of the hypotheses as determined by the analysis of covariance.

Pilot Study

The purposes of the pilot study were to determine whether the semantic differential developed by the researcher could be utilized as a reliable measure of teacher trainee attitudes and to provide the researcher with practical experience in administering and computing the semantic differential.

Cronbach's coefficient alpha was calculated to determine the internal consistency of the semantic differential. Using the responses

from the sixty-one undergraduate teacher trainees, alpha was calculated on the six selected concepts and the total semantic differential. The coefficients ranged from 0.89 to 0.94. Table I presents these reliability estimates. The concept mean, item mean, and standard deviation for the pilot study are also presented in Table I.

Alpha coefficients were examined to identify any items that reduced the scale's reliability. If a "poor" item is deleted from the calculations, reliability estimates increase. The results indicated that none of the items in the semantic differential scale significantly reduced the total reliability of the scale.

Results of Pretests and Post-tests

Summarized in Tables II and III are the results of the pretest and post-test scores of the sixty-four teacher trainees participating in the study. Using Tables II and III, a comparison can be made of the pretest and post-test of the experimental group's and the control group's concept means, item means, standard deviations, and reliability coefficients for each of the six selected concepts. The higher the concept mean and item mean, the more positive the responses of the teacher trainees toward that concept. These scores represent the global attitudes of the two groups of teacher trainees toward regular classroom teachers, special education and support teachers, students, routine paperwork, administrators, and classroom discipline.

In Table III, two facts are apparent concerning the results of the pretest and post-test for the control group. First, the reliability coefficients are all high, ranging from 0.93 to 0.96 for the six concepts. Second, post-test mean scores are all higher than pretest mean

TABLE I
 PILOT STUDY--INTERNAL CONSISTENCY RELIABILITIES
 FOR SELECTED CONCEPTS AND TOTAL SEMANTIC
 DIFFERENTIAL

Concepts	Concept Mean	Item Mean	Standard Deviation	Reliability*
1. Attitude Toward Regular Classroom Teachers	123.1	5.4	16.9	0.92
2. Attitude Toward Special Education and Support Teachers	133.7	5.8	14.3	0.89
3. Attitude Toward Students	111.4	4.8	20.2	0.91
4. Attitude Toward Routine Paperwork	105.0	4.6	20.2	0.93
5. Attitude Toward Administrators	111.6	4.9	22.3	0.94
6. Attitude Toward Class- room Discipline	110.1	4.8	20.9	0.93
7. Total Semantic Differential	115.8	5.0	21.5	0.93

* Coefficient alpha (N = 61).

TABLE II

CONCEPT MEAN, ITEM MEAN, STANDARD DEVIATION, AND RELIABILITY OF PRETEST AND
POST-TEST FOR THE EXPERIMENTAL GROUP

Concept	Pretest				Post-Test			
	Concept Mean	Item Mean	Standard Deviation	Rel.*	Concept Mean	Item Mean	Standard Deviation	Rel.*
1. Attitude Toward Regular Classroom Teachers	113.42	4.93	26.37	0.96	114.91	4.99	22.61	0.94
2. Attitude Toward Special Education and Support Teachers	131.21	5.70	20.30	0.94	137.09	5.96	15.81	0.91
3. Attitude Toward Students	114.36	4.97	26.81	0.96	121.73	5.29	20.60	0.93
4. Attitude Toward Routine Paperwork	97.82	4.25	29.70	0.95	101.21	4.40	25.50	0.95
5. Attitude Toward Administrators	117.55	5.11	22.53	0.94	115.70	5.03	25.19	0.95
6. Attitude Toward Class- room Discipline	107.31	4.67	27.68	0.96	105.24	4.58	25.38	0.94

* Coefficient alpha (N = 33).

TABLE III

CONCEPT MEAN, ITEM MEAN, STANDARD DEVIATION, AND RELIABILITY OF PRETEST AND
POST-TEST FOR THE CONTROL GROUP

Concept	Pretest				Post-Test			
	Concept Mean	Item Mean	Standard Deviation	Rel.*	Concept Mean	Item Mean	Standard Deviation	Rel.*
1. Attitude Toward Regular Classroom Teachers	113.90	4.95	23.93	0.95	118.90	5.17	18.91	0.95
2. Attitude Toward Special Education and Support Teachers	127.41	5.54	20.39	0.96	131.19	5.70	17.80	0.93
3. Attitude Toward Students	108.58	4.72	17.63	0.91	118.07	5.13	22.29	0.94
4. Attitude Toward Routine Paperwork	96.19	4.18	26.96	0.96	100.74	4.38	23.77	0.96
5. Attitude Toward Administrators	106.13	4.61	25.19	0.96	111.35	4.84	27.77	0.96
6. Attitude Toward Classroom Discipline	96.44	4.19	23.92	0.95	99.97	4.35	26.60	0.95

* Coefficient alpha (N = 31).

scores. For example, the smallest increase in a concept mean was for the concept, Attitude Toward Classroom Discipline, and the greatest increase in a concept mean was for the concept, Attitude Toward Students.

The reliability coefficients for the experimental group found in Table II are almost as high as those of the control group, ranging from 0.91 to 0.95 for each of the selected concepts. However, in comparing the results of mean scores, there are some noticeable differences. Four concepts have mean scores which increased from the pretest to the post-test. Two concepts, Attitude Toward Administrators and Attitude Toward Classroom Discipline, have mean scores which decreased from the pretest to the post-test. The greatest increase in a concept mean was for the concept, Attitude Toward Students, and the greatest decrease in a concept mean was for the concept, Attitude Toward Administrators.

Testing the Hypotheses

The data obtained from this investigation were used for the primary purpose of testing the null hypotheses presented in Chapter I of this study. The analysis of covariance was the statistical technique used to determine the significance of the differences between the means of the experimental group and the control group on the post-test. The F ratio is of primary importance as it signifies differences between the two groups which are due to the treatment, the student teaching experience. Scores on the pretest of the semantic differential serve as the covariate.

Hypothesis one stated:

There will be no significant difference at the 0.05 level of confidence between the global attitudes of these special

education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward regular classroom teachers.

Covariance was used to adjust pretest means, and this was followed by the F test. Table IV presents the unadjusted and adjusted means for the post-test, Attitude Toward Classroom Teachers. Table V shows the results of the analysis of covariance. The computed F ratio of 0.44 was not significant at the 0.05 level of confidence; therefore, null hypothesis one is accepted.

Hypothesis two stated:

There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward special education and support teachers.

Covariance was used to adjust pretest means, and this was followed by the F test. Table VI presents the unadjusted and adjusted means for the post-test, Attitude Toward Special Education and Support Teachers. Table VII shows the results of the analysis of covariance. The computed F ratio of 0.07 was not significant at the 0.05 level of confidence; therefore, null hypothesis two is accepted.

Hypothesis three stated:

There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward students.

Covariance was used to adjust pretest means, and this was followed by the F test. Table VIII presents the unadjusted and adjusted means for the post-test, Attitude Toward Students. Table IX shows the results of the analysis of covariance. The computed F ratio of 0.01 was not significant at the 0.05 level of confidence; therefore, null hypothesis

TABLE IV

TABLE OF UNADJUSTED AND ADJUSTED MEANS FOR
POST-TEST--ATTITUDE TOWARD REGULAR
CLASSROOM TEACHERS

	Experimental Group	Control Group	Total Population
Unadjusted Sum of Squares	114.91	118.90	116.84
Adjusted Sum of Squares	115.29	118.49	

Experimental Group N = 33

Control Group N = 31

TABLE V
 ANALYSIS OF COVARIANCE SUMMARY TABLE FOR
 POST-TEST--ATTITUDE TOWARD REGULAR
 CLASSROOM TEACHERS

Source	df	Sum of Squares	Mean Square	F	P
Covariate	1	4201.37	4201.37	11.15	<0.001
Treatment	1	163.73	163.73	0.44	0.512
Within	61	22963.25	367.77		
Total	63	27348.35			

Experimental Group N = 33
 Control Group N = 31

TABLE VI

TABLE OF UNADJUSTED AND ADJUSTED MEANS FOR
POST-TEST--ATTITUDE TOWARD SPECIAL
EDUCATION AND SUPPORT TEACHERS

	Experimental Group	Control Group	Total Population
Unadjusted Sum of Squares	131.21	127.55	129.44
Adjusted Sum of Squares	128.94	129.97	

Experimental Group N = 33
Control Group N = 31

TABLE VII

ANALYSIS OF COVARIANCE SUMMARY TABLE FOR
 POST-TEST--ATTITUDE TOWARD SPECIAL
 EDUCATION AND SUPPORT TEACHERS

Source	df	Sum of Squares	Mean Square	F	P
Covariate	1	11290.84	11290.84	49.78	<0.000
Treatment	1	16.46	16.46	0.07	0.788
Within	61	13830.36	226.73		
Total	63	25137.66			

Experimental Group N = 33
 Control Group N = 31

TABLE VIII

TABLE OF UNADJUSTED AND ADJUSTED MEANS FOR
POST-TEST--ATTITUDE TOWARD STUDENTS

	Experimental Group	Control Group	Total Population
Unadjusted Sum of Squares	110.88	108.58	109.77
Adjusted Sum of Squares	109.99	109.54	

Experimental Group N = 33

Control Group N = 31

TABLE IX
 ANALYSIS OF COVARIANCE SUMMARY TABLE FOR
 POST-TEST--ATTITUDE TOWARD STUDENTS

Source	df	Sum of Squares	Mean Square	F	P
Covariate	1	6000.63	6000.63	20.42	<0.000
Treatment	1	3.28	3.28	0.01	0.916
Within	61	17923.48	293.83		
Total	63	23927.38			

Experimental Group N = 33
 Control Group N = 31

three is accepted.

Hypothesis four stated:

There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward routine paperwork.

Covariance was used to adjust pretest means, and this was followed by the F test. Table X presents the unadjusted and adjusted means for the post-test, Attitude Toward Routine Paperwork. Table XI shows the results of the analysis of covariance. The computed F ratio of 0.001 was not significant at the 0.05 level of confidence; therefore, null hypothesis four is accepted.

Hypothesis five stated:

There will be no significant difference at the 0.05 level of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward administrators.

Covariance was used to adjust pretest means, and this was followed by the F test. Table XII presents the unadjusted and adjusted means for the post-test, Attitude Toward Administrators. Table XIII shows the results of the analysis of covariance. The computed F ratio of 3.99 was shown to be significant at the 0.05 level of confidence; therefore, null hypothesis five is rejected. The F ratio indicates there is a significant difference between the experimental group and the control group. The change in attitudes toward administrators of the special education teacher trainees who participated in the student teaching experience was in a more negative direction.

Hypothesis six stated:

There will be no significant difference at the 0.05 level

TABLE X
 TABLE OF UNADJUSTED AND ADJUSTED MEANS FOR
 POST-TEST--ATTITUDE TOWARD ROUTINE
 PAPERWORK

	Experimental Group	Control Group	Total Population
Unadjusted Sum of Squares	101.21	100.74	100.98
Adjusted Sum of Squares	100.89	101.07	

Experimental Group N = 33
 Control Group N = 31

TABLE XI
 ANALYSIS OF COVARIANCE SUMMARY TABLE FOR
 POST-TEST--ATTITUDE TOWARD ROUTINE
 PAPERWORK

Source	df	Sum of Squares	Mean Square	F	P
Covariate	1	8009.74	8009.74	16.43	<0.000
Treatment	1	0.52	0.52	0.001	0.974
Within	61	29742.63	487.58		
Total	63	37752.88			

Experimental Group N = 33
 Control Group N = 31

TABLE XII
TABLE OF UNADJUSTED AND ADJUSTED MEANS FOR
POST-TEST--ATTITUDE TOWARD
ADMINISTRATORS

	Experimental Group	Control Group	Total Population
Unadjusted Sum of Squares	117.55	105.16	111.55
Adjusted Sum of Squares	116.63	106.15	

Experimental Group N = 33
Control Troup N = 31

TABLE XIII
 ANALYSIS OF COVARIANCE SUMMARY TABLE FOR
 POST-TEST--ATTITUDE TOWARD
 ADMINISTRATORS

Source	df	Sum of Squares	Mean Square	F	P
Covariate	1	9062.57	9062.57	20.76	<0.000
Treatment	1	1743.42	1743.42	3.99	0.050
Within	61	26627.77	436.52		
Total	63	37433.75			

Experimental Group N = 33
 Control Group N = 31

of confidence between the global attitudes of those special education teacher trainees who participated in student teaching and those special education teacher trainees who did not toward classroom discipline.

Covariance was used to adjust pretest means, and this was followed by the F test. Table XIV presents the unadjusted and adjusted means for the post-test, Attitude Toward Classroom Discipline. Table XV shows the results of the analysis of covariance. The computed F ratio of 3.62 was not significant at the 0.05 level of confidence; therefore null hypothesis six is accepted.

TABLE XIV
TABLE OF UNADJUSTED AND ADJUSTED MEANS FOR
POST-TEST--ATTITUDE TOWARD CLASSROOM
DISCIPLINE

	Experimental Group	Control Group	Total Population
Unadjusted Sum of Squares	108.91	95.58	102.45
Adjusted Sum of Squares	108.23	96.30	

Experimental Group N = 33
Control Group N = 31

TABLE XV
 ANALYSIS OF COVARIANCE SUMMARY TABLE FOR
 POST-TEST--ATTITUDE TOWARD CLASSROOM
 DISCIPLINE

Source	df	Sum of Squares	Mean Square	F	P
Covariate	1	3545.78	3545.78	5.71	<0.020
Treatment	1	2249.76	2249.76	3.62	0.062
Within	61	37888.23	621.12		
Total	63	43683.77			

Experimental Group N = 33
 Control Group N = 31

CHAPTER V

SUMMARY, DISCUSSION AND CONCLUSION, AND RECOMMENDATIONS

Summary

The present study was initiated in an effort to investigate the impact of the student teaching experience upon the attitudes of special education teacher trainees. The focal point of this effort was limited to the attitudes of special education teacher trainees toward regular classroom teachers, special education and support teachers, students, routine paperwork, administrators, and classroom discipline. Thus, the question is whether attitudinal change occurs in these areas as a result of student teaching. For the purpose of exploring this question, a semantic differential was constructed to measure that change.

The population utilized in this study consisted of sixty-four junior and senior special education teacher trainees attending Oklahoma State University. The experimental group was made up of thirty-three of these teacher trainees who were enrolled in an eight-week student teaching program. These teacher trainees were assigned to various schools in the state of Oklahoma. The control group consisted of thirty-one of the teacher trainees who had not yet participated in the student teaching experience. These teacher trainees attended on-campus classes at the university during the eight-week treatment period.

In order to collect the data necessary for the design of this study, the semantic differential was administered to the teacher trainees both before and after the eight-week treatment period. The analysis of covariance was utilized to analyze data from the pretests and post-tests of the semantic differential.

At the conclusion of the eight-week treatment period, there was a significant difference between the experimental group and control group of special education teacher trainees at the 0.05 level in only one area. The difference indicates that due to the student teaching experience, special education teacher trainees' attitudes did change toward administrators; and this change was in a negative direction. However, the student teaching experience was found to have no significant effect upon the attitudes of the special education teacher trainees as measured by the semantic differential developed by the researcher toward regular classroom teachers, special education and support teachers, students, routine paperwork, and classroom discipline.

Discussion and Conclusions

This investigation constituted an attempt to determine if the student teaching experience significantly influences the attitudes of special education teacher trainees toward six concepts: regular classroom teachers, special education and support teachers, students, routine paperwork, administrators, and classroom discipline. On the basis of the findings of this study, there are a number of conclusions that appear to be justified.

Results of the study are inconsistent. There was no significant change in attitude toward five of the concepts that could be attributed

to the student teaching experience, but there was a significant change in attitude toward one concept as a result of the student teaching experience. Since the attitudes of the special education teacher trainees did not change significantly toward regular classroom teachers, special education and support teachers, students, routine paperwork, and classroom discipline, one may suggest that the student teaching experience may not have an effect on teacher trainees' attitudes toward these concepts. However, due to the student teaching experience, the attitudes of special education teacher trainees appeared to change in a negative direction toward administrators.

Various researchers (Stillwell, 1978; Ellison, 1977, and Fink, 1975) have reported negative changes in teacher trainee attitudes after completion of student teaching. However, these studies dealt with attitude in general. Only Stillwell's (1978) study identified specific areas in which attitude changes were measured. Two of the areas researched which were similar to those included in the present study were discipline and students.

Results of Stillwell's study relating to the concept, attitude toward students, do not support those of the present study. He found a negative change, whereas this study found no change in attitude toward students as a result of the student teaching experience. In his investigation of attitude toward discipline, Stillwell concluded that there was a negative change in attitude after student teaching. In carefully analyzing the data from the present study, the results indicate that although there was not a significant change in special education teacher trainees' attitudes toward classroom discipline after participating in the student teaching experience, scores were more negative on the

post-test. If the level of confidence had been set at 0.10 rather than 0.05, these scores were negative enough that they would have reflected a significant negative change in attitude. These lower, more negative scores on the post-test at least indicate a negative tendency toward discipline on the part of the teacher trainees in the present study.

Reasons for this negative tendency in the area of discipline may be surmised from studies done by other researchers. According to Wish (1976), teacher trainees need considerably more experience and preparation in handling discipline problems. In a study by Mallula (1978) on the effects of competency on teacher attitude, evidence was presented that the level of competency in an area affects teacher attitude. His investigation determined that the attitude of the more competent teacher is more positive than the attitude of the less competent teacher. With the findings of Wish and Mallula in mind, it may be concluded that a lack of experience and a resulting lack of competence in handling discipline matters could lead to negativity in teacher trainee attitudes. Discipline may play an even more important role in the special education teacher trainees' student teaching experience because of the nature of the children in special education classes. Many of these children have behavior problems and require extra care and skill to manage effectively.

A significant change in teacher trainee attitudes toward administrators was reported in the present study. This change was in a negative direction. Two investigations from the review of literature tend to add some insight to this finding. Kulwin (1978) maintained that teachers experience a process of work induction which make them receptive to advice passed on by more experienced teachers. He noted that beginning teachers were influenced by advice from veteran teachers

concerning teacher-administrators relationships. Results from Johnson's (1969) study indicated that the attitudes of the teacher trainee did change during student teaching, and most of the change was in the direction of the attitude held by the cooperating teacher. These studies give credence to the conclusion drawn by this researcher that a cooperating teacher might possibly have an influence upon teacher trainee attitudes toward administrators.

It is possible that prior to the student teaching experience, teacher trainees lack practical experience with public school administrators and knowledge of the administrators' responsibilities. When interacting with administrators on disciplinary problems of children in the class, is this interaction of a negative sort? Do the special needs of the children in the special education class effect this interaction? A negative change in attitude might possibly reflect a certain amount of disillusionment on the part of the teacher trainee. Administrators' personalities may also be a factor which influences teacher trainee attitudes. What effect administrators' personalities have on teacher trainees' attitudes has not yet been determined. At this point, these possibilities are strictly conjecture by the researcher.

After reviewing the current literature in relation to the present study, the researcher must agree with Taddeo's (1977) contention that research on teacher attitudes is deficient and research results seem to be inconsistent. The inconsistent findings of the present study indicate that there might be specific experiences or areas within the student teaching situation which account for attitudinal change, rather than the total experience. However, it is apparent that more research and experimentation are required on this subject in order to make a determination.

Since changes in attitude may take place during the student teaching experience, what responsibilities should teacher training programs take for establishing positive attitudinal changes? How can teacher educators go about this task? These are questions that need to be answered in the future.

The semantic differential proved to be a valid, reliable instrument for measuring attitude in this study. However, it is possible, in fact quite probable, that subtle changes may have taken place in the special education teacher trainees which were undetected by the semantic differential.

Recommendations

It should be clear from the findings of this study that the basic questions still go unanswered concerning the changing of attitudes due to participation in the student teaching experience by special education teacher trainees. However, the researcher offers the following suggestions:

1. Consideration should be given to further research which attempts to study change in teacher trainee attitudes. Further study might be done in this area to determine whether there are specific experiences within the student teaching situation which account for attitudinal changes or whether it is the total experience. Other variables that could be considered are: the effect of the pupil-teacher ratio on the attitudes of teacher trainees, the effect of the cooperating teacher's attitude on the teacher trainee, and the effect of the teacher trainee's attitude upon the cooperating teacher and the students

in the class.

2. It would be reasonable for teacher education programs to gather data on teacher trainee attitudes so that insights might be gained into the teacher trainees' motivations. The teacher training program could provide a knowledge base for the formation and change of student teachers' educational attitudes.
3. Periodic seminars should be conducted with teacher trainees before, during, and after their student teaching experiences with regard to attitudes which are appropriate and relevant to the given teaching situation.
4. Continued use of the semantic differential methodology to establish change in teacher trainee attitudes might benefit from encouraging subjects to add to their responses with written comments. This would help to clarify attitude changes such as the negative change of teacher trainee attitudes toward administrators.

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APPENDIX

Instructions

The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you. (On each page of this booklet you will find a different concept to be judged and beneath is a set of scales.) You are to rate the concept on each of these scales in order.

Here is how you are to use these scales:

If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

fair X : _____ : _____ : _____ : _____ : _____ : _____ unfair

or

fair _____ : _____ : _____ : _____ : _____ : _____ : X unfair

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong _____ : X : _____ : _____ : _____ : _____ : _____ weak

or

strong _____ : _____ : _____ : _____ : _____ : X : _____ weak

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you're judging. If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space:

safe _____ : _____ : _____ : X : _____ : _____ : _____ dangerous

IMPORTANT: (1) Place your check-marks in the middle of spaces, not on the boundaries:

This Not This

_____ : _____ : _____ : X : _____ : X : _____

(2) Be sure you check every scale for every concept--do not omit any.

(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so do not look back and forth through

the items. Do not try to remember how you checked similar items earlier in the test. Make each item a separate and independent judgment. Work at fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

REGULAR CLASSROOM TEACHERS

Merciless	_____ : _____ : _____ : _____ : _____ : _____ : _____	Merciful
Ignorant	_____ : _____ : _____ : _____ : _____ : _____ : _____	Educated
Melancholy	_____ : _____ : _____ : _____ : _____ : _____ : _____	Cheerful
Congenial	_____ : _____ : _____ : _____ : _____ : _____ : _____	Quarrelsome
Uninformed	_____ : _____ : _____ : _____ : _____ : _____ : _____	Informed
Creative	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unimaginative
Regressive	_____ : _____ : _____ : _____ : _____ : _____ : _____	Progressive
Disreputable	_____ : _____ : _____ : _____ : _____ : _____ : _____	Reputable
Pessimistic	_____ : _____ : _____ : _____ : _____ : _____ : _____	Optimistic
Honest	_____ : _____ : _____ : _____ : _____ : _____ : _____	Dishonest
Important	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unimportant
Skeptical	_____ : _____ : _____ : _____ : _____ : _____ : _____	Believing
Insufficient	_____ : _____ : _____ : _____ : _____ : _____ : _____	Sufficient
Confident	_____ : _____ : _____ : _____ : _____ : _____ : _____	Scared
Superior	_____ : _____ : _____ : _____ : _____ : _____ : _____	Inferior
Meaningless	_____ : _____ : _____ : _____ : _____ : _____ : _____	Meaningful
Negative	_____ : _____ : _____ : _____ : _____ : _____ : _____	Positive
Successful	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unsuccessful
Lethargic	_____ : _____ : _____ : _____ : _____ : _____ : _____	Energetic
Aggravating	_____ : _____ : _____ : _____ : _____ : _____ : _____	Soothing
Indecisive	_____ : _____ : _____ : _____ : _____ : _____ : _____	Decisive
Sociable	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unsociable
Egotistic	_____ : _____ : _____ : _____ : _____ : _____ : _____	Altruistic

STUDENTS (Children observed or taught in a
classroom situation)

Merciless	_____ : _____ : _____ : _____ : _____ : _____ : _____	Merciful
Ignorant	_____ : _____ : _____ : _____ : _____ : _____ : _____	Educated
Melancholy	_____ : _____ : _____ : _____ : _____ : _____ : _____	Cheerful
Congenial	_____ : _____ : _____ : _____ : _____ : _____ : _____	Quarrelsome
Uninformed	_____ : _____ : _____ : _____ : _____ : _____ : _____	Informed
Creative	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unimaginative
Regressive	_____ : _____ : _____ : _____ : _____ : _____ : _____	Progressive
Disreputable	_____ : _____ : _____ : _____ : _____ : _____ : _____	Reputable
Pessimistic	_____ : _____ : _____ : _____ : _____ : _____ : _____	Optimistic
Honest	_____ : _____ : _____ : _____ : _____ : _____ : _____	Dishonest
Important	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unimportant
Skeptical	_____ : _____ : _____ : _____ : _____ : _____ : _____	Believing
Insufficient	_____ : _____ : _____ : _____ : _____ : _____ : _____	Sufficient
Confident	_____ : _____ : _____ : _____ : _____ : _____ : _____	Scared
Superior	_____ : _____ : _____ : _____ : _____ : _____ : _____	Inferior
Meaningless	_____ : _____ : _____ : _____ : _____ : _____ : _____	Meaningful
Negative	_____ : _____ : _____ : _____ : _____ : _____ : _____	Positive
Successful	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unsuccessful
Lethargic	_____ : _____ : _____ : _____ : _____ : _____ : _____	Energetic
Aggravating	_____ : _____ : _____ : _____ : _____ : _____ : _____	Soothing
Indecisive	_____ : _____ : _____ : _____ : _____ : _____ : _____	Decisive
Sociable	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unsociable
Egotistic	_____ : _____ : _____ : _____ : _____ : _____ : _____	Altruistic

ADMINISTRATORS (i.e., building principal)

Merciless	_____ : _____ : _____ : _____ : _____ : _____ : _____	Merciful
Ignorant	_____ : _____ : _____ : _____ : _____ : _____ : _____	Educated
Melancholy	_____ : _____ : _____ : _____ : _____ : _____ : _____	Cheerful
Congenial	_____ : _____ : _____ : _____ : _____ : _____ : _____	Quarrelsome
Uninformed	_____ : _____ : _____ : _____ : _____ : _____ : _____	Informed
Creative	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unimaginative
Regressive	_____ : _____ : _____ : _____ : _____ : _____ : _____	Progressive
Disreputable	_____ : _____ : _____ : _____ : _____ : _____ : _____	Reputable
Pessimistic	_____ : _____ : _____ : _____ : _____ : _____ : _____	Optimistic
Honest	_____ : _____ : _____ : _____ : _____ : _____ : _____	Dishonest
Important	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unimportant
Skeptical	_____ : _____ : _____ : _____ : _____ : _____ : _____	Believing
Insufficient	_____ : _____ : _____ : _____ : _____ : _____ : _____	Sufficient
Confident	_____ : _____ : _____ : _____ : _____ : _____ : _____	Scared
Superior	_____ : _____ : _____ : _____ : _____ : _____ : _____	Inferior
Meaningless	_____ : _____ : _____ : _____ : _____ : _____ : _____	Meaningful
Negative	_____ : _____ : _____ : _____ : _____ : _____ : _____	Positive
Successful	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unsuccessful
Lethargic	_____ : _____ : _____ : _____ : _____ : _____ : _____	Energetic
Aggravating	_____ : _____ : _____ : _____ : _____ : _____ : _____	Soothing
Indecisive	_____ : _____ : _____ : _____ : _____ : _____ : _____	Decisive
Sociable	_____ : _____ : _____ : _____ : _____ : _____ : _____	Unsociable
Egotistic	_____ : _____ : _____ : _____ : _____ : _____ : _____	Altruistic

VITA²

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Master of Science

Thesis: UTILIZATION OF A SEMANTIC DIFFERENTIAL TO MEASURE THE EFFECT OF THE STUDENT TEACHING EXPERIENCE ON THE ATTITUDES OF SPECIAL EDUCATION TEACHER TRAINEES TOWARD SELECTED CONCEPTS

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