A study of attitude change toward student teaching as expressed by students pursuing certification to teach speech and drama courses

Dissertation

Presented to the Graduate Council of the North Texas State University in Partial Fulfillment of the Requirements

For the Degree of

Doctor of Philosophy

By

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The purpose of this study was to determine attitude and attitude change toward student teaching as expressed by students who were pursuing certification to teach speech and/or drama courses in the public school at the secondary level.

It was hypothesized that the attitude of student teachers between the outset and conclusion of the student teaching experience would change in a positive (favorable) direction. In addition to the primary hypothesis, several secondary hypotheses were formulated. The secondary hypotheses related to divisions of the primary hypothesis by sex, type of degree, teaching area, and score on the National Teacher Examination.

Using the semantic differential technique devised by Charles E. Osgood, a set of forty-five adjective scales were selected as a measure of attitude. These scales were then administered to a pilot group of 15 future teachers and three college professors. Twenty-four scales were selected to make up the final instrument used in this study. The scales of the semantic differential were then factor-analyzed by the
principal-axes method for the purpose of extracting all the evaluative scales used in this study. Sixteen scales were selected as a measure of attitude and attitude change.

All subjects of this study were undergraduate students from the Speech and Drama Department at North Texas State University. All subjects were pursuing certification to teach speech and/or drama at the secondary level. All subjects were enrolled in student teaching during the spring or fall term (1969) or the spring or fall term (1970). Data available were an initial and final attitude measurement toward student teaching, degree being pursued, teaching field, teaching plan, and score achieved on the National Teacher Examination.

The procedures used to gather data in this study were as follows:

1. The Semantic Differential was administered to all students enrolled in a speech methods course prior to student teaching. All students who were seeking certification to teach speech and/or drama were given the pretest.

2. Approximately one week prior to the termination of the student teaching experience, all students who were seeking certification to teach speech and/or drama and were performing their student teaching were given the posttest. The posttest was delivered to the student by the coordinating teacher from North Texas State University or was mailed to the student at the cooperating school.
Examination and treatment of the data were conducted in the following manner:

1. Raw scores were summed over all subjects on the pretest and posttest. The means and standard deviations were computed for further statistical computations.

2. Pearson product-moment coefficients were calculated over all scales of the Semantic Differential. The resulting tables of correlations were factor-analyzed for the purpose of extracting the scales used in this study.

3. Mean scores on the Semantic Differential pretest and posttest were compared by Fisher's t test of difference between means to determine if a significant change in attitude had occurred.

4. The .05 level was arbitrarily established as the level of significance for the rejection or retention of the null hypothesis.

Based on the analysis of the data related to this study, the following conclusions were drawn:

1. The student teaching experience at North Texas State University did not cause a significant change in attitude toward student teaching.

2. Mean attitude scores before and after the student teaching experience were favorable toward student teaching.
A STUDY OF ATTITUDE CHANGE TOWARD STUDENT TEACHING AS
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CHAPTER I
INTRODUCTION

Since the inception of the first teacher seminary in the United States in 1823, student teaching has become one of the primary concerns of all institutions which are involved with the education and preparation of teachers (15, p. 35).

"Student teaching," according to Koerner, "is the only Education course which is universally recognized as being of value" (11, p. 66). Student teaching consistently gets a vote of confidence from students and professors as being the most valuable part of professional preparation (5, 7, 16).

Sandgren and Schmidt (14) hypothesized that there seems to be a growing concern in the education of teachers about attitudes toward student teaching. Campbell (4) suggested the influence of pre-established attitudes and convictions may have an effect upon performance during student teaching.

Of the many variables involved in the teach-learn process, perhaps one of the most influential is the student's attitude structure. It is tenable, therefore, that a student's ultimate performance may be significantly affected by his attitude toward student teaching (13, p. 1).

The student approaches the student teaching phase of his professional development with mixed emotions. He has all the anxieties which usually accompany any new experience, while
realizing at the same time that his performance during student teaching is a critical phase of his program of professional preparation. Students enter student teaching with preconceived expectations. For some students these are clearly defined; for others they may be hazy and vague. Each student, nevertheless, has expectations of his role as a student teacher and a concept of himself as a teacher. The student teacher is usually eager to teach and wants to make a good impression; yet he is concerned and apprehensive about his capabilities and acceptance by the pupils, the cooperating teacher, and the school in which he is to perform his student teaching assignment.

Statement of the Problem

The problem of this study was to investigate the effect of the student teaching experience on attitudes toward that experience, as expressed by students pursuing certification to teach speech and/or drama courses in the public schools.

Statement of Purposes

The purposes of this study were (1) to ascertain attitudes of prospective student teachers toward student teaching prior to that experience, (2) to ascertain attitudes of student teachers at the completion of student teaching, (3) to determine if there was an attitude shift, and (4) to determine differences in attitudes when student teachers were grouped according to sex, degree sought, teaching field, and score achieved by each student on the National Teacher Examination.
Hypotheses

Each hypothesis was converted to the "null" for testing. Unless indicated, each hypothesis was based upon a comparison of the mean attitude scores on the pretest administered before student teaching and a posttest administered at the conclusion of student teaching. To carry out the purposes of this study, the following hypotheses were formulated:

**Hypothesis 1.**—The mean attitude scores for the total group on the posttest will be significantly higher than their mean attitude scores on the pretest toward student teaching.

**Hypothesis 2.**—The mean attitude scores of male students on the posttest will be significantly higher toward student teaching than will the mean attitude scores of male students on the pretest.

**Hypothesis 3.**—The mean attitude scores of female students on the posttest will be significantly higher toward student teaching than will the mean attitude scores of female students on the pretest.

**Hypothesis 4.**—The mean attitude scores of female students on the pretest will be significantly higher than will the mean attitude scores of male students on the pretest toward student teaching.

**Hypothesis 5.**—The mean attitude scores of female students on the posttest will be significantly higher than will the mean attitude scores of male students on the posttest toward student teaching.
Hypothesis 6.—The mean attitude score of the Bachelor of Science candidates on the posttest will be significantly higher toward student teaching than will the mean attitude scores of the Bachelor of Science candidates on the pretest.

Hypothesis 7.—The mean attitude score of the Bachelor of Arts candidates on the posttest will be significantly higher toward student teaching than will the mean attitude score of the Bachelor of Arts candidates on the pretest.

Hypothesis 8.—The mean attitude score of the Bachelor of Arts candidates on the pretest will be significantly higher than will the mean attitude score of the Bachelor of Science degree candidates on the pretest toward student teaching.

Hypothesis 9.—The mean attitude score of the Bachelor of Arts candidates on the posttest will be significantly higher than will the mean attitude score of the Bachelor of Science candidates on the posttest toward student teaching.

Hypothesis 10.—The mean attitude scores of drama students on the pretest will be significantly higher toward student teaching than will the mean attitude scores of speech students on the pretest toward student teaching.

Hypothesis 11.—The mean attitude scores of drama students on the posttest will be significantly higher toward student teaching than will the mean attitude scores of speech students on the posttest toward student teaching.

Hypothesis 12.—The posttest mean attitude score of all students above the national norm (609) on the National Teacher
Examination will be significantly higher toward student teaching than will the posttest mean attitude scores of students below the national norm toward student teaching.

Assumptions

For the purposes of this study, the following assumptions were made:

1. A pattern of stimulation which is not produced by the event becomes a "sign" of that event and is capable of producing a similar response to the event.

2. A response to a "sign" of the event will tend to elicit other responses to the event that are in proportion to their similarity to the original response.

3. The process of judgment can be conceived as the allocation of a concept to a continuum that is definable by a pair of bi-polar adjectives.

4. Each semantic scale, defined by a pair of bi-polar (opposite-in-meaning) adjectives, represents a straight-line function between the two adjectives.

5. The placement of an (X) on a semantic space between bi-polar adjectives, will correspond to the reaction elicited by the sign (STUDENT TEACHING), and the distance from the origin will correspond to the intensity of reactions.

6. The semantic differential technique is a logically valid and reliable technique for measuring connotative or implied meaning.
Background of the Study

Students who are pursuing certification at North Texas State University must meet all of the general requirements for the bachelor's degree and the special requirements of the school or college in which they are enrolled.

Each candidate for the bachelor's degree must complete thirty-six hours in courses designated as Academic Foundations (General Education Core Courses): six hours in Federal and State Constitutions; twelve hours in English; six hours in American history; six hours in a laboratory science, plus six hours in a foreign language or six hours in mathematics or an additional six hours in mathematics and/or science.

All students must, in addition to the above requirements, complete four hours in activity courses in physical education. Under certain conditions, this requirement may be waived.

The following education courses are required for all students seeking certification at the secondary level:

1. Education 343 - The American Secondary School
2. Education 345 - The Adolescent in School and Society
3. Education 349 - The Nature and Conditions of Learning
4. Education 405H - Secondary School Curriculum & Methods
5. Education 410H and 411H - Student Teaching in the Secondary School

In addition to the education courses above, all Bachelor of Science candidates must choose two of the following courses:

1. Education 344 - Utilization of Audio-Visual Materials
2. Education 446 - Organization & Principles of Guidance
3. Education 465 - The Philosophy of Teaching
4. Education 467 - The Psychology of Exceptional Children
5. Education 468 - Educational Testing and Evaluation
Students seeking certification to teach speech and/or drama at the secondary school level, must meet the educational requirements established by the School of Education. Specific course requirements established by the Speech & Drama Department are as follows:

First or Second Teaching Field in Speech (24 hours)

1. Speech 105 - Voice and Articulation
2. Speech 115 - Oral Interpretation
3. Speech 125 - Public Address
4. Speech 225 - Argumentation and Debate
5. Speech 420 - Methods of Teaching Speech and Drama
6. Plus nine additional advanced hours in speech

First or Second Teaching Field in Drama (24 hours)

1. Drama 105 - Voice and Articulation
2. Drama 115 - Oral Interpretation
3. Drama 134 - Aesthetics of the Theatre
4. Drama 211 - Stagecraft
5. Drama 310 - Directing of Drama
6. Drama 420 - Methods of Teaching Speech and Drama
7. Plus six additional advanced hours in drama

In summary, the following program is followed by all Bachelor of Arts or Bachelor of Science degree candidates who are seeking certification to teach speech and/or drama at the secondary school level:

1. General education (core) courses ........... 36 hours (*)
2. Professional education courses ............. 24 hours (#)
3. First teaching field .......................... 24 hours
4. Second teaching field .......................... 24 hours
5. Physical education requirement ............. 4 hours (**)
6. Courses to be designated ..................... 12 hours

(*) Bachelor of Arts degree candidates must complete 12-14 hours in a foreign language.
(##) 18 hours for the Bachelor of Arts candidates
(**) If the activity course requirement is waived, these hours may be designated by the degree department.
In order to continue in a degree program that will lead to teacher certification, the student must apply for and receive admission to the Teacher Education Program. Admission to the Teacher Education Program and eligibility for student teaching is determined on the basis of the following criteria as set forth in the 1970-71 North Texas State University Catalog:

1. An over-all college average of C or better.

2. An average of C or better in each teaching field being submitted for certification.

3. An average of C or better in previous education courses.

4. A sufficient amount of previous credit in education courses to result in a total of at least 18 semester hours of course credit in education at the completion of student teaching.

5. At least one semester of residence work, including six semester hours of credit in education earned at North Texas State University.

6. Approval by a faculty screening committee in those cases in which it is the judgment of the Dean of the School of Education that approval is necessary.

7. Students must have completed a minimum of sixty hours with at least a C average (no exceptions are possible), including enrollment in those courses designated by his degree plan in the academic foundations area and the teaching fields for the freshman and sophomore years.

8. Recommendation of the chairman of the department of the major or first teaching field.

9. Recommendation from his faculty adviser in the School of Education.

10. Recommendation from the Director of Health Services.

11. Recommendation from the University Speech and Hearing Clinic.

12. Proficiency in English composition as certified by the Committee on Student Use of English.
Admission to the Teacher Education Program at North Texas State University is cleared prior to the enrollment of the student in his first professional education course. Education 343 (The American Secondary School) is the first course for the secondary program. Satisfactory completion of Education 343 is a prerequisite to all other education courses. Credit in this course cannot be recorded unless the student has cleared his admission to the Teacher Education Program.

The Teacher Education Program at North Texas State University requires six semester hours of student teaching. This directed teaching, which is done during one semester of the senior year, requires a half-day assignment in a public school for at least sixteen weeks or a full-day assignment in a public school for eight weeks. Due to the large number of students in the program each year, it is necessary for many to complete their teaching in locations outside of Denton County. This is done by taking certain courses on an accelerated basis during half of one of the senior semesters, leaving the other half available for full-time student teaching.

Significance of the Study

The effectiveness of teacher education has been frequently questioned by persons within and outside the teaching profession. Teacher education institutions are often asked to produce teachers who are "well educated academically and professionally, who are socially mature and emotionally stable, and who have a deep understanding of the nature of youth" (8, p. 30).
Sharpe (15), chairman of the Joint Committee on State Responsibility for Student Teaching of the AACTE and NCTEP, believes that the opportunity for direct experience is the most important phase of the entire program of teacher preparation. Student teaching provides the opportunity for the student to demonstrate that he has the necessary qualifications that society demands. Sharpe states his beliefs as follows:

Student teaching is almost universally accepted as the most dynamic phase of teacher education. The student teacher is producing, not preparing to produce. His motivation is internal rather than external, for he is not working to meet another's standards but to realize his own goals (15, p. 33).

Student teaching was first viewed as an opportunity for students to pick up certain patterns of teaching; now it is recommended that student teaching should provide opportunity for the student to develop a high level of competence in all phases of the teacher's work (10, p. 1473).

Student teaching is so organized and conducted that it can strongly affect the attitudes and behavior of the student. General education, specialization, and professional study can influence not only the intellectual life of the student but also his emotional and ethical life as well.

Owing to the importance placed upon competence and quality, there is a growing concern in the education of teachers about "desirable attitudes toward student teaching" (14, p. 673). The importance of understanding the relationship between attitudes and performance cannot be overemphasized.
Attitudes toward a specific object or event in a specific situation seem to be a function of the way one conceives the object or event from the standpoint of its effect on values. Since value patterns appear to be fairly resistant to change, it seems likely that most changes produced in attitude must be brought about by changes in the concept of the object toward which the attitude is expressed. This emphasizes the role of student teaching in producing changes in attitudes, and offers a realistic explanation for the fact that educational practices which do not change concepts and which do not take into account attitude structures, are futile (17, p. 657).

Dunham advocated that "teacher education institutions have an obligation for evaluating their programs of teacher education. Institutions must continually determine if they are meeting the objectives which they have set for themselves" (8, p. 31).

Gage reported that the majority of research in the area of student teaching has been concerned with "(1) the teachers attitudes toward pupils, (2) attitudes toward administrators, (3) attitudes toward teachers, and (4) attitudes toward classroom behavior" (9, p. 751).

Reviewers of education research such as Dickens and Williams (6), Harris and Liba (10), Buros (3), Anastasi (2), and Gage (9), all stress the lack of sufficient evaluative research in the area of attitudes toward student teaching.

A review of the literature revealed no studies dealing with the specific purpose and problem treated in this study. Studies
were located which were in part related and these are reviewed in Chapter II of this study.

An attitude study of the student teaching phase of the Teacher Education Program may be of value, as follows:

1. The insight gained from this study may contribute to a better understanding of the influence of an individual's attitude structure on his performance.

2. This study may raise some questions concerning the student teaching phase of the Teacher Education Program.

3. This study may provide the basis for further research in the area of student teaching to determine if any specific experiences within the student teaching phase may account for attitudinal change or if it is the total experience.

4. Perhaps a service will have been rendered to the cause of teacher education if the presentation of data is thought provoking and a stimulus to further research in the area of attitudes toward the student teaching experience.

Definition of Terms

The vocabulary of student teaching has not been completely standardized, although the terms used throughout this study are commonly accepted. In order to facilitate understanding and avoid misconceptions, the terms used in this study are defined as follows:

1. The term **attitude** is defined as an inferred factor within an individual which involved a tendency to perceive and
react in some manner toward an aspect of his environment and was expressed as an emotional disposition of like or dislike (2, p. 19).

2. **Attitude change** is defined as the difference between the attitude assessed by the pretest and the attitude assessed by the posttest.

3. The term **student teacher** is used to describe a student at North Texas State University who applied for and had received admission to the Teacher Education Program and had completed the criteria for student teaching as outlined in current policies and procedures directives.

4. **Student teaching** refers to the period of guided teaching in which the student took increasing responsibility with a group of learners for a period of consecutive weeks.

5. The **cooperating school** is defined as a school used by the college to provide professional laboratory experience, but was not staffed, administered, or controlled by the college.

6. The **cooperating teacher** (supervising teacher) is a full-time teacher in a cooperating school in whose classes the college student teacher observed, participated, or performed student teaching.

7. The **college coordinator** (coordinating teacher) is a designated faculty member of North Texas State University who assumed the responsibility for supervising a number of student teachers. The college coordinator also provided consultive assistance to both student teachers and cooperating teachers.
Delimitations of the Study

In order to accomplish the purposes of this study, the following limitations were established:

1. The study was limited to students who were enrolled in student teaching at North Texas State University during the spring or fall term (1969) or the spring or fall term (1970).

2. The study was further limited to students who were pursuing certification to teach speech and/or drama in the public school at the secondary level.

3. The study was also limited to an investigation of attitude and attitude change toward student teaching.

Summary

The intent of this chapter was to present the purposes so they would reflect the problem of this study. Hypotheses were established, limitations instituted and terms defined. The study was discussed in terms of practical and theoretical value.

Chapter II contains a review of the literature that seemed to be pertinent to this investigation.

Chapter III constitutes a description of the subjects, a discussion of the semantic differential technique, and an analysis of the procedures employed to secure and treat data.

Chapter IV contains a presentation and analysis of the results of gathering and treating the data.

Chapter V contains a summary, conclusions, and recommendations for further investigation and study.
CHAPTER BIBLIOGRAPHY


CHAPTER II

SURVEY OF THE LITERATURE

Introduction

The investigation of literature was divided into (1) the concept and definitions of attitude, (2) attitude structure and theory, (3) types of attitude scales, (4) instruments used to measure student teacher attitudes, and (5) attitude research related to student teaching.

The Concept of Attitudes

Like most abstract terms in the English language, attitude has more than one meaning. Derived from the Latin aptus, it has on the one hand the significance of fitness or adaptedness, connotating a subjective or mental state of preparation for action. Through its use in the field of art, however, the term came to have quite an independent meaning; it referred to the posture of a figure in statuary or painting.

Throughout history, psychologists, educators, learning theorists, field theorists, sociologists, and researchers have attempted to clarify the origin and nature of attitudes. Many authorities are agreed that "attitudes are learned and implicit and they are inferred states of the organism that are probably acquired in much the same manner that other internal learned activity is acquired" (58. p. 189)
Since mentalistic psychology historically preceded response psychology, it is only natural to find that mental attitudes are given recognition earlier than motor abilities. One of the earliest psychologists to employ the term was Herbert Spencer. In his *First Principles* (1862), he concluded as follows:

> Arriving at correct judgements on disputed questions, much depends on the attitude of mind we preserve while listening to, or taking part in, the controversy; and for the preservation of a right attitude it is needful that we should learn how true, and yet how untrue, are average human beliefs (2, p. 16).

In recent years it is uncommon to find explicit labeling of an attitude as either "mental" or "motor." In nearly all cases today the term appears without a qualifying adjective and retains both its original meanings: a mental aptness and a motor set (1, p. 16).

The credit for instituting attitude as a permanent and central feature in sociological writings must be given to Thomas and Znaniecki (7) in 1918, who gave it a systematic priority in a study of Polish peasants. Prior to that time the term had made only sporadic appearances in sociological literature, but was adopted immediately by many authors.

According to Thomas and Znaniecki, "attitudes are individual mental processes which determine both the actual and potential responses of each person in the social world" (1, p. 19).

Following closely in the same vein of thought, Faris proposed additional refinements. He distinguished between conscious and unconscious attitudes, between mental and motor
attitudes, between individual and group attitudes, and between latent and kinetic attitudes (1, p. 19).

Park, who is in agreement with this school of thought, suggests four criteria for an attitude: (1) it must have a definite orientation in the world of objects; (2) it must not be altogether automatic and routine, but must display some tension even when latent; (3) it varies in intensity, sometimes being prevalent, sometimes relatively ineffective; (4) it is rooted in experience, and therefore is not simply a social instinct (1, p. 19).

Green found that all definitions of attitudes have one basic theme. This theme suggests that attitudes should be viewed as "latent variables and used to describe consistency among responses to a specified set of stimuli" (30, p. 335).

According to Krech and Crutchfield, the term attitude is used to define an "enduring organization of motivational and perceptual processes with respect to some aspect of the individual's world" (37, p. 152).

Doob (22) believes that an attitude is an implicit response that is both anticipatory and mediating in reference to patterns of overt responses, that is evoked by a variety of stimulus patterns, and is considered to be socially significant.

Campbell suggests that an attitude is "an enduring syndrome of response consistency to a set of objects" (2, p. 20).

After reviewing many different definitions of the term attitude, Allport concluded that "an attitude is a mental and
neural state of readiness exerting a directive influence upon
the individual's response to all objects and situations with
which it is related" (2, p. 20).

Allport suggests that attention must be given to the
attitude concept. He suggests the following:

The attitude unit has been the primary
building stone in social psychology. It has,
of course, had many critics. Especially in
recent years, learning theorists, field theorists,
and phenomenologists have attempted to dislodge
it. But it is questionable whether their combined
efforts can do more than refine the concept for
future use. Social behavior reflects so much
organization, that the doctrine of attitude is
necessary. Without some such concept, social
psychologists could not work in the fields of
public opinion, institutional behavior, or
national character; nor could they characterize
the mental organization of social man. The
term itself may not be indispensable, but what
it stands for is (1, p. 20).

It may be concluded, therefore, that an attitude is a
"latent" variable, since its meaning is derived from response
consistency in some attitudinal universe. In addition, there
seems to be a general agreement that an attitude is a mental
state of readiness to respond to some specific environmental
aspect of this universe.

Attitude Structure and Theory

An attitude is often defined as a tendency to react in a
favorable or unfavorable manner toward a designated class of
stimuli, custom, or an institution. It is evident, that when
so defined, attitudes cannot be directly observed, but must be
inferred from overt behavior (4, p. 541).
In more objective terms, the concept of attitude may be said to connote response consistency with regard to certain categories of stimuli. In actual practice, the term attitude has been most frequently associated with social stimuli and emotional responses.

Rosenberg and Hovland hypothesized that "attitudes are predispositions to respond to some class of stimuli with certain classes of responses and designated the three major type of responses as COGNITIVE, AFFECTIVE, and BEHAVIORAL" (63, p. 3).

The following schematic form illustrates the theory advanced by Rosenberg and Hovland:
To a large extent these response classes are themselves abstractions or constructs and are typically inferred from the specific types of measurable responses: feelings, beliefs, and actions.

Thus, profess Rosenberg and Hovland, individual responses toward another individual or object can be "inferred from measures of such variables as blood pressure or even galvanic responses, but is usually inferred from verbal statements of like or dislike" (63, p. 3).

The measurement of attitude, therefore, consists in the assessing of individual responses to a specific set of social objects or concepts. This is accomplished by observing sample behavior from an attitude universe.

Certain assumptions, according to Remmers, must be made in order to measure attitudes: "that attitudes are, in fact, measurable, that they vary along a linear continuum, that measurable attitudes are common to the group, and that they are held by many individuals" (6, p. 7).

The measurement of attitude responses constitutes an issue of concern. It seems a logical conclusion to identify attitude, as it is ordinarily conceived in both lay and scientific terms, with the evaluative dimension of the semantic space theory that is advocated by Osgood (58).

Osgood contends that the meaning of a concept "is its location in a space defined by some number of factors or dimensions, and attitudes toward a concept is its projection
onto one of these dimensions defined as EVALUATIVE" (58, p. 42). Thus, attitudes evoked by concepts are considered part of the total meaning of the concept. The word concept, as previously discussed, refers to the stimulus to which a subject's checking system is a terminal response.

Rhine (61) postulated that the development of an attitude could be explained and measured in terms of concept-formation. On a common sense level, concepts are developed over a period of time through a series of experiences. If an attitude is taken to be a concept with an EVALUATIVE dimension, its meaning may be derived from an explanation of concept-formation.

In support of previous researchers, Fishbein stated that "an attitude may be characterized as a mediating EVALUATIVE response, that is, a learned response which may vary with intensity and guide individual evaluations" (27, p. 389).

The measurement of attitudes and opinions have become a vital part of the educational system. If progressive education has made no other contribution, "its insistence on learning the needs and feelings of students would be a notable addition to educational methods" (61, p. 395).

Attitude measurement is not an end in itself. Its purpose is usually to provide information concerning motives of groups or individuals in situations to assist in the understanding of behavior (33).

Attitudes can be specified as favorable, neutral, or unfavorable. Thus, attitude change will occur when (1) the
individual's beliefs about an object or concept change and/or (2) when the evaluative aspect of beliefs about an object or concept changes.

It seems tenable, therefore, that the amount or direction of attitude change will be "a function of the initial attitude, and/or the evaluative aspects of the concept learned by the individual" (27, p. 397).

Recent research conducted by Anderson and Fishbein (5), indicated that there seems to be a direct relationship between an individual's beliefs about an object and his attitude toward that object. Attitude change will occur, therefore, when a belief changes.

Woodruff and DiVesta, in a study of attitudes and concepts, formulated the following conclusions:

An individual's attitude toward any object, proposition, or circumstance will be favorable if, according to his concepts, the situation seems to favor the achievement of his strong positive values. His attitude will become unfavorable if any change in the situation, or in his concept of the situation, makes it seem to him that the situation endangers his strong positive values. Conversely, individual attitude toward any object, proposition, event or circumstance will be unfavorable if, according to his concepts, the object seems to threaten his strong positive values. His attitude will become favorable if any change in the situation or his concept of the situation seems to favor his strong positive values (81, p. 648).

The strength of the attitudinal expression will be a function of the importance of the values to which the situation has any relationship and the extent to which the person feels the situation will affect him.
The strength and direction of an individual's attitude represents an important aspect of his personality. Attitudes can "affect his educational and vocational adjustments, his interpersonal relations, and his daily living" (4, p. 528).

Attitude Scales

Attitude scales differ in method of construction, method of response, and method of interpreting scores. Various types of attitude scales are discussed in this section. Regardless of the type of scale used, however, they are primarily designed to measure the attitude that an individual has toward some aspect of his environment.

Attitude scales are designed to provide quantitative measures of an individual's position along an attitude line (continuum). "Social procedures have been devised in the attempt to achieve comparability of scores from scale to scale, equality of distances between scale units, and unidimensionality or homogeniety of items" (4, p. 547).

The separate items or questions in an attitude scale are usually not of interest in themselves; the interest is, rather, in the total score or subscores that result from responses to various items (66, p. 305). In effect, then, any set of items work as well as any other set provided they give the same final scores on the attitude being measured.

The way in which a scale discriminates among individuals depends on the construction of the scale and the method used to
score the scales. Various types of scales are used to measure attitudes and may be summarized as follows:

In some scales the items form a gradation of such a nature that the individual agrees with one or two items which correspond to his position, and disagrees with those statements on either side of those he has selected. Such scales, in which the person's response localizes his position are called differential scales. In other scales, the person indicates his agreement or disagreement with each item. His total score is computed by adding the subscores assigned to his responses to all the separate items. Such scales are called summated scales. Still others are set up in such a way that the items form a cumulative series; theoretically, an individual whose attitude is at a certain point on the dimension being measured, will answer all the items favorably on one side of a point and will answer unfavorably all those on the other side of the point (66, p. 306).

Prior to presenting the various types of instruments used to assess attitudes toward teaching, it is necessary that an understanding be developed regarding various types of scales that constitute these instruments. The following types of scales are discussed:

1. Differential Scales
2. Summated Scales
3. Cumulative Scales
4. Semantic Differential Scales

Differential Scales

Differential scales for the measurement of attitudes are usually associated with the name of L. L. Thurstone (72). The method Thurstone devised represents an attempt to approximate interval scales.

In taking any of the Thurstone-type attitude scales, the subject marks all statements with which he agrees. His score
is simply the median scale value of the statements that he has endorsed (4, p. 550).

The following example of items from a Thurstone-type scale is from MacCrone's study of attitudes toward natives in Africa (66, p. 308):

<table>
<thead>
<tr>
<th>Scale value</th>
<th>Item No.</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.3</td>
<td>1</td>
<td>I consider that the native is only fit to do the dirty work of the community.</td>
</tr>
<tr>
<td>10.2</td>
<td>2</td>
<td>The idea of contact with the black or dark native disgusts me.</td>
</tr>
<tr>
<td>0.8</td>
<td>11</td>
<td>I would rather see the white people lose their position in this country than keep it at the expense of the native.</td>
</tr>
</tbody>
</table>

The scale values, of course, are not shown on the actual questionnaire, and the items are usually arranged in random order rather than in order of their scale value. The mean, or median, of the scale values of the items that are checked is interpreted as indicating his position on a scale of having a favorable or unfavorable attitude (66, p. 309).

**Summated Scales**

A summated scale, like a differential scale, consists of a series of items to which the subject is asked to react. The type of summated scale most frequently used in a study of attitudes, follows the pattern devised by Likert (39) and is referred to as a Likert-type scale (66, p. 313).
In such a scale, the subjects are asked to respond to each item in terms of several degrees of agreement or disagreement.

The following example is from a study performed by Murphy and Likert (66, p. 314):

Directions: The following list of sentences is in the form of what should or should not be done. If you strongly approve of the statement as it stands, underscore the words STRONGLY APPROVE. If you strongly disagree with the statement as it stands, underscore the words STRONGLY DISAPPROVE. The same procedure applies to the other choices (APPROVE, UNDECIDED, DISAPPROVE).

1. A person who loves his fellow man should refuse to engage in any type of war, no matter how serious the consequences to his country.

<table>
<thead>
<tr>
<th>STRONGLY APPROVE</th>
<th>APPROVE</th>
<th>UNDECIDED</th>
<th>DISAPPROVE</th>
<th>STRONGLY DISAPPROVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5)</td>
<td>(4)</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
</tr>
</tbody>
</table>

The numbers under the scale positions do not appear on the questionnaire given to the respondents. They are indicated to illustrate the scoring system.

Cumulative Scales

Cumulative scales, like differential and summated scales, are made up of a series of items with which the respondent is asked to indicate agreement or disagreement.

One of the earliest scales used in the measurement of attitudes, the Bogardus measurement of attitudes, was primarily composed of cumulative scales (66, p. 317).
In 1944, Guttman devised a scaling model using cumulative scales. These scales were designed in such a manner that any person having a score would have answered all items up to that score in the same direction. Rank order of the items is the scale. This method is called Scalagram Analysis (33, p. 110).

In the cumulative scale the items are related in such a way that whenever an individual replies favorable to item 2 he will also reply favorably to item 1; if he replies favorably to item 3, he will also reply favorably to item 1 and 2; etc. His score is a cumulation of items.

Sometimes the items, as they appear in the scale, are in order of favorableness; sometimes they are randomly arranged. Ordinarily, no attempt is made to determine if the intervals between items are equal, thus, in practice, cumulative scales are ordinal scales.

The social-distance scale, which has become the classic technique in the measuring of attitudes toward ethnic groups, lists a number of relationships to which members of a group might be admitted. The respondent is asked to indicate, for a specified nationality or racial group, the relationship to which he would be willing to admit members of each group. His attitude is measured by the closeness of relationship he is willing to accept. The instrument is usually preceded by the following instructions: For each race or nationality listed, circle each of the classifications to which you would be willing to admit the average member of that race or nationality (not the
best members you have known, nor the worst) to your group. Answer in terms of your first feeling reactions.

<table>
<thead>
<tr>
<th></th>
<th>Negro</th>
<th>Russian</th>
<th>French</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marriage</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>To my club</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>As a neighbor</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>As an employee</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>To citizenship</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>As a visitor to my country</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Exclude from my country</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

It is reasonable to expect that an individual who circles (4) in relation to Chinese, indicating that he would be willing to accept them to his occupation, would also circle (5) and not circle (6) or (7). Here, as in many other scales, the content of the items must be taken into account when deciding whether a "yes" response is to be scored as favorable or scored as unfavorable.

With the appearance of the Thurstone and Likert scaling methods in the late 1920's and early 1930's, attention shifted away from the cumulative scales. However, the 1940's saw a revival of interest in this type of instrument (66).
Semantic Differential Scales

Among the most promising measuring instruments to appear in relatively recent years is the Osgood Semantic Differential. Research conducted by Osgood and his associates (58) at the Institute of Communications Research, University of Illinois, was undertaken during the 1940's and led to the development of the semantic differential technique in 1957. Since that time this technique has been utilized in a variety of situations involving the measurement of attitude and attitude change.

Assumptions are made that the process of description or judgment can be conceived as the allocation of a concept to an experiential continuum defined by a pair of polar terms and a limited number of such continua can be used to define a semantic space "within which the meaning of a concept can be specified and attitude measured" (31, p. 179).

The semantic differential technique has received slight attention from other researchers in the area of student teaching, probably because it is relatively new. It was selected for this study because it has a greater potential for reflecting the complexity of a multidimensional concept than the traditional techniques used in most of the recent research in this area.

The semantic differential technique is discussed at length in Chapter III. The following is a brief example:

STUDENT TEACHING

Summary

Attitude scales, regardless of type, have a basic purpose of yielding a score based on the individual's response to the problem under investigation. All scales, however, have the primary function of measuring denotative attitude. That is, they call for surface judgments of various types, with the assumption following that it is attitude that is measured. The semantic differential technique purports to "measure connotative meaning of which attitude is but one of its dimensions" (53, p. 38).

Instruments Used to Measure Student Attitudes

An investigation of the literature revealed only a few instruments to assess attitudes toward student teaching and the teaching profession. These include (1) the Minnesota Teacher Attitude Inventory, (2) the Q-sort, (3) Likert-type scales, (4) the Purdue Rating Scales, and (5) the semantic technique.

Minnesota Teacher Attitude Inventory (M.T.A.I.)

After some ten years of investigation and study, Cook, Leeds, and Callis (17) presented the M.T.A.I. as an attitude assessment instrument in 1951.

The M.T.A.I. is an example of a modified Likert-type instrument. This test was developed by administering over seven hundred items to teachers nominated by their principals as superior in teacher-pupil relationship and 100 nominated as being inferior in teacher-pupil relationship (4, p. 551).
Two sample items from the initial test are as follows:

1. Most pupils are resourceful when left on their own.
2. A teacher should never acknowledge his ignorance of a topic in the presence of his pupils.

For each statement, respondents marked strongly agree, agree, undecided, disagree, or strongly disagree. The scores assigned to these responses were based on criterion keying, as in the Strong Vocational Interest Blank.

Briefly, the M.T.A.I. is designed to predict the type of social climate the teacher will maintain in the classroom. The rationale of the inventory includes the following:

It is assumed that a teacher ranking at the high end of the scale should be able to maintain a state of harmonious relations with his pupils characterized by mutual affection and sympathetic understanding. The pupils should like the teacher and school work. The teacher should like children and enjoy teaching. At the other end of the scale is the teacher who dominates the classroom. He rules with an iron hand, creating an atmosphere of tension, fear, and submission; or he may be unsuccessful and become nervous. Both teacher and pupils dislike school work; there is a feeling of mutual distrust and hostility (17, p. 3).

While the items on the inventory are rather homogeneous, and scores reflect to some extent a child-centered, permissive attitude, the emphasis on predicting a criterion has led the authors to use weights which are often illogical (12, p. 799).

The discrepancy between related studies does not indicate that the instrument is not valid or reliable. Rather, it does indicate that student teachers approach their student teaching experience with pre-established convictions and attitudes.
Purdue Rating Scales

The first ten items in the scale have been in use since 1927. They deal with such qualities of the teacher as their "interest in teaching," "fairness in grading," "self-reliance," "confidence," etc. The next 50 items were incorporated in the 1950 printing. The test manual, published in 1960, cites 22 studies in which the scales were used. All but one of these studies were performed prior to 1951, and were used to validate the test and establish norms. Pace, however, made the following observations concerning the Purdue Rating Scales:

Useful as the scales are, even in their present form, it is obvious that little or nothing has been done over the past 12 to 15 years to improve their content, increase their discriminating power, or to provide up-to-date norms. Moreover, the varied and changing patterns of college instruction (lectures, discussions, TV, programmed learning, independent study, and other practices) may rapidly make the Purdue Rating Scales obsolete (60, p. 951).

The Q-sort

The operations involved in the Q-sort are similar to the first steps in the construction of the Thurstone scale by the method of equal appearing intervals. Subjects are presented with a large number of statements believed to be relevant to the topic under investigation, and asked to sort them out into a specified number of piles—usually nine to eleven—according to some criterion established by the investigator.

The purpose of sorting is to get a picture of the subject's view of, or attitude toward, the subject or issue investigated.
The Q-sort, however, is normally employed in the study of personality. More specifically, changes in an individual's concept of himself.

The Semantic Differential

The 1950's saw the introduction of a number of approaches that utilized new techniques of scaling procedures. These new procedures cannot be described as differential, summated, or cumulative. The semantic differential technique is an example of this new approach.

The semantic differential technique can be described as a "highly generalized technique for measuring attitudes and attitude change" (58, p. 76). The object of this technique is to provide an index of meaning and attitude. This relatively new procedure grows out of logic concerning the nature of meaning, semantic space, and its dimensionality.

The semantic differential technique has been used in assessing attitudes toward a variety of concepts, ranging from drama (16), anxiety levels (51), advertising (7), television (36, 77), college courses (6, 34, 45, 53, 79), to the use of coffee and No-Doz (8).

In using the semantic differential, it is usual to ask the respondents to check the space in each scale representing reactions to an issue or event under investigation. Numerical values are assigned to these spaces, permitting the recording of quantitative data which can be treated.
In addition to the many studies performed by Osgood (58), many other studies were found that utilized the technique of a semantic differential instrument. A selection of studies are presented to illustrate the many uses and situations in which this technique may be applied.

Husek and Wittrock (35) completed a study designed to measure attitudes toward public school teachers. The subjects of this study were 259 students in an introductory course in Educational Psychology at the University of California, Los Angeles. Of these, 113 were enrolled in elementary education, and 146 in secondary education. One concept (SCHOOL TEACHERS) and 117, seven-step bipolar scales were used. The scales were selected to represent a diverse set of dimensions appropriate to teaching. The following conclusions were formulated:

The mean and standard deviations obtained in this study indicated that the attitudes of students toward public school teachers was in general, extremely positive. This study also indicated that education students apparently treat the dimensions of Restraint, Stability, Predictability, and Tenacity as independent of the general dimensions of evaluation in their ratings of teachers (35, p. 213).

A semantic differential instrument was used by Smith (68) to measure attitudes toward Negroes, Communists, Marriage, God, Death, Wealth, Fame, Recreation, Politics, and Love. Subjects of this study were enrolled in a two-hour Introduction to Public Speaking course at Indiana University, during the 1964-1965 school year. The semantic differential was administered to 132
subjects; responses from ten were discarded for failure to follow instructions. Neither subjects nor test administrators were aware of the purpose of the investigation. As a result of the study, Smith formulated the following conclusions:

Only Pathos appears in measurable quantity for each of the ten concepts selected. From the standpoint both of magnitude and of universality, Pathos appears to be a better predictor of attitude than Logos (68, p. 22).

In addition to the implications for attitude change, the semantic differential has been used to find an objective point of neutrality. Mehling (48) indicates that the semantic scales measure both the direction and the intensity of attitudes. When plotting average latency (the time it took subjects to move a lever to the left or right for an object of judgment when a scale was projected on a screen) against scale positions of the semantic differential, it was discovered that attitudes form a definite "U" curve. Mehling concluded that "the scales of the semantic differential measure both direction and intensity of attitudes" (48, p. 578).

Gulo (32) prepared a semantic differential instrument to measure attitude toward four concepts: Professors, University Administration, Student Organizations, and Campus Atmosphere. The sample was representative, including students from all classes, all colleges, and both sexes in relation to their total enrollment at the university.

The instrument was administered during a one-week period. Students and faculty were unaware of the purpose of the study.
The results were processed by IBM equipment and produced a means and standard deviation for each scale. The following conclusions were formulated:

The subjects indicated that the primary criteria for evaluating the PROFESSOR was his teaching ability and knowledge of his subject. This can, and perhaps justifiably so, be termed "Teaching Dynamism." The concept of UNIVERSITY ADMINISTRATION was composed of four factors. The predominant factor seemed to be centered around the scales rational-irrational, fair-unfair, and stable-changeable. An analysis of the concepts STUDENT ORGANIZATIONS and CAMPUS ATMOSPHERE, revealed a structure that involved eight factors. This indicates the complexity in evaluation (32, p. 152).

The semantic differential technique is a measuring device that is "flexible, widely applicable, simple to administer, and in accordance with the criteria established for an acceptable attitude measuring instrument" (61, p. 361).

Although the logic out of which the semantic differential was developed is complex, the instrument devised and methods used are relatively simple.

With the exception of the semantic differential, all the instruments discussed, have been denotative in nature. In other words, they call for surface judgments of various items, with the assumption that attitude is being measured.

The particular form of the semantic differential that was constructed for the present study conforms to the criteria as suggested by Osgood (58).

The instrument that was designed for this study is discussed at length in Chapter III.
Attitude Research Related to Student Teaching

The general status of critical, evaluative research on student teaching and student teachers is poor (49, p. 1573). This is possibly due to the lack of research interest in this area until recently and to the difficulties in doing conclusive research in such a diverse field of activity (49).

Harris and Liba (33) report that little research has been done on the evaluation of the student teaching program. Most institutions have tended to accept the student teaching phase of their program on the basis of its rating as being the most valuable part of the teacher education program.

Due to the relative importance of student teaching in the total teacher education program, the investigation of literature was centered around attitude research involving student teaching and student teachers. In particular, assessment of attitudes toward the student teaching experience.

A study conducted by Brim (1) was designed to investigate the effect of an undergraduate program upon prospective teachers attitude toward children. More specifically, the main problem was to discover the nature and sources of attitude change. The Minnesota Teacher Attitude Inventory was administered to 250 teacher education students at the University of Denver. The M.T.A.I. was administered during the initial days of a fall quarter. Approximately ten weeks later the same students were given the same form. It was assumed that the difference between the pretest and posttest scores would be caused by changes in
attitude during the enrollment in various Education courses during the fall quarter. The findings of this study may be summarized as follows:

The population of 250 students in the total teacher education program did change in attitude mean scores during the fall quarter in which the study was conducted. On an individual basis the direction of change varied from person to person but there was a highly significant overall change to a higher attitude mean (liberal in attitude toward children) on the M.T.A.I. Variance also increased significantly (10, p. 442).

Campbell (14) investigated a student teaching experience for changes in attitude. Form A of the M.T.A.I. was given to nine physical education majors at the beginning of a semester of student teaching and again at the conclusion of the student teaching experience. The change in response to the M.T.A.I. between the pretest and posttest was assumed to be the result of the student teaching experience. The null hypothesis that the pretest and posttest attitude scores on the M.T.A.I. would not vary significantly was advanced. The following conclusions were formulated by Campbell:

No significant difference was found to exist when the attitude scores of the pretest and posttest were compared as determined by the critical ratio t procedure. However, the attitude response varied significantly between the five dimensions which constitute the inventory (14, p. 162).

A Likert-type instrument was designed by Corrigan and Griswold (18) to measure attitude change of student teachers during their student teaching experience. Student teachers were asked to indicate their attitude toward three principles
of education held to be important in guiding various learning opportunities: (1) the learner's purpose is recognized and utilized, (2) the learner engages in problem solving, and (3) the learner is helped to develop generalizations which apply in a variety of life situations. The students responded to the items on a five-point continuum. A comparison of each student’s response prior to and upon completion of student teaching was considered a measure of attitude change during the semester. The following conclusions were formulated:

The results of the study indicated a mean attitude change for the period of student teaching of plus 9.8 points. The change was statistically significant. The data from the research indicates that student teaching does contribute to changes in attitudes toward the selected principles held to be important in guiding the learning habits and opportunities (18, p. 94).

An investigation of the attitude of beginning teachers to the student teaching experience was conducted by Day (19). The study utilized data collected by the M.T.A.I. The instrument was given to student teachers before and after their initial student teaching experience. Subjects were asked to respond to 150 statements about children and school work. Day concluded that "from the evidence gathered, it appears that students tended to exhibit unrealistic attitudes toward children and school at the beginning of student teaching. The mean loss was 4.2, which was significant at the .05 level" (19, p. 327).

Dunham (25), utilizing the M.T.A.I., investigated the attitudes of student teachers, college supervisors and
supervising teachers toward youth. The study involved a comparative analysis of the expressed attitudes of student teachers toward youth with those of college supervisors and supervising teachers during a period of concentrated study in professional education and student teaching. The subjects of this investigation included 15 college supervisors, 140 secondary school supervising teachers, and 150 prospective teachers at Indiana University. Based on the analysis of the data, the following conclusions were presented:

During the program of professional education conducted on campus at Indiana University, a change in a positive direction occurred in the attitude of prospective student teachers toward youth. During the program of off campus student teaching, a change in a negative direction occurred in the attitude of the student teachers toward youth (25, p. 1298).

The major objective of a study performed by Fishbein and Beigel (27), was to investigate relationships between student teachers' self-perceptions and their conceptions of the ideal child in the classroom. A second objective of this study was to construct an instrument (semantic differential) to measure the hypothesized relationship. A semantic differential was designed to measure attitudes toward three concepts: MYSELF, IDEAL SELF, and IDEAL CHILD. The three concepts were rated on an 18, six-point, bipolar adjective scale instrument. The scales were administered before student teaching. Data indicated, as hypothesized, that "student teachers tend to place a higher value on those qualities in others which are similar to their own" (27, p. 927).
The basic purpose of a study by Lipscomb (41), was to investigate the attitude of student teachers before and after student teaching to determine attitudinal changes. Another purpose was to design an instrument especially for the study. The sample consisted of forty-four senior students that were enrolled in elementary education at Indiana University. An instrument (Lipscomb Scale of Teacher Attitude) was designed and administered to student teachers at the beginning and at the conclusion of their student teaching experience. The focal point of this study was limited to the attitudes of student teachers toward children, toward the role of the teacher and curriculum practices. Conclusions were as follows:

The Lipscomb Scale of Teacher Attitude appears to have reasonable validity and reliability for the measurement of expressed teacher attitudes. There was a significant change in attitude during the student teaching phase of professional development. This (favorable) change was true at better than the .001 level of significance (41, p. 159).

Loeffler (42) designed and conducted a study to determine attitude and attitude change toward a set of teacher-related concepts before and after a student teaching experience. The concepts were: Teaching as an Occupation, Teachers in General, The Best Teacher, and Myself as a Teacher. The instrument used was a 12 scale semantic differential. The subjects were 144 women who were seniors in elementary education. Data available for each subject included an initial and final attitude score toward each concept, the amount of attitude change toward each concept, and attitude toward the student teaching experience, and
grades in student teaching. Analyses of variance of attitude scores were computed to compare the three groups on initial attitudes, final attitudes, attitude change, and attitude toward the student teaching experience. The following conclusions were formulated:

In the correlation matrix there were significant relationships of success with final attitude on Myself as a Teacher ($r = .18$) and The Student Teaching Experience ($r = .23$). On the average, the initial attitudes were not significantly different among those who made A's, B's, and C's in student teaching. The attitude change for these groups did not reach the desired level to be significant. There was a significant difference ($p = .05$) among attitudes of the three groups toward the student teaching phase with the A's having a more positive attitude than the B group, and the B group having more positive attitudes than the C group. A comparison of subjects making the greatest positive and those making the greatest negative attitude change showed that these subjects differed significantly on initial attitudes and attitude toward student teaching (42, p. 961A).

The Minnesota Teacher Attitude Inventory was used by Loy (43) in a study to determine the effect of the student teaching experience on certain factors which are considered important to teacher success. The factors considered were (1) teaching as a profession, (2) pupils, and (3) behavior. Students were given written tests at the beginning of the ten weeks of full-time or twenty weeks of half-time student teaching. The same tests were given again at the conclusion of student teaching. Loy concluded that the attitudes of teachers did not change toward any of the principles under investigation (43, p. 1210).

A comparison of the change in attitude toward youth of two selected groups of student teachers, was the focus of attention
by McCullough (46). Group I consisted of student teachers who were placed in public secondary schools for full-time student teaching during the first nine weeks of a semester and then returned to the college campus to take accelerated Education courses for the last nine weeks of the semester. Group II took accelerated Education courses on the college campus during the first nine weeks and then were placed in public secondary schools for full-time teaching the last nine weeks of the semester. The M.T.A.I. was administered to both groups before and after student teaching. McCullough concluded as follows:

The mean scores of both groups of prospective teachers changed in a positive direction during the period of accelerated professional Education courses. Both groups changed in a negative direction during the period of student teaching. Group I achieved a significantly higher mean attitudinal score than did group II (46, p. 2302).

Osmon (59), utilizing the Minnesota Teacher Attitude Inventory, investigated the associate factors in changes of student teacher attitudes during student teaching. During the second semester of the 1956-1957 academic year at the University of Indiana, 222 secondary students were tested with Form A of the M.T.A.I. before and after student teaching. The findings were as follows:

It was determined by means of the t test that the mean scores of all students showed a loss in attitude at less than the one percent level during the student teaching experience. Little or no relationship was found to exist between an increase or decrease in MTAI scores during student teaching and factors of the MTAI (59, p. 1281).
Sandgren and Schmidt (64) investigated the relationship between student teaching and teaching proficiency. Attitudes of student teachers toward school work and pupils were measured by the Minnesota Teacher Attitude Inventory and by the Student Teaching Report. The results obtained from this study were as follows:

The mean score for the entire group of 393 student teachers was 42.6 on the M.T.A.I. taken before student teaching, and 54.3 at the end of student teaching. This increase in mean scores was significant above the .05 level. There was no relationship between M.T.A.I. scores and the ratings by public school teachers on the Student Teacher Report (64, p. 679).

Shumaker (67) designed a study to investigate the use of the Q-sort to measure changes in attitudes during student teaching, and to determine the usefulness of this technique as a device for evaluating specified aspects of the student teaching phase of the teacher education program. Attitude scales were administered before and after student teaching. Shumaker concluded that "the total change was significant. Results also indicate that it is feasible to use the Q-sort technique for measuring changes in attitudes" (67, p. 1693A).

Scott and Brinkley (65) performed a study to investigate the predictive and concurrent validity of the M.T.A.I. for student teaching. Eighty-two student teachers participated in this study. For the predictive and concurrent study, the M.T.A.I. scores were used, and, in addition, scores obtained on a paper-and-pencil measure of student---teacher---pupil relationships. The M.T.A.I. scores were obtained within ten
days prior to student teaching and again two or three days after the completion of the student teaching experience. Of the many factors possibly associated with observed changes in behavior, only one factor, the attitude of the supervising teachers, was considered in this study. The following conclusions were formulated:

The group of student teachers working with supervising teachers whose attitude toward pupils were, in each instance, superior to their own, improved significantly as a group in attitude toward pupils during student teaching. Groups working with supervising teachers whose attitudes were, in each instance, inferior to theirs, did not as a group change significantly in attitude toward pupils during student teaching. Examination of the predictive and concurrent validity of the M.T.A.I. was the second aspect of this study. The responses made on a constructed checklist, using the Classroom Personal Relations booklet as a guide, provided the evidence that the M.T.A.I. had neither predictive nor concurrent validity, a finding in conflict with other studies (65, p. 81).

Walberg, Metzner, Todd, and Henry (74), using the M.T.A.I. and a semantic differential instrument, examined the effects of student teaching and internship on self-concept and attitudes. This study was performed at the Harvard University Center for Research and Development. The subjects utilized for this study consisted of 64 senior women enrolled in student teaching. A series of three measures were administered before and after student teaching. The first instrument consisted of a 26-scale semantic differential. The concept measured was MYSELF AS A TEACHER. The second instrument was exactly the same, except that the ratings were made between bi-polar phrases, such as
Findings support the sociological hypothesis which states that middle-class students trained for middle-class pupils have declining self-concepts when they encounter the realities of poverty in the school system. In the personal intimacy of tutoring, the students became less controlling and authoritarian and more pupil-centered (74, p. 290).

The structure of self-concept in prospective teachers, was the focus of the study completed by Walberg (75). The study was based on a sample of 1009 women in a teacher education program at Illinois Teachers College in Chicago. A semantic differential instrument was administered to students preparing for student teaching. Subjects indicated their concept of MYSELF AS A TEACHER on 26 scale items. The responses to the instrument were intercorrelated and the resulting matrix was subjected to a factor analyses. Walberg concluded as follows:

Viewed in the context of previous factor research on teacher ratings, this study suggests that student teachers do not see themselves in the same dimensions that pupils see teachers. Nor do they see themselves in the same dimensions as they see teachers in general (75, p. 85).

Williams (78) utilized the M.T.A.I. to investigate the interrelatedness of student teachers' temperament traits, their attitudes toward youth, and their teacher-pupil interpersonal
problems. Student teachers who participated in this study were seniors at North Texas State University. Several instruments were used to collect the data: The Minnesota Teacher Attitude Inventory, the Guilford-Zimmerman Temperament Survey, and the Problem Check List for Student Teachers and Intern Teachers.

Three major conclusions were formulated:

Student teachers' attitudes toward youth were of somewhat limited significance in the determination of teacher-pupil problems during student teaching. Student teachers' temperament traits were of somewhat limited significance in the determination of teacher-pupil problems. Discipline was shown to be a major concern of student teachers that participated in this study (78, p. 3255).

With the exception of the semantic differential, all of the instruments discussed have been denotative in nature. In other words, they call for surface judgments of various items, with the assumption that it is attitude that is being measured.

Summary

A survey of the literature reveals that very few studies have been completed that are primarily concerned with assessment of attitudes toward the student teaching experience. Gage (29) reported that the majority of research in the area of student teachers and student teaching has been concerned with (1) the attitudes toward pupils, (2) attitudes toward teachers, and (3) attitudes toward student behavior.

Chapter III is concerned with the procedures for collecting and treating the data.
CHAPTER BIBLIOGRAPHY


CHAPTER III

PROCEDURES FOR GATHERING AND TREATING THE DATA

Introduction

The purpose of this chapter is to (1) describe the subjects in this study, (2) explain the instrument utilized, (3) detail the chronology for securing the data, and (4) explain the statistical treatment of the data.

Description of the Subjects

The subjects utilized in this study were 70 undergraduate students from the Speech and Drama Department at North Texas State University, Denton, Texas. All subjects were seeking certification to teach speech and/or drama at the secondary level. All subjects were enrolled in student teaching during the fall term (1969), or the spring or fall term (1970).

The pretest was administered to 105 students who were enrolled in a methods course taught in the speech and drama department. Of the 105 students, 11 did not perform student teaching, 4 withdrew from the Teacher Education Program, and 20 did not return the posttest instrument. A second posttest was sent to the home address of these subjects; however, it was not returned. There were 27 males and 43 females in the study. Of this total, 31 were pursuing a Bachelor of Arts degree and 39 were pursuing a Bachelor of Science degree in Education.
The Measurement Instrument

One of the most promising attitude measuring instruments to appear in recent times is the Osgood Semantic Differential. Charles E. Osgood, George J. Suci and Percy H. Tannenbaum (13) developed the Semantic Differential as an instrument to measure "connotative" meanings or concepts held by individuals toward objects, events, persons, ideas, and situations.

The initial research by Osgood and his associates, which was undertaken at the Institute of Communications Research at the University of Illinois during the early 1940's, led to the development of the Osgood Semantic Differential in 1957. The semantic differential technique was first utilized as a tool for research on the psychology of meaning. Its possibilities for attitude assessment, however, were soon recognized by many researchers (1, p. 534).

The semantic differential is a technique and cannot be classified as a test. Within the context of this study, test is used to mean a fixed set of items, scored by a relatively fixed system, culminating in a standardization with norms. "A more appropriate term," contend Husek and Wittrock, "would be technique" (5, p. 209). Technique is used within this study to mean an approach to the measurement of some attribute; an approach that has to be modified to fit the subject matter under investigation. Osgood emphasized this point of view throughout all of his studies and explained that there are no standard concepts and no standard scales; rather, concepts and
scales that are used in a particular study depends upon the purpose of the study.

Subjects are asked to indicate their concept of a term, such as SCHOOL, along a continuum between bipolar adjectives.

SCHOOL

Good __________ Bad
Fair __________ Unfair etc.

For every rated concept, a series of bipolar adjectives are employed; the number varies, however, usually fifteen or more scales are included.

An intercorrelation and factorial analyses of the original set of fifty scales developed by Osgood (13), revealed three major factors: EVALUATIVE, that were loaded in such scales as valuable-worthless, clean-dirty, and good-bad; POTENCY, such as strong-weak, and large-small; and ACTIVITY, identified by scales such as active-passive, and fast-slow. The EVALUATIVE factor accounts for the largest percentage of variance (13, p. 325).

One of the best criteria in scale selection is relevance to the concept being judged. In assessing a persons concept of ADLAI STEVENSON, for example, evaluative scales such as ugly-beautiful may be irrelevant while others like fair-unfair may be highly relevant; on the other hand, the reverse would be true for judging paintings. The primary purpose of the study dictates the choice of appropriate adjective pairs.
Theory Underlying the Semantic Differential

A logical analysis of the semantic differential technique may begin with a self-evident fact: the pattern of stimulation which is evoked by the sign is never identical with the pattern of stimulation which is evoked by the object (12, p. 200). The word CHAIR, for example, is not the same stimulus as the object CHAIR. The former is a pattern of sound waves having elements of some familiar object of recall; the latter may be a visual form having color, shape, and size. Yet this sign—the word CHAIR—does elicit behavior which is relevant to the object it signifies. Osgood, then addressed himself to the question: "Under what conditions does something which is not the object become the sign of that object?"

The mentalistic view, advocated by Ogden and Richards (10), provides an entry into this question. The mentalistic view is derived from the natural philosophy of Western culture, in which the dualistic connotations of language dictate that a correlation can be established between the two classes of events, material and nonmaterial. Meanings are obviously physical events. Any satisfying theory of meaning must specify certain interrelations between these two levels (12, p. 201). The mentalistic view contends that the idea is the essence of the meaning; it is this mental event which links the physical event, sign, and object. In other words, something which is not the object becomes the "sign" of that object and is capable of eliciting a response.
Application of Pavlovian conditioning principles by the early behaviorists led to the theory that signs achieve their meanings simply by being conditioned to the same reactions originally made to the object (12, p. 201). This, in essence, is the substitution view that is encountered in many of the textbooks in use today. The substitution view may be briefly summarized as follows:

An object evokes certain behavior in an organism; if another pattern of stimulation is consistently paired with the original object, it becomes a sign and conditioned to the same response and thus gets its meaning. In other words, whenever something which is not the object receives a response it is the sign of that object (12, p. 201).

Working in the tradition established by Peirce and other American pragmatists, Morris proposed a formula for the sign process which avoided the pitfalls of the substitution theory. This theory, the disposition view, seems to be a turn backward toward the mentalistic view held by Ogden and Richards. Morris states his view as follows:

Signs achieve their meanings by eliciting reactions which take into account the objects that are signified. In other words, any pattern of stimulation which is not the object becomes a sign of that object if it produces in an organism a disposition to make any of the responses that were previously elicited by that object (12, p. 202).

According to Osgood, "words represent things because they produce some replica of the actual behavior toward things, as a MEDIATION PROCESS" (12, p. 204). Stating this proposition formally: A pattern of stimulation which is not the object is a sign of the object and evokes a mediating reaction.
In schematic form, the proposition as previously stated would appear as follows:

\[(S) \quad \ldots \quad r_m \quad \ldots \quad s_m \quad \ldots \quad R_x\]

The above model presents an abbreviated symbolic account of the development of a "sign," according to the mediation hypothesis. For example, the connotative meaning of the word SPIDER can be explained as follows: The stimulus-object \((S)\), the visual pattern of a hairy-legged insect often encountered in a threat context provided by other humans, elicits a type of behavior \((R_c)\), which in this case includes loading on the fear activity. The mediating reaction \((r_m)\) produces a pattern of self-stimulation \((s_m)\), which may elicit a variety of overt behaviors \((R_x)\), such as shivering and saying "ugh," or running out of the room where the spider is said to be lurking, and then refusing to work in this area (12, p. 205).

Using the model developed by Osgood, it can be concluded that when a "sign" is conditioned to a mediator, it may also tend to elicit other mediators in proportion to their similarity to the original reaction; it will tend to inhibit many other mediators in proportion to the directness of their antagonism to the original reaction (12, p. 213). This means that "signs" which develop a certain meaning through direct training will
readily elicit similar meanings but resist being associated with opposed meanings. If the sign COMMUNISM means "bad" to an individual, he will easily accept substitutions of "dirty," "unfair," and "cruel," but it would be difficult for the same person to think of COMMUNISM as "clean," and "fair."

Considering the number of abilities and attitudes that psychologists have attempted to measure by scaling, it is significant that there has been practically no attempt to measure meaning using this theory (12, p. 219).

The theory underlying the semantic differential technique, then, is that it is designed to measure "connotative" meaning or concepts held by individuals toward objects, events, ideas, and situations.

Validation of the Semantic Differential

Osgood and his associates (13) contend that the semantic differential technique will indicate direction of attitude, be it favorable or unfavorable. Direction is determined simply by indicating a place on a continuum between bipolar adjectives toward one pole or the other.

Based upon high correlations with scores gathered by the Thurstone, Likert, and Guttman scales, the validity of the semantic technique appears to be valid (13, pp. 191-197).

To determine the validity of the semantic differential technique, Osgood, et. al., compared the scales of the semantic differential with Thurstone scales. Each of three concepts,
THE NEGRO, THE CHURCH, and CAPITAL PUNISHMENT, was rated against a series of scales, including five evaluative ones: valuable-worthless, pleasant-unpleasant, clean-dirty, good-bad, fair-unfair. In addition, subjects indicated their attitude on a set of Thurstone scales that were specifically designed to scale these attitude concepts. Subjects were first given the semantic differential, followed approximately one hour later by the Thurstone test. This procedure was reversed for the second group. Two weeks later the subjects were given both tests again. This time, however, the Thurstone test was given first. The correlation was .74, .82, and .81 respectively toward the rated items (13, p. 193).

"It is apparent," stated Osgood, "that whatever the scales of the Thurstone test measure, the evaluative scales of the semantic differential measure just as well" (13, p. 194).

Another study by Osgood and his associates, compared the evaluative scales of a semantic differential to a Guttman-type scale. Three evaluative scales were utilized: good-bad, fair-unfair, valuable-worthless. The concept measured by both of the instruments was AGRICULTURAL PRACTICES. The rank order correlation between the instruments (rho .78; p = .01) was significant. "Again," concluded Osgood, "the findings support the contention that the evaluative scales of the semantic differential are an effective index of attitude" (13, p. 194).

A third validity study by Osgood, was performed comparing the semantic differential with the Bogardus Social Distance
Scales. Approximately forty subjects were asked to indicate their attitude toward Germans, Chinese, and Hindus. Subjects were asked to rate each group on a modified Bogardus Social Distance Scale and also on a semantic differential instrument designed for the study. Combining all three concepts, yielded a multiple correlation of .78. "Once again," concluded Osgood, "the scales of the semantic differential proved that they are capable of measuring attitudes" (13, p. 199).

McCrosky (6) conducted seven separate studies with a view toward developing Likert type scales to measure ethos, i.e., attitudes toward a speaker held by a listener. A subsequent factor analyses revealed a correlation of .85 between the scales of the Likert instrument and the semantic differential scales. McCrosky concluded that "the high correlation between the Likert and semantic differential scales indicate validity" (6, p. 71).

Grigg (4) tested the validity of the semantic differential technique when he performed a study which tested whether the semantic differential scores of a group of normal subjects would reflect greater distance between ideal self and neurotic than between self and neurotic. Grigg also tested whether the scores obtained when judging an actual case would shift in a predicted direction as a result of experimental manipulation on the basis of judgment. Grigg concluded as follows:

Using the semantic differential, a group of normal subjects indicated significantly greater distance between ideal self and neurotic than between self and neurotic. This result is evidence of the semantic differential validity (4, p. 180).
The reliability and validity of the semantic differential technique was examined under delayed and immediate test-retest conditions by DiVesta and Dick (3). The study was conducted with children in grades two through seven under delayed test conditions and grades three, five, and seven under test-retest conditions. There were 522 subjects in the delayed test-retest study and 488 in the immediate test-retest study. DiVesta and Dick concluded as follows:

The semantic differential technique was shown to be an acceptable instrument when used with children as young as the third grade under immediate retest conditions. Reliability for concepts based on group means is higher than that for individuals when groups are composed of only three to five subjects. Analysis of the results suggests the possibility that levels of reliability of concept scores of children may even approach those obtained for adults if 15 to 20 subjects are used (3, p. 615).

A semantic differential was constructed by McNeil (8) to investigate the validity of the semantic differential within subcultural groups. The semantic differential was administered by trained graduate students to 521 sixth-grade students. The instrument contained twelve high frequency concepts: Elephant, Army, Butler, Me, Fear, Clouds, Doctor, Street, Baby, Pain, Schoolwork, Policemant, each being rated on twenty bipolar, seven point, adjective scales. The subjects were grouped into their respective subcultural classifications. The four subcultural groups in this study were middle class Whites, lower class Whites, lower class Negroes, and lower class Latin Americans. McNeil suggested that the semantic differential technique is a valuable instrument to measure socialization
because of the reduction of the effects of response sets. That is, the instrument does not appear to the subjects that it is measuring socialization. "In fact," concluded McNeil, "the subject is unable to determine how the instrument is actually being used" (8, p. 327).

**Construction of the Semantic Differential for the Present Study**

The principles and procedures in the construction of the semantic differential utilized in this study, conforms to the criteria established by Osgood and his associates. The first step was to select the concept to be judged. The word concept, according to Osgood, refers

> ...to the "stimulus" to which the subject's checking operation is a terminal "response." The objects of judgment should, ideally, be both relevant to and representative of the area of research interest (13, p. 77).

The object of judgment (concept) subsequently selected for rating was STUDENT TEACHING.

The second step in the construction of the instrument used in this study was the selection of bi-polar adjective pairs. Forty-five adjective pairs were selected utilizing previous studies as source material. The initial selection was based upon intuition. The forty-five scales were then administered to a pilot group of fifteen prospective student teachers. All scales that could not be differentiated by the pilot group were deleted from the instrument. As a result of this procedure,
ten scales were deleted. The Semantic Differential instrument, containing thirty-five scales, was then administered to three college professors at North Texas State University. All scales which received a rating of "4" (neutral position) were deleted from the instrument. Of the original forty-five scales, only twenty-two were selected by both the pilot group of student teachers and the college professors.

So that the purpose of the measurement is somewhat obscured, Osgood (13) recommends that two or three scales be included that normally factor analyze other than evaluative. Two scales (fresh-stale and solid-hollow) were added to the instrument making a total of twenty-four scales. The scales that were added, however, were not utilized in determining the means of any group or subgroups of this study. The polarity of twelve of the twenty-four scales were randomly reversed to counteract response bias tendencies. A copy of the instructions, the information questionnaire, and Semantic Differential instrument appear in the Appendix of this study.

The primary sources used for the selection of adjective pairs were Osgood (13), Brinton (2), Olson (11), Husek and Wittrock (5), Smith (14), and Walberg (15).

Chronology of Data Collection

Prior to the termination of the spring semester, 1969, the Chairman of the Department of Speech and Drama at North Texas State University, and faculty members who expected to work with
student teachers, were consulted to gain permission to secure data from their class sections.

Prior to the termination of each semester, the pretest was administered to all students enrolled in Methods of Teaching Speech and Drama. All students were advised that the pretest instrument would not influence their student teaching grade.

The posttest was delivered to each student teacher by the coordinating teacher from North Texas State University or was mailed to the student teacher at the cooperating school. The posttest was delivered approximately one week prior to the termination of the student teaching period. A stamped, self-addressed envelope was enclosed to return the instrument. Of the 90 posttest instruments delivered to the subjects of this study, only 70 were returned. A second posttest was sent to the home address of these subjects; however, it was not returned.

In addition to completing the posttest instrument, all subjects were asked to respond to the question: "What changes, if any, would you like to see in student teaching and/or the Teacher Education Program at North Texas State University?"

Procedures for Treating Data

Examination and treatment of data were conducted in the following manner:

1. Each scale position of the semantic differential was assigned a value from one to seven. Unfavorable adjectives were assigned a value of (1) and the favorable adjectives were
assigned a value of (7). Values were assigned to the semantic space between each adjective pair as follows:

- **Fair** 7 : 6 : 5 : 4 : 3 : 2 : 1 **Unfair**
- **Good** 7 : 6 : 5 : 4 : 3 : 2 : 1 **Bad**

2. Raw scores were summed over all subjects. The mean score and standard deviation of all groups and subgroups were computed for use in further statistical computations.

3. Pearson product-moment coefficients were calculated over the twenty-four scales of the Semantic Differential. The resulting tables of correlations were factor analyzed by the principal axes method, for the purpose of extracting all the evaluative scales used in this study.

4. Individual and group means were computed for the rated concept, and thus were regarded as the individual and group original attitude score toward student teaching.

5. Scores on the Semantic Differential at the beginning and at the end of the student teaching experience were compared by the t test of differences between means to determine if there was a significant change in attitude that occurred during the period of student teaching. An appropriate table was consulted to determine the level of significance.

6. Posttest data were treated in the same manner as the pretest data, excluding the factor analyses.

7. Pretest and posttest data were recorded on IBM cards for a statistical analysis by the Data Processing Center at North Texas State University, Denton, Texas.
The t test for correlated samples was utilized to compute the significant differences for hypotheses 1, 2, 3, 6, and 7. The formula and interpretation are as follows (9, p. 102):

\[ t = \frac{M_1 - M_2}{S_{DM}} = \frac{M_1 - M_2}{\sqrt{(S_{M1})^2 + (S_{M2})^2 - 2(r_{12})(S_{M1})(S_{M2})}} \]

- \( S_{DM} \) = Standard error in the difference between means
- \( M_1 \) = Group or individual means on the pretest
- \( M_2 \) = Group or individual means on the posttest
- \( S_{M1} \) = Standard error of the means on the pretest
- \( S_{M2} \) = Standard error of the means on the posttest
- \( r \) = Measure of correlation

Fisher's t test for independent samples was utilized to compute the significant differences for hypotheses 4, 5, 8, 9, 10, 11, and 12. The formula and interpretation are as follows:

\[ t = \sqrt{\left( \frac{N_1 (S_1)^2 + N_2 (S_2)^2}{N_1 + N_2 - 2} \right) \left( \frac{N_1 + N_2}{N_1 N_2} \right)} \]

- \( M_1 \) = Means (individual or group) on the pretest
- \( M_2 \) = Means (individual or group) on the posttest
- \( N_1 \) = Number of subjects on the pretest
- \( N_2 \) = Number of subjects on the posttest
- \( S_1 \) = Standard Deviation on the pretest
- \( S_2 \) = Standard Deviation on the posttest
Summary

The purpose of Chapter III was to explain the procedures used to gather and treat the data generated by the pretest and posttest instruments. The construction of the instrument to assess attitudes toward student teaching has been described.

Osgood's criteria for the composition of a Semantic Differential for attitude assessment was met. A description of the procedures used to select the scales used in this study has been discussed.

The subjects of this study included students who were pursuing certification to teach speech and/or drama courses in the public school at the secondary level. There were 27 males and 43 females in this study.

The chronology of collecting data has been described, as has the statistical treatment applied to the data. Fisher's t test of difference between means was used to determine if there was a significant difference between the pretest and posttest mean scores.

Chapter IV is devoted to the presentation, analysis, and discussion of the results.


CHAPTER IV

PRESENTATION, ANALYSIS, AND DISCUSSION OF RESULTS

Introduction

The purpose of this chapter is to analyze the data that was collected in the manner described in Chapter III in order to determine if a change in attitude occurred during the student teaching experience.

Student attitude toward student teaching was measured at the beginning and end of the student teaching experience. A twenty-four-scale Semantic Differential instrument was used in both instances. The Semantic Differential was administered at the conclusion of a speech methods course prior to student teaching (pretest) and then again during the last week of the student teaching experience (posttest).

The analysis of the data was used (1) to determine attitude of student teachers toward student teaching, both before and after the student teaching experience, and (2) to determine the magnitude and direction of any change in attitude.

The initial step in presenting and analyzing the data received was to compute mean scores and standard deviation for each subject and related sub-divisions of the population involved. This procedure was consistent with the purpose to determine attitude and attitude change of student teachers toward the student teaching experience.
To accomplish the purpose of this chapter, the following divisions were established:

1. A presentation and analysis of results that emerged from the factor analyses of the semantic differential data.

2. A presentation of the findings associated with the statistical test of each hypothesis.

3. A presentation of the results obtained from oral and written interviews conducted at the conclusion of the student teaching experience.

4. A discussion of the findings related to the analysis of the data.

To test the hypotheses regarding the difference between means, a statistical hypothesis known as a null hypothesis was established. The null hypothesis states that there is no significant difference between means. The null hypothesis was rejected when the difference reached the .05 level of significance. When the .05 level of significance was not reached, the null hypothesis was retained. An appropriate table was consulted to determine the level of significance.

On the basis of speculation and theory, each hypothesis predicted a difference between the means of the pretest and posttest scales. For statistical purposes, however, the null hypothesis was established in each case.

The data produced by the Semantic Differential instrument were treated by the principal axes factor analyses and $t$ test so as to interpret the results.
All data were recorded on I.B.M. cards for a statistical analysis by the Data Processing Center at North Texas State University, Denton, Texas.

Factor Analyses of Semantic Differential Data

Since the Semantic Differential instrument was to serve as a measure of attitude, it was necessary to determine the evaluative scales.

The collected data were subjected to a factor analyses to determine the evaluative scales. The purpose of the factor analyses was to isolate the number of dimensions of meaning having a maximal differentiating power. The larger the total variance in meaning accounted for by the evaluative factor, the better the instrument will serve its intended purpose.

Of primary concern were those scales that factor loaded on the evaluative dimension, since it is the evaluative factor that is equated directly with attitude. Sixteen (16) adjective scales were selected on the basis of loading on the evaluative factor.

The factor analyses supported the procedure used to select the adjective pairs for this study. The evaluative factor accounted for over sixty percent of the response variance. A survey of studies mentioned in Chapter II, revealed that the normal variance was usually limited to twenty-five to thirty percent. The results of the factor analyses are presented in Table I of this chapter.


<table>
<thead>
<tr>
<th>Adjective Pairs</th>
<th>Factor Represented (*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fair - Unfair</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>2. Good - Bad</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>3. Beautiful - Ugly</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>4. Helpful - Hindering</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>5. Valuable - Worthless</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>6. Positive - Negative</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>7. Fresh - Stale</td>
<td>U -------- Unknown</td>
</tr>
<tr>
<td>8. Understandable - Mysterious</td>
<td>III --- Activity</td>
</tr>
<tr>
<td>9. Clear - Hazy</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>10. Honest - Dishonest</td>
<td>U -------- Unknown</td>
</tr>
<tr>
<td>11. Complete - Incomplete</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>12. Stimulating - Dull</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>13. Pleasurable - Painful</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>14. Rational - Irrational</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>15. Optimistic - Pessimistic</td>
<td>U -------- Unknown</td>
</tr>
<tr>
<td>16. Practical - Impractical</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>17. Strong - Weak</td>
<td>II -------- Potency</td>
</tr>
<tr>
<td>18. Solid - Hollow</td>
<td>U -------- Unknown</td>
</tr>
<tr>
<td>19. Pleasant - Unpleasant</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>20. Certain - Uncertain</td>
<td>III --- Activity</td>
</tr>
<tr>
<td>21. Kind - Cruel</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>22. Pleasing - Annoying</td>
<td>I -------- EVALUATIVE</td>
</tr>
<tr>
<td>23. Wide - Narrow</td>
<td>U -------- Unknown</td>
</tr>
<tr>
<td>24. Ordered - Chaotic</td>
<td>I -------- EVALUATIVE</td>
</tr>
</tbody>
</table>

(*) Only the adjective pairs that loaded on the EVALUATIVE factor were used in this study.
Sixteen of the twenty-four scales loaded on Factor I. This factor is identifiable as evaluative by the semantic nature of the scales which have the highest loadings on it: fair--unfair, good--bad, beautiful--ugly, helpful--hindering, valuable--worthless, positive--negative, complete--incomplete, clear--hazy, stimulating--dull, pleasurable--painful, kind--cruel, rational--irrational, practical--impractical, pleasant--unpleasant, pleasing--annoying, and ordered--chaotic.

Of paramount concern were those scales that primarily loaded on the evaluative factor, since it is the evaluative dimension that is equated with attitude. Mean ratings on the sixteen evaluative scales were taken as the attitude measure to determine group and subgroup means. A group attitude score was considered to be the mean of all group members' individual attitude measures.

Findings Associated with each Hypothesis

In addition to the primary hypothesis, several secondary hypotheses were formulated. These secondary hypotheses related to divisions of the primary hypothesis by sex, type of degree, teaching areas, and scores on the National Teacher Examination.

Table II shows the means and standard deviation for all pretest and posttest scale ratings. The ratings were summed over all subjects on the evaluative scales. Bi-polar adjective scales appear in the same order as on the Semantic Differential instrument used in this study.
### TABLE II

PRETEST AND POSTTEST MEANS AND STANDARD DEVIATION FOR SCALE RATINGS SUMMED OVER ALL SUBJECTS

<table>
<thead>
<tr>
<th>Scales</th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Fair-Unfair</td>
<td>5.885</td>
<td>1.149</td>
<td>5.542</td>
<td>1.490</td>
</tr>
<tr>
<td>Good-Bad</td>
<td>6.028</td>
<td>0.977</td>
<td>5.700</td>
<td>1.535</td>
</tr>
<tr>
<td>Beautiful-Ugly</td>
<td>4.828</td>
<td>1.141</td>
<td>4.928</td>
<td>1.289</td>
</tr>
<tr>
<td>Helpful-Hinderng</td>
<td>6.128</td>
<td>0.991</td>
<td>5.800</td>
<td>1.430</td>
</tr>
<tr>
<td>Valuable-Worthless</td>
<td>6.157</td>
<td>0.942</td>
<td>6.142</td>
<td>1.195</td>
</tr>
<tr>
<td>Positive-Negative</td>
<td>5.600</td>
<td>1.068</td>
<td>5.642</td>
<td>1.532</td>
</tr>
<tr>
<td>Fresh-Stale</td>
<td>5.271</td>
<td>1.463</td>
<td>5.114</td>
<td>1.664</td>
</tr>
<tr>
<td>Understandable-Mysterious</td>
<td>5.114</td>
<td>1.367</td>
<td>5.328</td>
<td>1.380</td>
</tr>
<tr>
<td>Clear-Hazy</td>
<td>4.985</td>
<td>1.398</td>
<td>5.300</td>
<td>1.554</td>
</tr>
<tr>
<td>Honest-Dishonest</td>
<td>5.357</td>
<td>1.142</td>
<td>5.300</td>
<td>1.526</td>
</tr>
<tr>
<td>Complete-Incomplete</td>
<td>4.728</td>
<td>1.693</td>
<td>4.514</td>
<td>1.847</td>
</tr>
<tr>
<td>Stimulating-Dull</td>
<td>5.600</td>
<td>1.159</td>
<td>5.585</td>
<td>1.429</td>
</tr>
<tr>
<td>Pleasurable-Painful</td>
<td>5.100</td>
<td>1.374</td>
<td>5.000</td>
<td>1.606</td>
</tr>
<tr>
<td>Rational-Irrational</td>
<td>5.257</td>
<td>1.304</td>
<td>5.257</td>
<td>1.529</td>
</tr>
<tr>
<td>Optimistic-Pessimistic</td>
<td>5.457</td>
<td>1.421</td>
<td>5.514</td>
<td>1.539</td>
</tr>
<tr>
<td>Practical-Impractical</td>
<td>5.671</td>
<td>1.188</td>
<td>5.742</td>
<td>1.358</td>
</tr>
<tr>
<td>Strong-Weak</td>
<td>5.157</td>
<td>1.199</td>
<td>5.214</td>
<td>1.483</td>
</tr>
<tr>
<td>Solid-Hollow</td>
<td>5.285</td>
<td>1.217</td>
<td>5.328</td>
<td>1.500</td>
</tr>
<tr>
<td>Pleasant-Unpleasant</td>
<td>5.142</td>
<td>1.525</td>
<td>5.157</td>
<td>1.620</td>
</tr>
<tr>
<td>Certain-Uncertain</td>
<td>4.828</td>
<td>1.659</td>
<td>4.757</td>
<td>1.573</td>
</tr>
<tr>
<td>Kind-Cruel</td>
<td>4.942</td>
<td>1.350</td>
<td>5.314</td>
<td>1.399</td>
</tr>
<tr>
<td>Pleasing-Annoying</td>
<td>5.100</td>
<td>1.415</td>
<td>5.200</td>
<td>1.528</td>
</tr>
<tr>
<td>Wide-Narrow</td>
<td>5.014</td>
<td>1.302</td>
<td>4.971</td>
<td>1.587</td>
</tr>
<tr>
<td>Ordered-Chaotic</td>
<td>4.728</td>
<td>1.502</td>
<td>4.771</td>
<td>1.762</td>
</tr>
</tbody>
</table>

N=70
Hypothesis 1

The primary hypothesis of this study was that the attitude of student teachers between the outset and conclusion of student teaching "will change in a positive (favorable) direction toward the student teaching experience."

Hypothesis one, for statistical purposes, was restated in the null as follows: "There was no significant difference between the total group mean attitude score on the pretest and the total group mean attitude score on the posttest toward the student teaching experience."

Table III indicates the pretest and posttest mean attitude scores, standard deviations, $t$ value for correlated samples and level of significance for student teachers as a total group.

**TABLE III**

MEANS, STANDARD DEVIATIONS, $t$ VALUE AND LEVEL OF SIGNIFICANCE OF SCALE RATINGS TOTALED OVER ALL SUBJECTS ON THE PRETEST AND POSTTEST

<table>
<thead>
<tr>
<th>N</th>
<th>Pretest</th>
<th>Posttest</th>
<th>$t$</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>70</td>
<td>5.307</td>
<td>0.820</td>
<td>5.297</td>
<td>1.157</td>
</tr>
</tbody>
</table>

The $t$ test was employed to determine whether or not there was any significant difference between the mean attitudinal scores achieved by subjects at the outset of student teaching.
and the mean attitudinal scores achieved by the same subjects at the conclusion of the student teaching experience. This procedure was used to indicate if there was a significant mean gain or loss in attitude during student teaching.

The difference between the pretest mean (5.307) and the posttest mean (5.297) did not reach the desired level to be significant \( (t = 0.075) \). The null hypothesis, in this case, must be retained. The attitude of student teachers did not move in the hypothesized direction. In fact, although not to a significant degree, the total mean attitude score moved in the opposite direction. The pretest mean for the 20 subjects that did not return the posttest was (5.258).

The total group mean attitude score was more favorable at the outset of student teaching. Both means, however, represent a favorable attitude toward student teaching.

**Hypothesis 2**

Hypothesis two, for statistical purposes, was restated in the form of a null hypothesis as follows: "There was no significant difference between the pretest and posttest mean attitude scores of male subjects toward student teaching."

Once again the \( t \) test was employed to determine whether or not there was any significant difference between the mean attitudinal score achieved by male subjects at the beginning of student teaching and the mean attitudinal score achieved by male subjects at the conclusion of student teaching.
Table IV shows the means, standard deviations, t values and levels of significance of scale ratings totaled over all male and female subjects on the pretest and posttest.

TABLE IV

MEANS, STANDARD DEVIATIONS, t VALUES AND LEVELS OF SIGNIFICANCE OF SCALE RATINGS TOTALED OVER ALL MALE AND FEMALE SUBJECTS ON THE PRETEST AND POSTTEST

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>t</td>
</tr>
<tr>
<td>Male</td>
<td>5.424</td>
<td>0.731</td>
<td>5.364</td>
<td>1.034</td>
<td>0.321</td>
</tr>
<tr>
<td>Female</td>
<td>5.233</td>
<td>0.872</td>
<td>5.254</td>
<td>1.238</td>
<td>0.114</td>
</tr>
</tbody>
</table>

N (Male) = 27

N (Female) = 43

An analysis of the pretest mean (5.424) and the posttest mean (5.364) revealed no significant change in attitude of male subjects toward the student teaching experience (t=0.321). The null form of research hypothesis two must be retained. Although an observed difference (unfavorable) between the mean attitude score on the pretest and posttest existed, the .05 level was not reached. It should be noted, however, that the mean on both the pretest and posttest represents a favorable attitude toward student teaching.
Hypothesis 3

Hypothesis three, for statistical purposes, was restated in the form of a null hypothesis as follows: "There was no significant difference between the pretest and posttest mean scores of female subjects toward student teaching."

An analysis of data, as presented in Table IV, indicates that the null hypothesis must be retained. A comparison of the pretest mean (5.233) and the posttest mean (5.254) resulted in a t value of (0.114). Although female subjects did attain a higher mean score on the posttest than on the pretest toward student teaching, the mean difference did not reach the desired level to be significant. The research hypothesis that the posttest mean score would be significantly higher was rejected. Both the pretest mean score and the posttest mean score, however, represents a favorable attitude toward student teaching.

Hypothesis 4

Hypothesis four, for statistical purposes, was restated in the form of a null hypothesis as follows: "There was no significant difference between the pretest mean attitude score of male subjects and the pretest mean attitude score of female subjects toward student teaching."

Table V shows the means, standard deviations, t values and levels of significance of scale ratings totaled comparing the scores of male and female subjects on the pretest and posttest toward student teaching.
TABLE V

MEANS, STANDARD DEVIATIONS, t VALUES AND LEVELS OF SIGNIFICANCE COMPARING SCORES OF MALE AND FEMALE SUBJECTS ON THE PRETEST AND POSTTEST TOWARD STUDENT TEACHING

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>t</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Pretest</td>
<td>5.424</td>
<td>0.731</td>
<td>5.233</td>
<td>0.872</td>
</tr>
<tr>
<td>Posttest</td>
<td>5.364</td>
<td>1.034</td>
<td>5.254</td>
<td>1.238</td>
</tr>
</tbody>
</table>

N (Male)= 27
N (Female)= 43

A comparison of the pretest mean score of female subjects (5.233) and the pretest mean score of male subjects (5.424), resulted in a mean difference that was not significant. The null form of research hypothesis four must be retained.

**Hypothesis 5**

Hypothesis five, for statistical purposes, was restated in the form of a null hypothesis as follows: "There was no significant difference between the posttest mean attitudinal score of male subjects and the posttest mean attitudinal score of female subjects toward the student teaching experience."

A comparison of the posttest mean of the male and female subjects resulted in a t which did not reach the desired level
to be significant. The posttest mean for males was (5.364) and for females (5.254). The null hypothesis must be retained.

**Hypothesis 6**

Hypothesis six, for statistical purposes, was restated in the form of a null hypothesis as follows: "There was no significant difference between the pretest and posttest mean attitude scores of the Bachelor of Science degree candidates toward the student teaching experience."

Table VI shows the means, standard deviations, t values and levels of significance of scale ratings totaled over all Bachelor of Science degree and Bachelor of Arts degree candidates on the pretest and posttest.

**TABLE VI**

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
<th>t</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.S.E.</td>
<td>5.444</td>
<td>0.860</td>
<td>5.198</td>
<td>1.271</td>
<td>1.283</td>
<td>0.204</td>
</tr>
<tr>
<td>B.A.</td>
<td>5.134</td>
<td>0.744</td>
<td>5.420</td>
<td>1.001</td>
<td>1.633</td>
<td>0.109</td>
</tr>
</tbody>
</table>

N (Bachelor of Science in Education Degree) = 39

N (Bachelor of Arts Degree) = 31
An analysis of the pretest mean (5.444) and the posttest mean (5.198), as shown in Table VI, resulted in a $t$ of (1.283). The null hypothesis was retained.

**Hypothesis 7**

Hypothesis seven, for statistical purposes, was restated in the form of a null hypothesis as follows: "There was no significant difference between the pretest and posttest mean attitude scores of the Bachelor of Arts candidates toward the student teaching experience."

A comparison of the pretest mean (5.134) and the posttest mean (5.420), as shown in Table VI, resulted in a $t$ value of (1.633). Although the Bachelor of Arts degree candidates indicated a favorable shift in attitude toward student teaching, the .05 level was not reached. The null form of hypothesis seven was retained.

**Hypothesis 8**

Hypothesis eight, for statistical purposes, was restated in the form of a null hypothesis as follows: "There was no significant difference between the mean attitude scores of the Bachelor of Science degree candidates and the Bachelor of Arts degree candidates on the pretest toward student teaching."

Table VII shows the means, standard deviations, $t$ values and levels of significance of scale ratings totaled comparing mean scores of the Bachelor of Science degree and Bachelor of Arts degree candidates on the pretest and posttest.
TABLE VII

MEANS, STANDARD DEVIATIONS, $t$ VALUES AND LEVELS OF SIGNIFICANCE COMPARING SCORES OF THE BACHELOR OF SCIENCE DEGREE AND BACHELOR OF ARTS DEGREE CANDIDATES ON THE PRETEST AND POSTTEST

<table>
<thead>
<tr>
<th></th>
<th>B.S. Degree</th>
<th>B.A. Degree</th>
<th>$t$</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Pretest</td>
<td>5.444</td>
<td>0.860</td>
<td>5.134</td>
<td>0.744</td>
</tr>
<tr>
<td>Posttest</td>
<td>5.198</td>
<td>1.271</td>
<td>5.420</td>
<td>1.001</td>
</tr>
</tbody>
</table>

N (Bachelor of Science in Education Degree) = 39
N (Bachelor of Arts Degree) = 31

A comparison of the pretest means of the Bachelor of Arts degree candidates and the Bachelor of Science degree candidates toward student teaching, resulted in a $t$ value which did not reach the desired level to be significant. As shown in Table VII, the pretest mean for the Bachelor of Science candidates was (5.444) and (5.134) for the Bachelor of Arts candidates. The mean difference did not reach the .05 level. The research hypothesis was rejected. The null hypothesis was retained. It should be noted, however, that the Bachelor of Science degree candidates had a higher mean attitude score on the pretest toward student teaching than any other grouping in this study.
Hypothesis 9

Hypothesis nine, for statistical purposes, was restated in the form of a null hypothesis as follows: "There was no significant difference between the mean attitude scores of the Bachelor of Science degree candidates and the Bachelor of Arts degree candidates on the posttest toward the student teaching experience."

A comparison of the posttest means of the Bachelor of Arts and Bachelor of Science degree candidates toward the student teaching experience resulted in a t value which did not reach the desired level to be significant (0.795). As shown in Table VII, the posttest mean for the Bachelor of Arts candidates was (5.420) and (5.198) for the Bachelor of Science candidates. The null hypothesis was retained.

Hypothesis 10

Hypothesis ten, for statistical purposes, was restated in the form of a null hypothesis as follows: "There was no significant difference between pretest mean attitude scores of subjects who were pursuing certification to teach speech and pretest mean attitude scores of subjects who were pursuing certification to teach drama."

Table VIII shows the means, standard deviations, t values and levels of significance of scale ratings totaled comparing pretest and posttest scores of subjects pursuing certification to teach speech and/or drama at the secondary level.
TABLE VIII

MEANS, STANDARD DEVIATIONS, t VALUES AND LEVELS OF SIGNIFICANCE OF SCALE RATINGS TOTALED COMPARING PRETEST AND POSTTEST SCORES OF SUBJECTS PURSUING CERTIFICATION TO TEACH SPEECH AND/OR DRAMA

<table>
<thead>
<tr>
<th></th>
<th>Speech</th>
<th></th>
<th>Drama</th>
<th></th>
<th>t</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>5.375</td>
<td>0.805</td>
<td>5.211</td>
<td>0.846</td>
<td>0.820</td>
<td>0.580</td>
</tr>
<tr>
<td>Posttest</td>
<td>5.272</td>
<td>1.223</td>
<td>5.331</td>
<td>1.076</td>
<td>0.210</td>
<td>0.828</td>
</tr>
</tbody>
</table>

N (Speech) = 41
N (Drama) = 29

A comparison of pretest mean attitude scores of subjects pursuing certification to teach speech (5.375) and subjects pursuing certification to teach drama (5.211), did not result in a significant difference. The null hypothesis was retained.

Hypothesis 11

Hypothesis eleven, for statistical purposes, was restated in the form of a null hypothesis: "There was no significant difference between the posttest mean attitude scores of subjects pursuing certification to teach speech and posttest mean attitude scores of subjects pursuing certification to teach drama."

A comparison of posttest mean attitude scores of subjects pursuing certification to teach speech (5.272) or drama (5.331)
resulted in a t of (0.210). The difference in means was not significant. The null hypothesis was retained.

**Hypothesis 12**

Hypothesis twelve, for statistical purposes, was restated in the null as follows: "There was no significant difference between posttest mean attitude scores of subjects who attained a score above the national norm of 609 on the National Teacher Examination and subjects who attained a score below 609 on the National Teacher Examination toward student teaching."

The means, standard deviations, t value and level of significance comparing posttest attitude scores of students above or below the national norm on the National Teacher Examination, are shown in Table IX.

**TABLE IX**

MEANS, STANDARD DEVIATIONS, t VALUE AND LEVEL OF SIGNIFICANCE COMPARING POSTTEST MEAN ATTITUDE SCORES OF STUDENTS WHO ATTAINED SCORES ABOVE OR BELOW THE NATIONAL NORM ON THE NATIONAL TEACHER EXAMINATION

<table>
<thead>
<tr>
<th></th>
<th>Below 609—N.T.E.</th>
<th>Above 609—N.T.E.</th>
<th>t</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Below 609—N.T.E.</td>
<td>5.173</td>
<td>1.254</td>
<td>5.395</td>
<td>1.079</td>
</tr>
<tr>
<td>N (Students below 609) = 31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (Students above 609) = 39</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Students who scored above the national norm (609) on the National Teacher Examination had a mean attitude score of (5.395) on the posttest while subjects who scored below the national norm had a mean attitude score of (5.173). Although the difference between means was not significant (t= 0.794), students who scored above the national norm attained a slightly higher mean score. The null hypothesis, however, was retained.

Findings Related to Oral and Written Interviews with Student Teachers

Awareness of student attitudes and opinions should be one of the first duties of an educational institution. Opinions of students must be weighed critically; few educators will suggest that student opinions be accepted at face value. Many educators will agree that the student is not in a position to see the long range potential value of their courses, nor are they able to appraise them logically. Nevertheless, students in any subject are presumably qualified to judge, with some degree of accuracy, the conduct of the courses they must take.

In an attempt to solicit attitudes toward student teaching and the Teacher Education Program, subjects were requested to comment on the following question: "What changes, if any, would you like to see in student teaching and/or the Teacher Education Program at North Texas State University?"

Responses to this question are presented verbatim. The responses were both written and oral.
1. (Male - B.S. candidate)---My biggest complaint is the fact that we were told about the new methods and techniques of presenting information, but we were never exposed to the use of these methods and techniques.

2. (Female - B.S. candidate)---I think that Education (---) was a complete waste of time. Most of the time was spent reading from the text. Most of the information had been covered in previous courses.

3. (Female - B.A. candidate)---I would like to see a change from the teacher-oriented instruction to the pupil-oriented classroom. There is a strong need for this type of instruction.

4. (Female - B.A. candidate)---I can't put my finger on the exact problem, however, there seems to be something lacking in the Teacher Education Program. I believe that there should be more practical work. There was too much theory and not enough practical application. More field trips are needed.

5. (Female - B.S. candidate)---I would like to see the student teachers perform their student teaching during their junior year. This would allow time to determine if they are suited for teaching.

6. (Male - B.A. candidate)---Complete revamping of all education courses. Very careful evaluation of all teachers selected as coordinating teachers. I did not see my coordinating teacher during my student teaching until the last day.

7. (Female - B.A. candidate)---Entire reorganization of the existing Teacher Education Program. The only beneficial professional help that I received was my experience during student teaching. My Speech Methods course was very good but had nothing to do with the material introduced in the education courses.

8. (Female - B.A. candidate)---I would like to see an organized system established whereby a follow-up study would be made after student teaching. I would like to see a requirement started that would require an organized evaluation period under the supervision of the coordinating and cooperating teachers.

9. (Male - B.S. candidate)---Less theory and much more practical application in all education courses.
10. (Male - B.A. candidate)---I believe that many of my education courses could have been combined. This would permit the student to take more courses in his first and second teaching fields. There should be an observation period prior to student teaching.

11. (Male - B.S. candidate)---I would recommend that Education 405 be a required course before the actual student teaching period begins and conducted as a methods course. I believe that this would help all students before student teaching.

12. (Female - B.S. candidate)---Too much time was spent telling us about the "ideal" classroom situation. We should have spent much more time on the practical side rather than the ideal side of teaching. In my school, for example, I encountered very few of the "ideal" situations.

13. (Female - B.A. candidate)---I believe that there should be a class, or a portion of a class, that is devoted to classroom discipline problems. I believe that there should be more group work, oral reports, films, and related information concerning student teaching and teaching as a profession.

14. (Male - B.A. candidate)---I would like to see more work in our teaching fields and less in education courses. I believe that many education courses can be combined.

15. (Female - B.S. candidate)---I believe that many of my education courses overlapped each other. I would like to see a seminar established during the junior year. I would like to see a session set up and conducted by teachers or student teachers that have completed their student teaching assignment. Student teaching was the best part of the entire program.

16. (Male - B.S. candidate)---Establish an intern program and pay student teachers. Less rigid conformity to the standards of the 1950s.

17. (Female - B.A. candidate)---More practical teaching experience with closer supervision and assistance from the supervising teacher.

18. (Female - B.S. candidate)---I feel that the Teacher Education Program should be improved by establishing an observation period prior to the student teaching experience.
19. (Female - B.S. candidate)---Transportation furnished, when needed by secondary teachers. I do not quite understand why only elementary teachers have it.

20. (Male - B.S. candidate)---I believe that we should have an opportunity to observe classroom activity before the senior year.

21. (Female - B.S. candidate)---Coordinating teachers should come from the speech and drama department rather than from the education department. Have the methods course divided into two parts. One part before student teaching and one part after student teaching.

22. (Female - B.A. candidate)---Observation of student teachers should be revised. I do not believe that professors from the education department should be assigned as coordinating teachers for someone that is teaching speech or drama.

23. (Female - B.A. candidate)---Too much time was spent on the "good" and "reasonable" aspect of America's Educational System. Why weren't we taught why the student drops out of school? We need more exposure to the proper methods of handling problems and less theory. The speech and drama department should teach the student to "teach" -- rather than professors from the education department. The education courses were of little value in this respect.

24. (Female - B.A. candidate)---More understanding on the part of the cooperating teacher about the goals of student teaching. The end responsibility for school related activities should be the cooperating teacher and not the student teacher.

25. (Male - B.A. candidate)---Develop a coherent, overall, and "practical" education curriculum devoted to and designed for "today's" youth.

26. (Female - B.A. candidate)---I would like to see the education department arrange transportation for all student teachers.

27. (Female - B.S. candidate)---More extensive application to the actual teaching situation - junior student teaching and senior student teaching. A follow-up system needs to be developed to assist with problems encountered during student teaching and to answer questions concerning teaching in general.
28. (Male - B.S. candidate)---Have an opportunity to observe actual classes before the senior year. Set up an observation period during the junior year.

29. (Female - B.S. candidate)---We need more practical suggestions for conducting an average and below average class. Students need to know that many of the pupils are lazy and dull. They need to know this and be prepared to handle this situation.

30. (Male - B.S. candidate)---Education is much too idealistic. More practical work and less theory. An earlier exposure to teaching.

31. (Male - B.A. candidate)---I would like to see the head of the teaching field place the student in the school for his student teaching.

32. (Female - B.A. candidate)---I would like to see more time allowed for "non-teaching" school-related type activities (counselor visits, student conferences, seminars, etc.).

33. (Male - B.S. candidate)---With the exception of my student teaching, I received very little information from my education courses. I believe that much more attention needs to be given to the solution of school problems - not merely discussing the causes.

34. (Female - B.S. candidate)---Most of my education courses lacked substance. In one class, for example, the instructor did nothing except relate to class members a paper that he had written. We need more discussion type classes.

35. (Male - B.A. candidate)---Most of the education courses that I took were dull and seemed to lack content. They were based on idealistic theory and avoided the actual situation. I feel that most of my education instructors were well qualified but they did not present their classes in an interesting manner. More small group sessions are needed.

36. (Male - B.S. candidate)---Education courses were much too repetitious.

37. (Female - B.A. candidate)---There needs to be more emphasis placed on content and less on methods.
Research problems are usually attacked experimentally if possible. Many phenomena and questions, however, cannot be answered by an experimental manipulation. To answer many statistical questions, a correlation approach is often used.

Correlation, as the word suggests, is an interrelation between conditions or events. A correlation study rarely indicates which variable influences which, or even whether either variable is influencing the other one directly. In any case a correlation coefficient, as a form of statistical procedure, can never indicate causality.

Although correlation research seldom shows what factor is responsible for a relationship between two variables, it is nevertheless a valuable method of measuring relationships.

The Pearson (product-moment) correlation coefficient, and its symbol, \( r \), is a measure of the linear relationship between a given set of paired data. Positive values produce a positive correlation and negative values produce a negative correlation. Furthermore, high values, regardless of whether they are positive or negative, produce a high correlation, and low values produce a low correlation.

A high correlation occurs if relatively high scores on the pretest and posttest tend to be paired and if relatively low scores on the pretest and posttest tend to be paired.

Table X presents the correlation coefficient \( r \) and level of significance for each evaluative scale that made up the Semantic Differential instrument used in this study.
### TABLE X

PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENT (r) AND LEVEL OF SIGNIFICANCE FOR ALL EVALUATIVE SCALES

<table>
<thead>
<tr>
<th>Scales</th>
<th>r</th>
<th>Level</th>
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<tr>
<td>Fair -- Unfair</td>
<td>.2313</td>
<td>.05</td>
</tr>
<tr>
<td>Good -- Bad</td>
<td>.2472</td>
<td>.05</td>
</tr>
<tr>
<td>Beautiful -- Ugly</td>
<td>.3953</td>
<td>.01</td>
</tr>
<tr>
<td>Helpful -- Hindering</td>
<td>.0797</td>
<td>NS</td>
</tr>
<tr>
<td>Valuable -- Worthless</td>
<td>.3114</td>
<td>.01</td>
</tr>
<tr>
<td>Positive -- Negative</td>
<td>.1858</td>
<td>NS</td>
</tr>
<tr>
<td>Clear -- Hazy</td>
<td>.2953</td>
<td>.05</td>
</tr>
<tr>
<td>Complete -- Incomplete</td>
<td>.1896</td>
<td>NS</td>
</tr>
<tr>
<td>Stimulating -- Dull</td>
<td>.1783</td>
<td>NS</td>
</tr>
<tr>
<td>Pleasurable -- Painful</td>
<td>.1248</td>
<td>NS</td>
</tr>
<tr>
<td>Rational -- Irrational</td>
<td>.0681</td>
<td>NS</td>
</tr>
<tr>
<td>Practical -- Impractical</td>
<td>.2415</td>
<td>.05</td>
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<td>Pleasant -- Unpleasant</td>
<td>.3027</td>
<td>.01</td>
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<td>Kind -- Cruel</td>
<td>.2014</td>
<td>NS</td>
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<td>Pleasing -- Annoying</td>
<td>.3657</td>
<td>.01</td>
</tr>
<tr>
<td>Ordered -- Chaotic</td>
<td>.3100</td>
<td>.01</td>
</tr>
</tbody>
</table>

Mean (evaluative scales)     | .3898| .01   |

**N=70**

The logic of the statistical test implies that there would be less than 1 chance in 100 of obtaining an (r) of .3898 if the population (r) were zero. It can be concluded, therefore, there was a significant linear correlation between the scores on the pretest and scores on the posttest.
Discussion of the Findings

Student teachers come out of different backgrounds and environments. At the core of student teaching, however, is the attitude of the student teacher toward student teaching. The vitality of the student teaching experience depends, to a large part, upon the interactions between the student teacher and individuals who are responsible for his training.

The primary hypothesis of this study was that student teacher attitude would change to a more favorable position between the outset and conclusion of student teaching.

On an individual basis, the direction and magnitude of change varied from person to person, but there was an overall slight change to a lower mean attitude score at the conclusion of the student teaching experience.

The total population of 70 student teachers indicated a slight attitude loss at the conclusion of student teaching. The mean score for the entire group of student teachers was (5.307) on the pretest taken before student teaching, and (5.297) on the posttest taken at the conclusion of the student teaching experience. The shift to a slightly lower mean attitude score, however, still represents a favorable attitude toward student teaching.

Although male subjects showed a higher mean attitude score on the pretest and posttest, they indicated a mean loss (unfavorable) at the conclusion of student teaching. Female subjects, on the other hand, indicated a mean attitude gain
(favorable) toward the student teaching experience. The mean attitude score for females on the pretest was (5.233) and (5.424) for male subjects. The posttest mean attitude score for females was (5.254) and (5.364) for males.

Subjects pursuing certification to teach speech had the highest initial mean attitude score toward student teaching when grouped according to teaching fields. However, students pursuing certification to teach drama had the highest mean attitude score at the conclusion of student teaching. The close relationship between drama teachers and drama students might, in part, account for the higher mean attitude score.

There was no significant change in attitude toward student teaching when subjects were grouped according to their score on the National Teacher Examination. The posttest mean attitude score attained by subjects above the national norm was (5.395). The posttest mean attitude score of subjects who attained a score below the national norm was (5.173). Due to the fact that the mean score of students above the national norm of 609 was higher than the mean attitude score of students below the national norm, inference may be drawn that there may be a slight relationship between attitudes and scores achieved on the National Teacher Examination.

The slight change in attitude does not seem to warrant the conclusion that there is a need for an alignment of the theory presented in the professional education curriculum and the student teaching experience.
Summary

It was the purpose of this chapter to present an analysis of the results that emerged from this study. The results that emerged from the factor analyses have been presented, as well as the findings associated with each hypothesis.

Results of the oral and written interviews with student teachers were also presented. In an attempt to solicit attitudes toward student teaching and the Teacher Education Program at North Texas State University, subjects were asked to comment on the following question: "What changes, if any, would you like to see in student teaching and/or the Teacher Education Program at North Texas State University?"

Chapter V contains a summary of the study, conclusions, inferences, and recommendations for further study and research.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This study was designed with the intention of determining student teacher attitude and attitude change toward the student teaching experience. A semantic differential instrument was constructed for use as an attitude measurement device in order to determine the subjects' attitude toward the student teaching experience. The instrument was administered as a pretest during a speech methods course and as a posttest during the last week of the student teaching experience. The subjects of this study consisted of all students who were seeking certification to teach speech and/or drama in the public school at the secondary level. There were 43 females and 27 males in this study.

Summary of Purposes and Hypotheses

The purposes of this study were (1) to ascertain attitudes of prospective teachers toward student teaching prior to the experience, (2) to ascertain attitudes of student teachers at the completion of student teaching, (3) to determine if there was an attitude change and in which direction, and (4) to determine differences in student teacher attitude when grouped according to sex, degree sought, teaching field, and score achieved on the National Teacher Examination.
To carry out the purposes of this study, the following hypotheses were formulated:

1. **Hypothesis 1.**—The mean attitude score for the total group on the posttest will be significantly higher than their mean attitude score on the pretest toward student teaching.

2. **Hypothesis 2.**—The mean attitude score of male students on the posttest will be significantly higher toward student teaching than will the mean attitude score of male students on the pretest.

3. **Hypothesis 3.**—The mean attitude score of female students on the posttest will be significantly higher toward student teaching than will the mean attitude score of female students on the pretest.

4. **Hypothesis 4.**—The mean attitude score of female students on the pretest will be significantly higher than will the mean attitude score of male students on the pretest toward student teaching.

5. **Hypothesis 5.**—The mean attitude score of female students on the posttest will be significantly higher than will the mean attitude score of male students on the posttest toward student teaching.

6. **Hypothesis 6.**—The mean attitude score of Bachelor of Science candidates on the posttest will be significantly higher toward student teaching than will the mean attitude score of the Bachelor of Science degree candidates on the pretest.
7. **Hypothesis 7.**—The mean attitude score of Bachelor of Arts candidates on the posttest will be significantly higher toward student teaching than will the mean attitude score of Bachelor of Arts candidates on the pretest.

8. **Hypothesis 8.**—The mean attitude score of Bachelor of Arts candidates on the pretest will be significantly higher than will the mean attitude scores of Bachelor of Science candidates on the pretest toward student teaching.

9. **Hypothesis 9.**—The mean attitude score of Bachelor of Arts candidates on the posttest will be significantly higher than will the mean attitude score of Bachelor of Science candidates on the posttest toward student teaching.

10. **Hypothesis 10.**—The mean attitude scores of drama students on the pretest will be significantly higher toward student teaching than will the mean attitude score of speech students on the pretest toward student teaching.

11. **Hypothesis 11.**—The mean attitude scores of drama students on the posttest will be significantly higher toward student teaching than will the mean attitude scores of speech students on the posttest toward student teaching.

12. **Hypothesis 12.**—The posttest mean attitude score of students who attained a score above the national norm on the National Teacher Examination will be significantly higher than will the posttest mean attitude score of students who attained a score below the national norm toward student teaching.
Summary of Procedures

Prior to the termination of the spring semester, 1969, all members of the Department of Speech and Drama at North Texas State University, Denton, Texas, that expected to work with student teachers, were consulted to gain permission to secure data from their respective class sections.

Prior to the termination of each semester, the pretest was administered to all students enrolled in Methods of Teaching Speech and Drama. All students were advised that the pretest would not influence their student teaching grade. All students were also told that they were participating in an attitude study toward student teaching.

The posttest was delivered to each student by the assigned coordinating teacher from North Texas State University or was mailed to the student teacher at the cooperating school. The posttest was delivered approximately one week prior to the termination of the student teaching period. A stamped, self-addressed envelope was enclosed to return the instrument.

In addition to completing the posttest instrument, all students were asked to respond to the question: "What changes, if any, would you like to see in student teaching and/or the Teacher Education Program at North Texas State University?"

Examination and treatment of data were conducted in the following manner:

1. Each scale position of the Semantic Differential was assigned a value from one to seven. The unfavorable poles
(adjectives) were assigned a value of (1) and the favorable poles were assigned a value of (7).

2. Raw scores were summed over all subjects. The mean and standard deviation was computed for further statistical computations.

3. Mean scores on the Semantic Differential pretest and posttest toward student teaching were compared by Fisher's t-test of difference between means. This procedure was used to determine if there was a significant change in attitude that occurred between the outset and conclusion of the student teaching experience.

4. Pretest and posttest data were recorded on IBM cards for a statistical analysis at the Data Processing Center at North Texas State University, Denton, Texas.

5. In order to test the hypothesis regarding differences between means, the null hypothesis was established. The null hypothesis was rejected when the obtained difference reached the .05 level of significance. When the .05 level was not reached, the null hypothesis was retained. An appropriate table was consulted to determine the level of significance.

Summary of Findings

Each hypothesis was subjected to a t test for either correlated or independent means. In accordance with the hypotheses which were pertinent to this investigation, an analysis of the data disclosed the following:
1. Individual mean scores on the Semantic Differential pretest ranged from (4.728) to (6.128) out of a possible range of (1.000) to (7.000). Individual mean attitude scores on the Semantic Differential posttest ranged from (4.514) to (6.142) out of a possible range of (1.000) to (7.000). The mean scores for the entire group of student teachers was (5.307) on the pretest taken before student teaching, and (5.297) on the posttest taken at the conclusion of student teaching. The difference in the means of the pretest and posttest (0.010) does not, however, indicate an unfavorable attitude toward student teaching. A mean attitude score above (4.000) represents a favorable attitude.

2. There was no significant change in the mean attitude score of male subjects between the outset and conclusion of the student teaching experience. The mean attitude score on the pretest was (5.424) and on the posttest (5.364). Although there was an unfavorable attitude shift, the .05 level was not reached.

3. There was no significant change in the mean attitude score of female subjects between the outset and conclusion of the student teaching experience. The mean attitude score on the pretest was (5.233) and on the posttest (5.254). Although there was an unfavorable shift in attitude toward the student teaching experience, the .05 level was not reached.

4. A comparison of the pretest means of male and female subjects resulted in a t which did not reach the desired level
to be significant. The pretest mean for males was (5.424) and for females (5.233). Although the male subjects attained a higher mean attitude score than did females on the pretest, the difference in means was not significant ($t = 0.946$).

5. A comparison of the posttest means of male and female subjects resulted in a $t$ which did not reach the desired level to be significant. The posttest mean for males was (5.364) and for females (5.254). Although the male subjects attained a higher mean attitude score than did females on the posttest, the difference in means was not significant ($t = 0.382$).

6. There was no significant difference between the pretest and posttest mean attitude scores of the Bachelor of Science degree candidates at the conclusion of the student teaching experience. A comparison of the pretest mean (5.444) and the posttest mean (5.198) revealed an unfavorable attitude shift. The change in attitude, however, did not reach the desired level to be significant ($t = 1.283$).

7. There was no significant difference between the pretest and posttest mean attitude scores of the Bachelor of Arts degree candidates at the conclusion of student teaching. A comparison of the pretest mean (5.134) and the posttest mean (5.420) revealed a favorable attitude shift. The change in attitude, however, did not reach the desired level to be significant ($t = 1.633$).

8. A comparison of pretest means of the Bachelor of Arts and Bachelor of Science degree candidates toward student
teaching resulted in a \( t \) which did not reach the desired level to be significant. The pretest mean for the Bachelor of Science degree candidates was (5.444) and for the Bachelor of Arts candidates (5.134). Although the Bachelor of Science degree candidates attained a higher mean score, the difference in means was not significant (\( t = 1.587 \)).

9. A comparison of the posttest means of the Bachelor of Arts and Bachelor of Science degree candidates toward the student teaching experience resulted in a \( t \) which did not reach the desired level to be significant (\( t = 0.795 \)). The posttest mean for the Bachelor of Science degree candidates was (5.198) and for the Bachelor of Arts candidates (5.420). Although the Bachelor of Arts candidates attained a higher mean attitude score, the difference was not significant.

10. A comparison of the pretest mean attitude scores of subjects pursuing certification to teach speech (5.375) and subjects pursuing certification to teach drama (5.211), did not result in a significant difference in means (\( t = 0.820 \)). The hypothesis that subjects pursuing certification to teach drama would attain a significantly higher mean attitude score, was not supported by the data.

11. A comparison of the posttest mean attitude scores of subjects pursuing certification to teach speech (5.272) and subjects pursuing certification to teach drama (5.331), resulted in a \( t \) of (0.210). The desired level was not reached. The null hypothesis was retained.
12. Students who scored above the national norm (609) on the National Teacher Examination had a mean attitude score of (5.395) on the posttest while subjects who scored below the national norm had a mean attitude score of (5.173). The slight difference between means was not significant (t= 0.794). It should be noted, however, subjects who attained a score above the national norm indicated a higher mean attitude score toward student teaching.

The Pearson (product-moment) correlation coefficient, which is designated by (r), was used to determine if there was any relationship between the pretest and posttest mean scores. In this study, there was a positive correlation (r= .3898). An assumption can be made, therefore, that there is a linear relationship between the pretest and posttest scales on the instrument used in this study.

Conclusions

From an analysis of the data, and within the limitations of this study, the following conclusions can be drawn that are relative to student teaching and the Teacher Education Program at North Texas State University:

1. An analysis of the pretest and posttest mean attitude scores indicate that the student teaching experience does not cause a significant change in attitude toward student teaching.

2. The mean attitude scores before and after student teaching are favorable toward student teaching.
Inferences and Interpretations

A change in attitude, favorable or unfavorable, can be interpreted several ways. Unfavorable changes may provide evidence that the student lacks confidence and ability in his chosen field. An unfavorable attitude change may also provide evidence of the beginnings of a process that might turn into bitterness toward the teaching profession.

Favorable attitude changes may be looked upon as a sign of maturity, common sense, and good judgment. In addition, favorable changes provide the basis for concluding that the student teacher has a realistic outlook upon the demands of the classroom and the teaching profession in general.

Since value patterns appear to be fairly resistant to change, it seems logical to conclude that most of the changes produced in attitudes must be instigated by changes in the object toward which the attitude is being expressed. This would seem to place emphasis on the role of the Teacher Education Program in producing changes in attitudes, and may prompt the conclusion that educational practices which do not change attitudes or behavior, and which do not take into account individual attitude patterns, are not meeting the requirements of a good Teacher Education Program.

Due to the high mean attitude score on the pretest and posttest instruments, it is apparent that the student teaching experience at North Texas State University is a valuable aspect of the entire Teacher Education Program.
Recommendations

The following recommendations for further research and practices are presented for consideration:

1. A case study should be conducted to determine whether there are any specific experiences during the student teaching period which account for attitudinal changes or whether it is the total experience. Subjects of this study should include those students who indicate a significant change in attitude between the pretest and posttest.

2. Continued studies should be conducted to determine the effect of the cooperating and coordinating teacher on the attitudes of student teachers.

3. Continued emphasis should be placed on the development of an instrument which is specifically designed to measure the attitude of student teachers toward student teaching.

4. Educators must continue to focus attention on the process of teaching, to identify the knowledge and skills that teachers should have, and to work on the formation of studies in an attempt to obtain concrete evidence relative to the best method to prepare and train teachers.
APPENDIX A

STUDENT TEACHER QUESTIONNAIRE

1. STUDENT NUMBER: _________________________

2. SEX (Circle one):
   (A) Male
   (B) Female

3. DEGREE (Circle one):
   (A) Bachelor of Science
   (B) Bachelor of Arts
   (C) _________________________

4. TEACHING FIELDS:
   (A) 1st Teaching Field _________________________
   (B) 2nd Teaching Field _________________________

5. STUDENT TEACHING PLAN (Circle one):
   (A) 1st 8 weeks
   (B) 2nd 8 weeks
   (C) 16 weeks

6. SUBJECT AND NUMBER OF CLASSES TAUGHT (Circle one or more):
   (A) Speech  1  2  3  4  5  6
   (B) Drama  1  2  3  4  5  6
   (C) _________  1  2  3  4  5  6

7. WHAT CHANGES, IF ANY, WOULD YOU LIKE TO SEE MADE IN STUDENT TEACHING AND/OR THE TEACHER EDUCATION PROGRAM AT N.T.S.U.?
GENERAL INSTRUCTIONS

The purpose of this survey is to measure your concept of STUDENT TEACHING. Complete the rating sincerely, fairly rapid, and spontaneously.

1. If you feel that your concept of STUDENT TEACHING is VERY CLOSELY related to one end of the scale, mark as follows:
   (or)

2. If you feel that your concept of STUDENT TEACHING is QUITE CLOSELY related to one end of the scale, mark as follows:
   (or)

3. If you feel that your concept of STUDENT TEACHING is only SLIGHTLY related to one end of the scale, mark as follows:
   (or)

4. If you feel that your concept of STUDENT TEACHING is NEUTRAL on the scale, you should place your mark in the middle space - as follows:

The direction toward which you check depends upon which of the two ends of the scale seem most characteristic of your concept of STUDENT TEACHING. Be sure to check each scale.
APPENDIX C

SEMANTIC DIFFERENTIAL INSTRUMENT

Instructions: Indicate your concept of - STUDENT TEACHING

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<thead>
<tr>
<th>Fair</th>
<th>Unfair</th>
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<td>Chaotic</td>
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</tbody>
</table>

MAKE SURE THAT EACH SCALE HAS BEEN CHECKED

Student Number _____________ Date ________
BIBLIOGRAPHY

Books


Articles


Campbell, Donald E., "Dimensional Attitude Change of Student Teachers," The Journal of Educational Research, LXI (December, 1967), 160-162.


Scott, Owen and Sterling G. Brinkley, "Attitude Changes of Student Teachers and the Validity of the Minnesota Teacher Attitude Inventory," The Journal of Educational Psychology, LI (April, 1960), 76-81.


Unpublished Materials


