A Study of Attitude Changes of Selected Student-Teachers During the Student-Teaching Experience.

Thomas J. Wilcox Jr

Louisiana State University and Agricultural & Mechanical College

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TEACHERS DURING THE STUDENT TEACHING EXPERIENCE

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Education

in

The Department of Education

by

Thomas J. Wilcox, Jr.
B.A. Southern University, 1948
M.Ed. Louisiana State University, 1954
December 1973
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ABSTRACT

This study was made to determine whether attitude changes took place in a selected group of student teachers during their student teaching experience and whether changes which occurred were positive or negative. Efforts were made to determine if attitude changes which occurred were significant, and therefore, related to student teaching experiences. Comparisons were made of attitude changes in thirteen sub-groups of the student teachers who were subjects in the study. These sub-groups were determined by: sex--male or female; location of the high school which each student teacher attended--rural or urban; assignment level--elementary or secondary; socio-economic level of the student teachers--upper, middle, or low; and the community characteristics of the cooperating school--predominantly white, predominantly black, transition, or college community. A total of 280 student teachers from Southern University, a state supported institution with a teacher training college, participated in the study. This number represented all of the student teachers who were enrolled in student teaching at Southern University for the spring semester, 1973. A total of 145 supervising teachers in 45 cooperating schools participated.

All of these student teachers were administered an adaptation of the Minnesota Teacher Attitude Inventory. The Inventory was administered at the beginning of the period of student teaching and again near the end of the period. The difference between the pre-test
and the post-test scores was used to determine if there were changes in attitudes, and if these changes were positive or negative. Intra-group comparisons were made of attitude changes within the total group of student teachers and those student teachers assigned to predominantly white schools, predominantly black schools, transition schools, and a college community school.

Inter-group comparisons were made of the changes between: male and female student teachers; urban and rural student teachers; elementary and secondary student teachers; and between upper and middle, upper and low, and middle and low socio-economic levels of student teachers. The data collected from these sub-groups of student teachers, as well as the data from the total group, were statistically treated and analyzed in an effort to answer the questions raised for the study. The t-test was the statistical tool used in testing for significance of changes which took place. The 0.05 level of confidence was used in determining the significance of changes of attitudes.

Calculations of the means of the pre-test and the post-test scores showed changes in attitudes of student teachers who were subjects in this study. The attitude changes which took place in the total group of student teachers were negative and were great enough to be significant at the 0.05 level of confidence.

Of the thirteen sub-groups of student teachers whose attitude changes were tested, only the transition school sub-group experienced changes which were significant at the 0.05 level of confidence.

Based on data produced by this study, it was concluded that for the total group of student teachers, attitude changes did take
place, that these changes were negative, and that they were statistically significant. It may be inferred that the student teaching experience itself produced these negative effects on the changes in attitudes of the student teachers. When the changes for the thirteen sub-groups of student teachers were tested, however, it was found that only those student teachers assigned to transition schools showed attitude changes which were statistically significant.
Chapter 1

THE PROBLEM AND ITS INVESTIGATION

Student teaching is generally considered as the most important and dynamic phase of the teacher education program. Statistics compiled by the National Commission on Teacher Education and Professional Standards, National Education Association (1966) reveal that more than one hundred fifty thousand regular classroom teachers cooperate with nearly twelve hundred teacher education colleges to provide student teaching experiences for more than two hundred thousand student teachers annually. While many serious questions are being raised about the effectiveness of the student teaching program as it is being currently practiced, those persons responsible for the preparation of teachers see the student teaching process as a most valuable resource for helping prospective teachers become effective teachers. During the period of preparation of prospective teachers for the teaching profession, one of the major concerns of teacher educators is that of attitude changes of student teachers during their student teaching experience.

All of the attitudes which the student teacher holds at the end of the student teaching experience do not necessarily result from his relationships with those persons and situations directly involved in this experience. Many factors may be involved: his personal characteristics, as age, sex, race, etc.; his educational background; his self-concept; his peer group relationships; and his
concept of what he thinks others think of him (Crow, 1967). Many of
his ego-involved attitudes are derived from the values and norms of
these as well as other reference groups (Sherif, Sherif, and
Nebergall, 1965).

Some studies have been made of the attitude changes which
take place during the teacher education program itself as well as
during early teaching experiences. This study represents the
results of an investigation made of the attitude changes that
occurred in student teachers during their student teaching
experience.

THE PROBLEM

The prime purpose of this study was to determine whether
attitude changes took place during the student teaching experience
of a select group of student teachers. Specifically, the problem
was: Do student teachers show significant changes in their attitudes
during the student teaching experience? From this problem, the study
proposed the following null hypothesis: No significant attitude
changes take place in student teachers during their student teaching
experience. Eight sub-hypotheses were tested.

1. There is no significant difference between pre-test and
post-test attitude scores of those student teachers who were assigned
to predominantly white schools.

2. There is no significant difference between pre-test and
post-test attitude scores of those student teachers who were assigned
to predominantly black schools.
3. There is no significant difference between pre-test and post-test attitude scores of student teachers who were assigned to transition schools.

4. There is no significant difference between pre-test and post-test attitude scores of student teachers who were assigned to a college community school.

5. There is no significant difference between the change of attitude scores of elementary and secondary student teachers.

6. There is no significant difference between the change of attitude scores of student teachers with rural and urban backgrounds.

7. There is no significant difference between the change of attitude scores of student teachers with different socio-economic backgrounds.

8. There is no significant difference between the change of attitude scores of male and female student teachers.

Efforts were made to determine if there were evidences that changes in attitudes took place during the student teaching experience, and to determine whether any attitude changes which occurred were positive or negative.

Importance of the Study

Because so much controversy surrounds the areas of teacher preparation generally and student teaching specifically, it was felt that any data which could be produced by this study should be useful to those persons involved in teacher training and preparation. This
study produced information and data which show whether there were significant attitude changes during the student teaching experience. It also produced data which should be helpful in determining if selected environmental factors influence attitude formation and change.

Having objective and reliable data in this area of concern should enable those persons responsible for teacher preparation programs to understand better the problems related to specific school assignment for student teachers. Proper data pertaining to attitude changes that take place during the student teaching experience and the circumstances surrounding these changes should also prove helpful in developing orientation programs for student teachers prior to their student teaching assignments.

Limitations of the Study

This study was limited to an investigation of attitude changes in approximately 280 student teachers in the teacher education program of Southern University. These student teachers were assigned to supervising teachers at the Southern University Laboratory School and at elementary and secondary schools in the East Baton Rouge Parish public school system. A further limitation was that the study concerned itself with attitude changes which were related to the community characteristics of the cooperating schools and to the sex, socio-economic background, the level of the academic major (elementary or secondary), and community characteristics (urban or rural) of the student teachers.
The study was made during the spring semester of the 1972-73 school session.

DEFINITION OF TERMS

Attitude

The feelings which student teachers have toward children and toward teaching as revealed by their responses to items on the adapted version of the Minnesota Teacher Attitude Inventory.

Student Teacher

A college student who has been assigned to student teaching experiences under the supervision of an experienced elementary or secondary school teacher.

Supervising Teacher

The teacher employed in the cooperating school as the regular classroom instructor and to whom a student teacher is assigned.

College Supervisor

The college representative who is given the responsibility of supervising a student teacher or group of student teachers.

Cooperating School

A public school which assists a university or college by providing a typical teaching-learning setting and a supervising teacher.
Predominantly White School

A formerly all-white school, with non-whites comprising less than ten percent of the present student enrollment. Such a school will be considered as existing in a white community environment.

Predominantly Black School

A formerly all-black school, with non-blacks comprising less than ten percent of the present student enrollment. This type of school will be considered as existing in a black community environment.

Transition School

A formerly all-white or all-black school, with students of the opposite race now comprising a minimum of ten percent of the student enrollment. This type of school will be considered as existing in a transition community environment.

College Community School

A school which is located on a college or university campus and is operated and controlled by that college or university. This type of school will be considered as existing in a college community environment.

PROCEDURE

All of the students assigned to student teaching during the spring semester of 1973 at Southern University, a predominantly
black university under the supervision and control of the Louisiana State Board of Education, were subjects in this study. These student teachers, all black, were assigned to supervising teachers in the Southern University Laboratory School and to elementary and secondary schools in the East Baton Rouge Parish public school system. The faculty and staff of the Southern University Laboratory School are all black; the Laboratory School is located on the University campus, being a department in the College of Education. The public schools of the East Baton Rouge Parish School Board are operating under a unitary system approved by the courts and the United States Department of Justice.

The student teachers who were subjects in this study were administered an adaptation of the Minnesota Teacher Attitude Inventory at the end of the first week of their assignment in student teaching. These student teachers were administered the adaptation of the Inventory again during the last week of the student teaching period. Based on the scores received from the two administrations of the Inventory, efforts were made to determine whether or not there had been significant attitude changes for each of the student teachers. Further efforts were made to determine whether any changes which took place were positive or negative.

Each of the cooperating schools to which the student teachers were assigned, as well as the Southern University Laboratory School, was placed into one of the following categories:

1. White community environment
2. Black community environment
3. Transition community environment
4. College community environment

A comparison was made between pre-test and post-test attitude scores to determine if any significant changes in attitudes had taken place in the following:

1. Student teachers assigned to the four types of schools classified on the basis of community characteristics as enumerated above.
2. Elementary and secondary student teachers.
3. Student teachers with different socio-economic backgrounds.
4. Student teachers with rural and urban backgrounds.
5. Male and female student teachers.

The measuring instrument that was used was an adapted version of the Minnesota Teacher Attitude Inventory, also referred to as the Inventory in this study. Six persons, three who had recently completed their student teaching assignment, one college supervisor, one supervising teacher from the Southern University Laboratory School and one supervising teacher from the East Baton Rouge Parish public school system cooperated in constructing the adaptation of the Minnesota Teacher Attitude Inventory. These persons eliminated those items which they felt were not consistent with current philosophy and objectives in teaching. The remaining items made up the adaptation of the measuring instrument.
This adaptation of the Inventory was used to determine if any attitude changes had taken place between the first and the second administration of the Inventory.

The socio-economic level of each student teacher was determined by the occupation of his father or male guardian, using the National Opinion Research Center Occupation Prestige Ratings, United States, 1965 (Bertrand, 1967). Three socio-economic levels were used: low, middle, and upper.

Data collected from the Inventory administered to the student teachers were used to determine the significance of attitude changes of these student teachers.

ORGANIZATION OF THE STUDY

Materials used in subsequent chapters completed the study. The review of related literature was reported in Chapter 2. The methods and procedures used in this study were outlined and developed in Chapter 3. Chapter 4 contained the statistical analysis and interpretation of data. The final chapter, Chapter 5, summarized and concluded the study.
Chapter 2

REVIEW OF RELATED LITERATURE

A prime factor in determining the degree to which prospective teachers become effective classroom teachers is the attitude which is developed, altered or established during the student teaching experience. Studies show that one's attitude toward his work and toward others who are part of his work experience affects his work behavior (Sherif, Sherif and Nebergall, 1965; Crow, 1967). If this statement is accepted as fact, it then becomes vitally important that positive efforts be made to insure that student teachers develop wholesome attitudes toward student teaching, as well as toward teaching generally. The development of these wholesome attitudes may take place during the student teaching experience.

Attitude identification and assessment can prove to be rather elusive to the person interested in studying attitude changes in individuals. However, the area of attitude measurement has been given considerable study in recent years, and there are evidences, if one studies the literature carefully, that attitudes can be identified and measured with a high degree of reliability.

The literature relating to attitudes and attitude changes during the student teaching experience was reviewed to determine if there are evidences that attitude changes do take place during student teaching, to determine how one's value system affects his attitudes, and to gather information relative to attitude measurement.
A review of the literature in these areas was made. This review is presented in this chapter.

THE NATURE OF ATTITUDES

If the identification of attitudes and an assessment of factors surrounding attitude changes are rather difficult and elusive, it may be because of the difficulty encountered in arriving at a consensus definition of an attitude. Suedfeld (1971) states:

The very definition of "attitude" has been embroiled in controversy. To many workers the concept has three components: cognition, affect, and behavior. Some writers restrict the term to the first two dimensions, and view behavior as an independent dimension that may be but does not have to be a function of attitude. Still others use "attitude" to mean only emotional reactions, and refer to cognitive responses as "beliefs."

Depending on one's acceptance of the three components of attitude as enumerated above, an assessment of attitudes would be determined by which of the components, or combination of components, one accepts and uses. For example, if an investigator were trying to determine a chronic drinker's attitude toward drinking, he would perhaps ask questions that would elicit the drinker's response to his beliefs relative to the injurious effects of drinking on one's health. The drinker may be in complete agreement with the stated ideas of the injury which chronic drinking causes to one's health. However, if he continues to drink, in spite of his beliefs, his acceptance is only intellectual and emotional, and does not affect his drinking behavior. If we have defined behavior as part of attitude, then we see this situation as "an attitude with components
that are either inconsistent or differentially relevant to a variety of circumstances." From the second viewpoint, the attitude is internally consistent; the reason it did not lead to action resides in other attitudinal, personality, and environmental factors (Suedfeld, 1972).

Sherif, Sherif and Nebergall (1965), define "attitude" and propose several referents for attitudes in an elaboration on their definition.

Attitudes refer to the stands the individual upholds and cherishes about objects, issues, persons, groups, or institutions. The referents of a person's attitude may be a "way of life"; economic, political or religious attitudes; family, school or government. We are speaking of an individual's attitude when we refer to his holding in high esteem his own family, his own school, his own party, his own religion, with all the emotional and affective overtones these terms imply. We refer to his attitudes when we say he holds other groups, other schools, other parties, or religions in less favorable light or at a safe distance (as "safe" is defined by his attitudes).

The definition of "attitude" suggests that one's attitudes are determined largely by his contacts within his various reference groups, and that his attitudes are "colored" by the quality of these contacts. We may go a step further and say that one's attitudes are "introduced" to him by persons in his reference group. How he reacts to this "introduction" and subsequent socialization process exerts as much influence on attitude formation as does his own conscious efforts at determining his various attitudes.

Many authorities have proposed definitions of "attitude," some of which are widely quoted in the literature. Some of these definitions support those proposed by other authorities, while some advocate different and sometimes opposing ideas.
Sherif and Cantril (1947) propose the following definition of attitude.

Characterized in broad outlines, an attitude is an established readiness which has a subject-object relationship of highly variable contents, which is learned (formed), which has effective properties with various degrees of motivational components, which may refer to whatever stimuli are encompassed in the subject-object relationship, and which determines that an individual will react to a stimulus in a selective way. Once formed, an attitude serves as an anchorage to structure or modify subsequent experience or response.

This definition points out several significant facts to the investigator who wishes to study attitude formation and change. Of particular significance should be three facts: (1) attitudes imply a readiness to act in a given way to most situations, (2) attitudes are learned, and (3) attitudes, once formed, serve as a rather reliable predictor of behavior.

As stated earlier, the literature contains numerous definitions of attitude. The most frequently quoted definition, according to Callis (1948) is Allport's definition.

An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related.

The review of a general concept of what is an attitude advances this study to an inquiry into the nature of attitude formation.

If there appears to be a wide variance in the definition of "attitude," this variance has not kept authorities from reaching the general consensus that attitudes are acquired or learned. Doob (1947) found that most writers agree that attitudes may be learned, and that
this learning process does not always represent structured, formal
learning efforts. He stated that the processes involved in the
learning, retention, and decline of an attitude are no different
from those processes involved in the learning, retention, and
decline of a skill.

Sherif, Sherif and Nebergall (1965) report that the process
whereby an individual becomes a member of a particular institution
or other social group "consists in acquiring appropriate attitudes"
about these institutions or groups. These authors state further:

To say that attitudes are learned implies neither
mechanical imprinting nor formal instruction, necessarily.
From early childhood on, an integral part of an individual's
interaction with adults and with other children important
in his eyes is labeling the objects, persons, events, and
groups he encounters in approving, disapproving, or other
affective tones. This labeling process involves words,
gestures, and actions of other people. But it is not a
one-way affair. As he learns labels, the individual
develops the desire to belong, to be accepted, and to prove
himself among those he identifies as his own. Henceforth,
these desires cannot be ignored in the learning process.

Whether the individual's attitudes are formed primarily
in interaction with others to whom he is attached emotionally
or primarily by exposure to dictums, pronouncements, and
printed and spoken exhortations, they constitute what he is
not. Thus, they express the end products of the socialization
of the person in so many roles—as a member of a family,
school, church, political party, adherent of an ideology,
citizen of a country, and so on. They express his
psychological reference to these groups and institutions.

Lester D. Crow (1967) has made an extensive study of
attitudes as they relate to human adjustment. In a report of one
of his studies Crow states that "attitudes are, in effect, certain
kinds of habit patterns. They result from learning and are subject
in their formation to be accepted laws of learning."
Callis (1948) reporting on one of his studies, states that one of the most important aspects of attitudes is that they are learned; however, learning attitudes is probably different from what he terms "school learnings." As the individual goes through the various experiences of his everyday living, certain learnings take place rather informally and incidentally. The "residue" of these learnings causes the individual to be preconditioned to react to subsequent stimuli in a manner similar to his reaction to the original stimuli. Attitudes, then, may be linkages between past experiences and future behavior. Callis concludes that attitudes are learnings.

In his study of the process by which attitudes are acquired, Stagner (1941) found that attitudes may arise in four ways: (1) integration, (2) trauma, (3) differentiation, and (4) adoption. These ways of learning attitudes may be illustrated by data collected in a study by Stagner on the development of communist leaders in Russia. Stagner found that some Russian leaders who developed radical ideas could have this development traced to persecution by czarists leaders. This method of attitude formation could be classified as the integration of specific reactions by the leaders to form a generalized pattern of behavior of ideas. Other leaders had attitude changes favoring the communist viewpoint as a result of a single traumatic experience. A third group appeared to have experienced a state of unrest which manifested itself in a state of religious uncertainty. Their embracing of the communist point of
view might be seen as a differentiation of a specific attitude from
this general state of dissatisfaction. A fourth group seemed to
have acquired their communistic beliefs by adopting the positions
of persons to whom they felt friendly.

Brembeck and Howell (1952) quoting Kimball Young, define
"attitude" as follows:

An attitude may be defined as a learned and more or less
generalized and effective tendency or predisposition to
respond in a rather persistent and characteristic manner,
usually positively or negatively (for or against) in
reference to some situation, idea, value, material object
or class of such objects, or person or group of persons.

This statement seems to place Brembeck and Howell, as well
as Young, in agreement with those authorities who say that attitudes
are learned.

In an elaboration on the nature of attitudes, Brembeck and
Howell (1952) point out certain specific facts. Attitudes are
usually associated with external objects, ideas, images, and values.
Attitudes are also considered preconditions of human behavior; they
are incipient and preparatory rather than overt and consummatory.
Attitudes are more numerous, more personal, and more varying than
motives. They may be regarded as "modi operandi" in human behavior
rather than as original sources of motivation.

For a summation of the theory that attitudes are learned,
the following statement from Sherif, Sherif and Nebergall (1965)
seems appropriate.

The behavior from which attitudes are inferred are
evaluative, in the sense of favoring or disapproving,
agreeing or objecting, striving in one direction and
avoiding another. Thus, a hungry man eats in response to hunger and food, but selects one kind of food and avoids other kinds because of his attitudes toward foods. What is evaluated and how it is sized up vary greatly from one culture to another and between individuals in the same culture. Therefore, we are forced to conclude that attitudes are acquired.

VALUES AND ATTITUDES

All individuals live within a certain value system which they have established for themselves. Generally, this value system is compatible with the social groups to which the individual belongs. Sometimes this value system is at odds with one's social groups, resulting in a certain amount of friction which may lead to outright rejection by the group.

The concern of this study with values is the relationship which one's values have to his attitude formation and attitude changes.

Philosophically speaking, the four types of values which receive more direct attention in studying the overall development of individuals are ethical, religious, social, and aesthetic values. These values, in combination with a variety of other values, work together in an interrelationship which gives the individual the type of "personality" or "character" by which he is identified, distinguished, or characterized (Butler, 1968). The combination of these individual types of values comprise what may be termed as an individual's system of values. This value system is important for it exerts an enormous influence on the type of attitudes which each individual holds.
References have been made earlier in this study to the fact that there is a direct relationship between attitudes and behavior. Bertrand (1962) quoting Parsons, Shils, and Smelser, defines values as "standards that provide legitimacy for social arrangements and social behavior." This definition seems to draw a parallel between "values" and "standards for behavior," thereby giving support to the contention that there is a relationship between values and attitudes.

Direction is given to our attitudes in terms of our interests and values. If an object or goal that has been attained has little effect on an individual, the individual's attitude relative to the object or goal is negligible; if the object or goal is easily lost or is easily replaced, attitude changes are slight. If, however, the individual is emotionally involved with an object, a person, or a situation, and he holds it in high esteem, that is, values it greatly, he is deeply moved if it is lost or destroyed. When its replacement or duplication is difficult or impossible the attitude of an individual toward an object, person, or situation approaches that of an emotional stress (Crow, 1967).

Studies have shown that the individual generally has deepseated commitments to values of the family, religion, politics, his standard of living, or his country. His evaluation of these personal areas of his interests does not change from day to day. These evaluations may be considered ingredients of his "self-picture." They may be classified as his ego-involved attitudes. Many ego-involved attitudes are derived from the values and norms of one's
reference groups. As such, they are not transitory or easily changed. Changing one's attitude means changing him as a person--changing a part of himself as he has come to know himself relative to his social world (Sherif, Sherif and Negerball, 1965).

We may conclude, then, that each individual does possess a value system, that this value system is derived primarily within the framework of his reference groups, and that this value system does exert an enormous influence on the attitudes which he forms and adopts.

ATTITUDE MEASUREMENT

The measurement of attitudes, like the measurement of any abstract quality, is much more difficult and more prone to error than measurement of concrete, real objects. This statement should not be construed to mean that investigators of the abstract qualities of behavior have not developed accurate and reliable instruments for measuring these qualities.

A number of studies and investigations have been conducted to determine whether attitudes can be measured. From these studies have evolved three basic requirements to follow in developing an adequate technique for attitude assessment.

1. Indicators of the range of positions toward the object of the attitude that is encompassed by the individual's evaluative categories (acceptable or objectionable, in some degree).
2. Indicators of the individual's personal commitment to his own stand toward the object, that is, the degree of his ego-involvement with the issue.

3. Ways and means to insure that the individual responds in terms of his attitude toward the object rather than with what he thinks the investigator or other persons conceive as a socially desirable response (Sherif, Sherif and Nebergall, 1965).

Using these three basic requirements, attitude assessment researchers have devised three techniques which are widely used. Scaling is the most commonly used of these techniques. This technique utilizes the social distance scales devised by E. S. Bogardus in 1925 and reported by Sherif, Sherif and Nebergall, 1965. On the social distance scale there are social dimensions on which various positions are cumulative.

A second assessment technique, the Guttman technique, presents a model for scaling attitudes which uses a single score to reproduce responses to items on the scale. The model proposed by Guttman assumes that positions on an issue are cumulative, in the sense that an individual who agrees with one position will also agree with less extreme positions on the topic (Sherif, Sherif and Nebergall, 1965).

The third of the commonly used assessment techniques is the semantic differential technique, developed in 1957. This procedure, the type most often employed in attitude studies, consists of presenting a concept along with a set of evaluative scales, the end points of which are designated by polar adjectives--good-bad,
favorable-unfavorable, valuable-worthless. The respondent reacts to the concept by checking each evaluative scale, and his responses yield a single score indicating his average position on the favorable or unfavorable side (Sherif, Sherif and Nebergall, 1965).

Suedfeld (1971) agrees partially with Sherif, Sherif and Nebergall in listing commonly used assessment techniques, listing scaling as the most commonly used one, followed by the semantic differential technique.

Sherif, Sherif and Nebergall (1965) give three concepts which should be utilized in attitude assessment: (1) latitude of acceptance--the position on an issue most acceptable, (2) latitude of rejection--the position on an issue least acceptable, and (3) latitude of non commitment--the position not categorized as either acceptable or objectionable.

Accepting the premise that attitudes can be measured and assessed, Cook, Leeds, and Callis (1951) have developed a scale, the Minnesota Teacher Attitude Inventory, to measure teacher attitudes as they relate to students and to teaching generally. These authors indicate that their inventory was designed "to measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relations, and indirectly, how well satisfied he will be with teaching as a vocation."

Cronbach, writing in the Fourth Mental Measurements Yearbook, says of the Minnesota Teacher Attitude Inventory that patient and careful research preceded the publication of the Inventory. He stated that studies reported in the manual of instructions for the
Inventory clearly establish the fact that its validity has proven satisfactory. These studies show that there is a clear correspondence between Inventory scores and teaching behavior at the time the Inventory is given. In his comments relative to the reliability of the Inventory, Cronbach said that a split-half reliability of .93 has been established, while retest reliability during the first weeks of teaching experience is near .70 (Buros, 1953).

Regardless of the type of technique used or the specific instrument utilized, it is generally agreed that attitudes cannot be measured directly. Attitudes are inferred from an individual's behavior, his words, and his deeds. More specifically, attitudes are inferred from consistent patterns of behavior toward objects, or classes of objects (Sherif, Sherif and Nebergall, 1965). It is therefore more important to judge an individual's attitudes from what he does rather than from what he says.

Assessment inventories, then, should be carefully worded to insure that the respondent is not aware that his attitude is under investigation.

ATTITUDE CHANGES DURING STUDENT TEACHING

There is some evidence that changes in the attitudes of student teachers do take place during the student teaching experience. The difference between the pre-test and post-test responses of student teachers to items of an adaptation of the Minnesota Teacher Attitude Inventory was considered a measure of attitude changes of subjects in this study.
A number of studies were reviewed to assess the findings relating to attitude changes of student teachers during their student teaching experience. Summaries of some of these studies are reported here.

Sandgren and Schmidt (1956) report that the results of a study which they conducted involving 393 student teachers show that the mean score of student teachers increased from 42.6 on a pre-student teaching inventory to 54.3 on the same inventory at the completion of student teaching. They considered this increase in mean scores as being statistically significant. Student teachers in this study who had two terms of student teaching had higher second inventory scores than did those student teachers who had only one term of student teaching. These researchers concluded that attitudes of student teachers do improve during student teaching.

Kearney and Rocchio (1956) conducted a study of 291 elementary teachers to determine whether the type of teacher education institutions attended by elementary teachers related significantly to their ability to maintain a harmonious relationship with children. They found that teachers who graduated from universities had higher mean scores than graduates of teacher colleges, and that teacher college graduates had higher mean scores than graduates of liberal arts colleges. These researchers concluded "that there is obviously a complex relationship between concepts of teaching, other variables, and ultimate teacher-pupil relationships."
These relationships are reflected in the attitudes which teachers develop during the period of teacher preparation and during the beginning years of teaching.

Jacobs (1968) reports that findings in a study which he conducted using 1,007 students, 550 of whom were enrolled in professional education courses and 457 of whom were assigned to student teaching showed that significant changes in attitudes occurred in both phases of teacher education. Changes of respondents in the initial courses in professional education moved away from rigid and formalized attitudes toward more liberal points of view. Attitudes of student teachers changed from more liberal and democratic points of view toward more rigid and formalized attitudes.

Writing concerning changes that take place during the student teaching experience, Horowitz (1968) states:

When we compare the expectations and the perceptions of student teachers before and after student teaching experiences, we find that student teachers change in their attitudes toward teaching—even when the student teaching period is only two weeks in length.

These changes which take place during the student teaching experience may be attributed in part to the change in expectations of student teachers, and more specifically, to the differences between student teacher expectations and what he conceives as the supervising teacher's expectations of him.

In a study carried out to determine the effects of practice teaching on self-concept and attitudes in education students, Walberg and others (1968) found that in the category of controlling,
practice teachers scored higher after practice teaching; in the pupil-centered category, they scored low. Both scores are considered negative scores as they relate to the desirability of attitudes of teachers. These researchers, in explaining the probable reasons for the negative attitude formation say that "the beginning teacher, in conforming to the institutional role of the teacher, learns that she must maintain a status gap between herself and her children."

They further concluded that "practice teachers, during their period of practice teaching, become less 'pupil-centered' and 'egalitarian' and more 'controlling'."

Studies by other researchers have indicated that the student teaching experience does influence attitude formation and change of student teachers. Price (1961) discovered that the attitudes of student teachers changed considerably after their student teaching experience, and that these changes tended to be in the direction of the attitudes held by the classroom teachers with whom they worked. He found that in some instances even the teaching practices of the student teachers mirrored those of their supervising teachers. This finding is consistent with the findings of Crow (1967) who says that "when a person admires another person for an outstanding character trait, he is likely to accept all of that person's behavior."

Goodlad (1965) believes that a consensus of opinion exists on the extent to which the supervising teacher significantly molds the attitudes and methods of the student teacher, if only because the successful methods and techniques of the supervising teacher insure the survival of the student teacher.
Lipscomb (1965) offers further evidence of the supervising teacher's importance in attitude development of student teachers. He points out that student teachers generally identify closely with classroom teachers, and that the influence of these classroom teachers permeates the student teachers' attitudes and their interaction with classroom pupils with superior supervising teachers showing significantly greater effect than below average teachers.

SUMMARY

The review of the literature relative to attitudes and the effect that student teaching has on attitude formation and change has been presented in this chapter. The literature revealed some significant facts which have been used in the study.

Of particular significance is the general consensus that attitudes are learned, and that they are probably learned from experiences. Attitudes, then may be considered as linkages between past experiences and future behavior.

Important in determining the range and direction of attitude formation and change is the system of values to which one subscribes. Values relate to choices and choices are affected by one's feelings or beliefs.

Studies which have been conducted show that changes do take place in student teacher attitudes during the student teaching period. These changes are sometimes positive and sometimes negative. The greatest changes in student teacher attitudes perhaps result
from the influences exerted by the supervising teacher, for it is during the student teaching experience that the student teacher bridges the gap between the roles of the student and that of the teacher.

The literature has substantially supported the contention that attitudes can be measured, and that they can be measured with a high degree of reliability. A number of studies have verified both the validity and the reliability of the Minnesota Teacher Attitude Inventory, the basic measuring instrument used in this study.
Chapter 3

PROCEDURES

SELECTION OF STUDENT TEACHERS

All of the students who were assigned to student teaching at Southern University during the spring semester of 1973 were originally chosen as subjects for this study. A total of 280 persons--79 elementary student teachers, and 201 secondary student teachers--was enrolled in the student teaching program during this semester.

The socio-economic level of each student teacher was determined, based on the occupation of his father or other male guardian, and using the National Opinion Research Center Occupational Prestige Ratings, United States, 1965 (Bertrand, 1967). Three general socio-economic levels were used: upper, middle, and low. Students whose parents' or guardians' occupations were within the upper third bracket of the National Opinion Research Center's occupations listings were placed in the "upper" socio-economic level. Those students whose parents' or guardians' occupations were within the middle third of the listings were placed in the "middle" socio-economic level. Those students whose parents' or guardians' occupations were in the bottom third of the listings were placed in the "low" socio-economic level.

Data collected from the measuring instrument administered to the student teachers were used to determine the nature of attitude changes of these student teachers.
Because all of the students who were assigned to student teaching at Southern University during the 1973 spring semester were subjects in this study, all of the public schools of East Baton Rouge Parish which were cooperating schools during the spring semester participated in the study. Cooperating public schools are chosen for participation in the student teaching program through the cooperative efforts of personnel of the teacher education program at the University and representatives of the Central Office staff of the East Baton Rouge Parish public school system. Supervising teachers in these cooperating schools are selected through this same cooperative process. During the semester in which this study was conducted, a total of 44 public schools furnished 115 supervising teachers for the student teaching program.

In addition, the Southern University Laboratory School, a department in the teacher education program at Southern University, furnished 30 supervising teachers. The total number of participating schools was 45, while the total number of supervising teachers was 145.

The Southern University Laboratory School and each of the cooperating schools to which the student teachers were assigned, were placed into one of the following categories.

1. White community environment - a situation in which a school formerly enrolled white students only. This school now has a
membership in which blacks make up less than 10 percent of the enrollment. It is located in a predominantly white neighborhood.

2. Black community environment - a situation in which a school formerly enrolled black students only. This school now has a membership in which whites make up less than 10 percent of the enrollment. It is located in a predominantly black neighborhood.

3. Transition community environment - a situation in which a school formerly enrolled only white or black students. This school now has a membership which includes a minimum of 10 percent of the minority race. The racial composition of the community may be either predominantly white or predominantly black.

4. College community environment - a situation in which a school is located on a college campus. In this study, the Southern University Laboratory School exists in such an environment.

The Louisiana State Board of Education has approved the criteria for certifying supervising teachers. Most of the supervising teachers participating in this study were properly certified as supervising teachers by the State Department of Education.

The period of student teaching at Southern University lasted for ten weeks during the spring semester of the 1972-73 school session.

SELECTION OF ATTITUDE MEASURING INSTRUMENT

A basic assumption of this study was that attitudes can be reliably measured. Most specifically, this study has assumed that
attitudes of student teachers can be measured, and that changes in attitudes during a particular period can be determined by measuring attitudes at the beginning of the period and again at the end of that period. Any difference between attitude scores would be considered a measure of attitude changes.

A review of the literature into the reliability of attitude assessment and measurement revealed that there are instruments which have proven reliable and trustworthy for the researcher in gathering data. The Minnesota Teacher Attitude Inventory is the one measuring instrument which is most widely quoted in the literature as being highly reliable, and easily administered (Callis, 1953; Chappell and Callis, 1954; Cook, Leeds and Callis, 1951; Buros, 1953; Kearney and Rocchio, 1956; Rocchio and Kearney, 1955; Scott and Brinkley, 1960; and Sandgren and Schmidt, 1956). The Minnesota Teacher Attitude Inventory was therefore chosen as the basic instrument to be used in measuring attitude changes in this study. Its choice was made on the basis of research findings which say the the Inventory is suitable in determining interpersonal relationships between teachers and students, and how well satisfied a prospective teacher will be with teaching. Data collected from the Inventory can be used to determine the amount as well as the direction of attitude changes. The difference between the pre-test and the post-test scores of each respondent was used to determine the amount as well as the direction of attitude changes. Positive difference scores indicated positive attitude changes; negative difference scores indicated negative attitude changes. It has been established
that the **Inventory** has a high level of reliability and is easily administered (Cook, Leeds and Callis, 1951).

The instrument which was actually used to assess and measure attitude changes in this study was an adaptation of the *Minnesota Teacher Attitude Inventory*. Because the *Minnesota Teacher Attitude Inventory* was constructed in 1951, and has not been revised since, it was felt that it may contain items which are no longer relevant.

The following procedure was therefore used in constructing this adaptation of the *Inventory*. Six persons were asked to read the 150 items contained in the *Inventory*. These six persons included three who had recently completed their student teaching assignment, one college supervisor, one supervising teacher from the East Baton Rouge Parish public school system, and one supervising teacher from the Southern University Laboratory School. After reading the items in the *Minnesota Teacher Attitude Inventory*, each person identified those items which he felt were not consistent with current philosophy and objectives in teaching. Items which three or more of these persons listed as being unsatisfactory were eliminated from the instrument. Nine items were eliminated, leaving a total of one hundred forty-one items in the adapted *Inventory*. These nine items were not actually removed from the listing on the *Inventory*. Instead, they were not scored during the scoring process. The nine items identified for elimination are listed in Appendix A.

This adapted version was used to determine if any attitude changes had taken place between the first and second administrations of the *Inventory*. Responses to the *Inventory* items were recorded on
answer sheets by checking one response on a five-point scale—strongly agree; agree; uncertain or undecided; disagree; or strongly disagree.

The adaptation of the Minnesota Teacher Attitude Inventory is virtually a self-administering instrument. The directions, printed on the front page of the Inventory booklet, are read by the respondents who proceed to answer the Inventory items. There is no time limit, but each respondent is encouraged to work as rapidly as he can and to respond, based on the first impression to each item, rather than pondering over items for any period of time. The Inventory can be completed in an average time of twenty-five minutes.

There are no "right" or "wrong" answers to the Inventory items. Answers are either in agreement or disagreement, at two levels of agreement or disagreement, or the respondent may indicate that he is undecided as to agreement or disagreement. However, to avoid a change in accepted terminology, the authors of the Inventory use the terms "rights" and "wrongs" on the scoring keys to identify the keys for hand scoring of the Inventory (Cooks, Leeds and Callis, 1951).

The adapted version of the Minnesota Teacher Attitude Inventory has a score range of plus 141 to minus 141. Each response which is in agreement with currently accepted practices in teaching receives a value of plus one, and each response which is in disagreement with currently accepted practices in teaching receives a value of minus one. A response which indicates that the respondent is
undecided receives a zero value. The algebraic sum of the plus and minus responses becomes the respondent's score for the Inventory. This score may be positive or negative, and indicates a positive or negative attitude toward teaching. The difference between each respondent's pre-test and post-test score determines if there has been an attitude change, and whether any change which occurred was positive or negative. A positive difference score indicates a positive attitude change; a negative difference score indicates a negative attitude change.

In his analysis of the Minnesota Teacher Attitude Inventory, Downie (1958) wrote that a respondent who scores high on the scale can be assumed to be one who understands students and who should be able to work harmoniously with them. A child-centered atmosphere is most often found in the classroom where this type of teacher is found. Downie reports also that the teacher who scores high on the scale will most likely be one who is satisfied with teaching as a profession. The teacher who scores low on the scale generally has a teacher-dominated classroom atmosphere, and often expresses sentiments which suggest that he is unhappy in his role as a teacher.

Downie concludes that the scores of students who have been administered the Minnesota Teacher Attitude Inventory increase as they progress through a program of teacher education. Apparently, the individual's score reflects his learning of specific attitudes in his methods and psychology courses.

Ofchus and Gnagey (1963) reported that a majority of the attitudes measured by the Minnesota Teacher Attitude Inventory are
expressed daily by the character of the instructor's reaction to, and his interaction with, those students enrolled in his classes.

Norms for various groups have been established for the Inventory by the authors. However, since the norms were not used in this study, the elimination of nine items from the original Inventory should not affect its validity nor its reliability.

ADMINISTRATION

The 280 students enrolled in student teaching at Southern University during the spring semester of 1973 were selected as subjects in this study and for administering the adaptation of the Minnesota Teacher Attitude Inventory. The semester began in February. Applications for assignment to student teaching were received and processed by personnel in student teaching, assignments were made, and a general seminar for all students enrolled in student teaching was scheduled for March 16, 1973. At this seminar the first administration of the adapted Inventory was made. A brief introductory statement was made to the students relative to the author's purpose for administering the Inventory and the importance of following the printed instructions carefully. The purpose given was to collect data which were to be used in completing a study. At no time were the respondents advised that the Inventory was designed to assess their attitudes toward students and toward teaching. Following this brief oral presentation, Inventory booklets and answer sheets with attached data sheets were passed out. The
booklets and answer sheets with attachments were collected after the students had completed the **Inventory**. Some student teachers were absent during this initial seminar when the **Inventory** was administered. Copies of the **Inventory** booklet with answer sheets, along with individual data sheets were mailed to supervising teachers in the schools to which absent student teachers were assigned. Accompanying these materials were a letter addressed to the supervising teacher outlining her role in getting the **Inventory** completed, and a letter addressed to the student teacher explaining briefly the need for the data which the **Inventory** would give and soliciting his cooperation in the completion and return of the **Inventory** booklet, the completed answer sheet, and the completed data sheet. Included also was a sheet of instructions for completing the **Inventory** and the accompanying data sheet. The materials sent to the supervising teachers for distribution to student teachers were to be returned not later than the end of the first week of assignment of student teachers to the classroom.

At the completion of the classroom phase of student teaching, the adapted version of the **Minnesota Teacher Attitude Inventory** was again administered to student teachers, during their final seminar on May 4, 1973. The same procedure used during the first administration of the **Inventory** was followed during the second administration. During the following week efforts were made to have students who were absent during the final seminar to complete the adapted **Inventory**.
After eliminating answer sheets of some respondents who did not complete all of the items of the Inventory, it was determined that a total of 254 of the 280 students enrolled in student teaching had completed the Inventory during the first and the second administration.

ANALYSIS OF INVENTORY DATA

The two inventories for each of the 254 student teachers were scored, yielding pre-test and post-test scores. Pre-test and post-test means of these raw scores were calculated. The difference between these two means was used to determine if there had been attitude changes in the various sub-groups of student teachers, as well as in the total group. The size of the mean difference was an indication of the amount of attitude changes which occurred. A positive mean difference indicated a positive attitude change; a negative mean difference indicated a negative attitude change. The use of mean differences to determine attitude changes does not determine the significance of any changes.

From the pre-test and post-test scores, a D score was determined for each student teacher. A D score is the score which is the difference between the pre-test and the post-test score of each respondent. The calculation of this score was necessary since it had been determined that the t-test would be the statistical tool which would be used in making an analysis and interpretation of the data collected in this study. The t-test is one which is widely used
in determining the significance of changes which take place within groups and between groups in studies such as this one. The 0.05 confidence level was used in determining the significance of t-values calculated.

Two types of comparisons were made in the study--comparisons involving correlated or paired means (intra-group comparisons), and comparisons involving independent means (inter-group comparisons). This study also refers to comparisons of correlated or paired means as "within-group" comparisons, and comparisons of independent means as "between-group" comparisons.

Intra-group comparisons of attitude changes of student teachers were made of the following:

1. The total group.
2. Student teachers assigned to predominantly white schools.
3. Student teachers assigned to predominantly black schools.
4. Student teachers assigned to transition schools.
5. Student teachers assigned to a college community school.

Inter-group comparisons of attitude changes of student teachers were made of the following:

1. Between elementary and secondary student teachers.
2. Between rural and urban student teachers.
3. Between male and female student teachers.
4. Among student teachers with different socio-economic backgrounds.
   a. Between student teachers of the upper and middle socio-economic levels.
b. Between student teachers of the upper and low socio-economic levels.

c. Between student teachers of the middle and low socio-economic levels.

Through the use of the statistical methods mentioned above, this study has proposed to determine:

1. If there were evidences that attitude changes took place during the student teaching experience.

2. Whether any attitude changes which occurred were positive or negative.

3. Whether any attitude changes which occurred were significant.

SUMMARY

The purpose of this chapter was to present the procedures followed in this study. Procedures were outlined for the selection of student teachers, the selection of cooperating schools and supervising teachers, the selection of an attitude measuring instrument, and for analyzing the data collected with the use of this measuring instrument.

A total of 254 student teachers, 145 supervising teachers, and 45 cooperating schools participated in the study. An adaptation of the Minnesota Teacher Attitude Inventory was administered to each student teacher at the beginning of the student teaching period and again at the end of this period. Analyses of Inventory responses
were made to determine whether attitude changes occurred during the period of student teaching and whether any changes which occurred were positive or negative.

The difference between the pre-test and post-test Inventory scores was calculated and statistically treated to determine the significance of changes in attitudes which occurred during the student teaching period. The \( t \)-test was the statistical tool used in this study for the test of significance. The 0.05 confidence level was used in testing for significance.

The findings which resulted from this study are presented in Chapter 4.
Chapter 4

STATISTICAL ANALYSIS OF DATA

INTRODUCTION

The purpose of this chapter is to record the data which have been gathered and analyzed, in accordance with the procedures outlined in Chapter 3. The t-test was the statistical technique used for testing for significance of attitude changes. The 0.05 confidence level was used for rejecting or accepting the null hypotheses. Two types of comparisons of attitude changes were made: comparisons involving correlated or paired means (intra-group or within-group comparisons), and comparisons involving independent means (inter-group or between-group comparisons). The findings which were derived from an analysis of the data collected in this study are presented in the categories as follow:

1. Changes of attitudes within groups
2. Changes of attitudes between groups

The statement of the null hypotheses in Chapter 1 of this study determined whether the comparisons were within-group or between-group ones.

CHANGES OF ATTITUDES WITHIN GROUPS

Comparisons of attitude changes within several sub-groups of student teachers were made. These attitude changes were determined
from pre-test and post-test scores of the student teachers. The difference between pre-test and post-test scores was considered a measure of change.

As pointed out earlier, the $t$-test was used to determine the significance of attitude changes reflected by the mean differences of pre-test and post-test scores. In calculating the $t$-value, two different formulas were used in testing mean differences. One formula was used for testing mean differences of related or paired means. Another formula was used when testing mean differences of independent means. For testing mean differences of paired or related means, these steps were followed:

1. First, the standard deviation (SD) of the distribution of the differences ($SD_D$) of the sample was computed, using the following formula:

\[
SD = \sqrt{\frac{\sum D^2}{N} - \overline{X_D}^2}
\]

\[
SD = \text{Standard deviation of the } D \text{ scores}
\]
\[
D = \text{Difference scores } (X_1 - X_2)
\]
\[
\overline{X_D} = \text{Mean of the differences}
\]

Then the standard error of the differences for the sample was computed by the formula:

\[
SE_D = \frac{SD_D}{\sqrt{N - 1}}
\]

\[
SE_D = \text{Standard error of the mean difference}
\]
\[
SD_D = \text{Standard deviation of the differences}
\]
\[
D = \text{Difference scores } (X_1 - X_2)
\]

\footnote{For a more complete explanation of the processes involved in computing $t$, see Spence and others, Elementary Statistics, 2nd ed. New York: Appleton-Century-Crofts, 1968, pp. 142-43.}
The final step was to compute $t$ using the formula:

$$t = \frac{\bar{D}}{SE_{D}}$$

$\bar{D} = \text{Mean of the differences}$

$SE = \text{Standard error of the mean difference}$

$D = \text{Difference scores (}X_1 - X_2\text{)}$

Using this sequence of formulas, within-group comparisons were made of the following groups of student teachers: the total group; student teachers assigned to predominantly white schools; student teachers assigned to predominantly black schools; student teachers assigned to transition schools; and student teachers assigned to a school in a college community environment. The results of these comparisons are outlined in the section which follows.

**Total Group Attitude Changes**

A first concern of this study was to determine if any attitude changes had taken place in student teachers during the student teaching experience, and to determine whether any changes which may have occurred were positive or negative. From this concern the following null hypothesis was proposed: No significant attitude changes take place in student teachers during their student teaching experience.

To determine whether or not there were attitude changes, pre-test and post-test means were calculated using the raw scores of individual student teachers. Subtracting the post-test mean ($M_2$) from the pre-test mean ($M_1$) yielded a result which indicated attitude changes, and the direction of these changes, that is, positive or negative.
Table 1 shows the pre-test and the post-test means and the differences between means of the total group of student teachers and of the sub-groups for whom intra-group (within-group) comparisons were made. Information contained in this table shows that for the total group and for each of the sub-groups the post-test mean was lower than the pre-test mean, indicating not only that changes in attitudes had occurred, but that these changes were negative. The pre-test mean for the total group was 85.14; the post-test mean was 80.40. The mean difference for the total group was -4.74. This indicated that a mean attitude score change of minus 4.74 took place during the period of student teaching.

Table 1

Mean Attitude Changes of Student Teachers for Whom Intra-Group Comparisons Were Made

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Pre-test Mean (M₁)</th>
<th>Post-Test Mean (M₂)</th>
<th>M₁-M₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predominantly White</td>
<td>20</td>
<td>77.30</td>
<td>71.65</td>
<td>-5.65</td>
</tr>
<tr>
<td>Predominantly Black</td>
<td>109</td>
<td>89.43</td>
<td>85.30</td>
<td>-4.13</td>
</tr>
<tr>
<td>Transition</td>
<td>71</td>
<td>83.77</td>
<td>77.77</td>
<td>-6.00</td>
</tr>
<tr>
<td>College Community</td>
<td>54</td>
<td>80.50</td>
<td>77.87</td>
<td>-2.63</td>
</tr>
<tr>
<td>Total Group</td>
<td>254</td>
<td>85.14</td>
<td>80.40</td>
<td>-4.74</td>
</tr>
</tbody>
</table>

The largest mean change (-6.00) occurred in the transition school sub-group; the smallest mean change (2.63) occurred in the college community sub-group. Although the data indicated that changes in attitudes did occur in these groups during the student teaching
experience, and that these changes were negative, data presented in Table 1 do not tell whether these changes were significant or not.

However, when the $t$-test was used with the data for the total group, a $t$-value of 4.57 was obtained. At the 0.05 confidence level, the attitude change for the total group of student teachers was considered as being significant. The null hypothesis was rejected and significant changes in student teacher attitudes did take place during the period of student teaching. Data showing the significance of attitude changes for student teachers for whom intra-group comparisons were made are illustrated in Table 2.

Table 2

Student Teacher Attitude Changes in Schools
Classified on the Basis of Community Environment

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>$\overline{D}$</th>
<th>$SD_D$</th>
<th>$SE_D$</th>
<th>$t$</th>
<th>Significant at 0.05 level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predominantly White Schools</td>
<td>20</td>
<td>7.55</td>
<td>28.69</td>
<td>6.58</td>
<td>1.15</td>
<td>No</td>
</tr>
<tr>
<td>Predominantly Black Schools</td>
<td>109</td>
<td>4.30</td>
<td>27.27</td>
<td>2.62</td>
<td>1.64</td>
<td>No</td>
</tr>
<tr>
<td>Transition Schools</td>
<td>71</td>
<td>7.94</td>
<td>24.13</td>
<td>2.88</td>
<td>2.76</td>
<td>Yes</td>
</tr>
<tr>
<td>College Community Schools</td>
<td>54</td>
<td>3.43</td>
<td>24.08</td>
<td>3.31</td>
<td>1.04</td>
<td>No</td>
</tr>
<tr>
<td>Total Group</td>
<td>254</td>
<td>7.26</td>
<td>25.22</td>
<td>1.59</td>
<td>4.57</td>
<td>Yes</td>
</tr>
</tbody>
</table>

$\overline{D}$ = Mean of differences (of $D$ scores)
$SD_D$ = Standard deviation from the mean of the differences
$SE_D$ = Standard error of the mean of the differences
From the data presented in Table 2 it may be concluded that changes in attitudes in student teachers did take place during the period of student teaching, that these changes were significant, that they were negative, and that they may be attributed to some factors in the student teaching experience.

**Attitude Changes in Predominantly White Schools**

A second concern of this study was to determine if significant attitude changes had occurred in student teachers who were assigned to predominantly white schools. The sub-hypothesis for this sub-group was: There is no significant difference between pre-test and post-test attitude scores of student teachers assigned to predominantly white schools. Data on this sub-group of student teachers were collected and statistically treated. Table 2 gives information which shows a \( t \)-value of 1.15 for attitude changes of student teachers in this sub-group. This \( t \)-value of 1.15, when compared with the probability table, was not significant at the 0.05 level of confidence. The null hypothesis was not rejected. The fact that student teachers were assigned to schools that were predominantly white had no significant bearing on the changes in attitudes which occurred in these student teachers.

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2The probability table shows the values of \( t \) corresponding to various levels of probability, for any given degree of freedom, and may be found in the appendix in most elementary statistics texts.
Attitude Changes in Predominantly Black Schools

A third concern of this study was to determine if significant attitude changes had occurred in student teachers who were assigned to predominantly black schools. The null hypothesis as applied here, was that there is no significant difference between pre-test and post-test attitude scores of student teachers assigned to predominantly black schools. When reference is made to Table 2, data are revealed which show a t-value of 1.64 for attitude changes which took place in student teachers who were assigned to predominantly black schools during their student teaching experience.

When the t-value of 1.64 shown in Table 2 was compared with the probability table, it was found not to be significant at the 0.05 level of confidence. The null hypothesis was not rejected. The interpretation which was made from this finding was that the changes which did occur in student teachers who were assigned to predominantly black schools resulted from some factors other than the racial composition of the school or the school community. The fact that student teachers were assigned to such schools had no significant effects on their attitude changes, if the results revealed by this study are accepted as valid.

Attitude Changes in Transition Schools

A fourth concern of this study was to determine if any significant attitude changes had taken place in student teachers who were assigned to transition schools. The null hypothesis for this
sub-group was: There is no significant difference between pre-test and post-test attitude scores of student teachers assigned to transition schools. The data which were collected for this sub-group of student teachers were statistically treated and analyzed. Data used to determine the significance of attitude changes are recorded in Table 2. The data contained in this table show that a t-value of the change which took place in student teachers in this group was 2.76. The change represented by this t-value was a significant one, for when it was compared with the probability table, it was revealed that this value was significant at the 0.05 level of confidence. For this sub-group, the null hypothesis was rejected, and it may be concluded that the study produced evidences that changes did occur in the attitude of student teachers assigned to transition schools, and that these changes were significant. The significance of changes led to the conclusion that the attitude changes which occurred were related to the racial composition of the school or the school community.

**Attitude Changes in a College Community School**

A fifth concern of this study was to determine if any attitude changes had taken place in student teachers who were assigned to a school in a college community environment. The statement of the null hypothesis was as follows: There is no significant difference between pre-test and post-test attitude scores of student teachers assigned to a college community school. The one school included in this study which fits into this category is the Southern University Laboratory School.
Data for the fifty-four student teachers who were assigned to this school were collected and analyzed. The results of the statistical treatment of this data are recorded in Table 2. Following the pattern used for treating the data for the other sub-groups, the \( t \)-test was applied to the data collected. The \( t \)-value of 1.04 which Table 2 shows for the attitude changes for student teachers assigned to a school in a college community environment, when compared to the probability table, showed that the change was not significant at the 0.05 level of confidence. The null hypothesis was accepted. Although there were evidences of attitude changes within this group of student teachers, this study indicated that there was little likelihood that these changes in attitudes were due to the environmental conditions of the school to which the student teachers were assigned. Any changes which did occur would more correctly be attributed to some conditions outside the scope of this study.

School Community Characteristics and Attitude Changes

An examination of Table 2 showed that when the \( t \)-test was applied to the data collected for predominantly white schools, predominantly black schools, transition schools, and the college community school, significant attitude changes had occurred within only one sub-group. When the \( t \)-values of 1.15 for the student teachers assigned to predominantly white schools, 1.64 for those student teachers assigned to predominantly black schools, 2.76 for those student teachers assigned to transition schools, and 1.04 for those student teachers assigned to a college community school were
compared with the probability table, it was found that the $t$-value of 2.76 for attitude changes in transition schools was the only one which was significant at the 0.05 level of confidence. According to the information revealed by this study, the community characteristics of the schools to which these student teachers were assigned was a significant factor in attitude changes in transition schools only. It may be concluded from this study that the community environment, as determined by the racial composition of the school community, affects attitude changes of student teachers only when they are assigned to transition schools.

CHANGES OF ATTITUDES BETWEEN GROUPS

Efforts were made to make comparisons of attitude changes, as determined by pre-test and post-test scores, between pairs of subgroups of student teachers. These inter-group comparisons were made between: elementary and secondary student teachers; rural and urban student teachers; upper and middle, upper and low, and middle and low socio-economic level student teachers; and male and female student teachers. Before turning to the task of determining the significance of changes between these groups, this study presents in Table 3 data which show the mean changes in student teacher attitudes for the comparison groups listed above. These mean changes are the differences between pre-test and post-test means of the student teachers. As pointed out earlier in this study, the difference score between pre-test and post-test scores would be considered a measure of attitude
changes which took place during the period in which the student teachers were assigned to student teaching.

Table 3

Mean Attitude Changes of Student Teachers for Whom Inter-Group Comparisons Were Made

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Pre-test Mean (M₁)</th>
<th>Post-test Mean (M₂)</th>
<th>M₁ - M₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>66</td>
<td>89.30</td>
<td>85.12</td>
<td>-4.18</td>
</tr>
<tr>
<td>Secondary</td>
<td>188</td>
<td>83.72</td>
<td>78.72</td>
<td>-5.00</td>
</tr>
<tr>
<td>School Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>70</td>
<td>81.92</td>
<td>77.70</td>
<td>-4.22</td>
</tr>
<tr>
<td>Urban</td>
<td>184</td>
<td>86.42</td>
<td>81.06</td>
<td>-5.36</td>
</tr>
<tr>
<td>Socio-Economic Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>42</td>
<td>90.64</td>
<td>88.48</td>
<td>-2.16</td>
</tr>
<tr>
<td>Middle</td>
<td>101</td>
<td>82.78</td>
<td>78.28</td>
<td>-4.50</td>
</tr>
<tr>
<td>Low</td>
<td>111</td>
<td>85.29</td>
<td>79.30</td>
<td>-5.99</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>62</td>
<td>86.66</td>
<td>80.98</td>
<td>-5.68</td>
</tr>
<tr>
<td>Female</td>
<td>192</td>
<td>84.70</td>
<td>80.22</td>
<td>-4.48</td>
</tr>
</tbody>
</table>

Data presented in Table 3 show that there were attitude changes which took place during the student teaching experience for each group of student teachers for whom between-group comparisons were made. For each of the sub-groups these attitude changes were negative. The greatest amount of change (-5.99) occurred in the low socio-economic sub-group, while the least amount of attitude change (-2.16) occurred in the upper socio-economic sub-group. The greatest and the least amounts of attitude changes occurred within sub-groups classified on
the basis of the socio-economic background of the student teachers. The purpose of these data was to show whether attitude changes occurred. These data did not show whether attitude changes were significant, and therefore related to the variables listed.

To determine the significance of attitude changes that occurred between sub-groups reported in this section of the study, calculations of the t-value of the changes between groups were made. The calculations involved determining the difference between mean differences of the two variables being compared. The formula for determining the t-value for testing mean differences of independent means is listed below.\(^3\)

\[
t = \sqrt{\frac{D_1^2 + D_2^2}{N_1 + N_2 - 2}} \left( \frac{1}{N_1} + \frac{1}{N_2} \right)
\]

\(M_1\) = Mean of difference scores, variable X 
\(M_2\) = Mean of difference scores, variable Y 
\(D\) = Difference score (score X minus score Y) 
\(D_1\) = Difference score of variable X 
\(D_2\) = Difference score of variable Y 
\(N_1\) = Number of scores of variable X 
\(N_2\) = Number of scores of variable Y 

The findings resulting from the comparisons made of the various paired groups listed in Table 3 are recorded in the section of the report of this study which follows.

**Attitude Changes of Elementary and Secondary Student Teachers**

A sixth concern of this study was to determine if there were any significant attitude changes between elementary and secondary students.\(^3\) For a more detailed explanation of the processes involved in computing t, see Runyon and Haber, *Fundamentals of Behavioral Statistics*. Reading, Massachusetts: Addison-Wesley Publishing Co., 1971, pp. 197-98.
student teachers who participated in this study. The statement of the null hypothesis was: There is no difference between the change of attitude scores of elementary and secondary student teachers. The calculation of $t$ from the data collected from the subjects yielded a $t$-value of .22 for the student teachers included in this category. The data used for calculating the $t$-value for the 254 elementary and secondary student teachers included in the study are presented in Table 4. As shown in Table 4, the result of a comparison of the $t$-value of .22 with the probability table indicated that this value of $t$ at the 0.05 level of confidence was not significant. Because the change was not a significant one, the null hypothesis was accepted. Even though there were changes in attitudes between these two groups of student teachers, the fact that the changes were not significant would lead to the conclusion that assignment of student teachers at the elementary or secondary levels was not a

Table 4
Attitude Changes of Elementary and Secondary Student Teachers

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>$\bar{D}$</th>
<th>$M_1 - M_2$</th>
<th>$t$</th>
<th>Significant at 0.05 level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>66</td>
<td>4.17</td>
<td>.97</td>
<td>.22</td>
<td>No</td>
</tr>
<tr>
<td>Secondary</td>
<td>188</td>
<td>5.14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$\bar{D} =$ Mean of difference scores  
$M_1 =$ Mean difference of variable $X$  
$M_2 =$ Mean difference of variable $Y$
factor in the attitude changes which occurred. What caused these attitude changes during the student teaching experience were some factors which were not identified by this study.

**Attitude Changes of Rural and Urban Student Teachers**

The seventh concern of this study was to determine if there were any significant attitude changes between the rural-urban category of student teachers. The designations "rural" or "urban" were based on the location of the high schools attended by the student teachers rather than the location of the school to which they were assigned for student teaching experiences. The null hypothesis was stated as follows: There is no difference between the change of attitude scores of student teachers with rural and urban backgrounds. Data collected from these student teachers with rural or urban backgrounds were used to determine the t-value of the changes which took place between these two groups. When the t-test was applied to the data collected, a t-value of .91 was obtained. This value was compared to the table of probability. From this comparison it was determined that the change in attitudes which took place between student teachers with rural and urban secondary school backgrounds was not significant at the 0.05 confidence level. On the basis of this finding, the null hypothesis was not rejected. Although it was determined that there were attitude changes which occurred in these groups during the student teaching experience, the changes were not statistically significant, and therefore, were not the result of the
fact that the student teachers attended secondary schools that were located in rural or urban areas.

The results of the findings as they relate to student teachers with rural and urban secondary school backgrounds are presented in Table 5.

Table 5

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>$\bar{D}$</th>
<th>$M_1 - M_2$</th>
<th>t</th>
<th>Significant at 0.05 level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>70</td>
<td>2.29</td>
<td>3.53</td>
<td>.91</td>
<td>No</td>
</tr>
<tr>
<td>Urban</td>
<td>184</td>
<td>5.82</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Socio-Economic Background and Attitude Changes

The eighth concern of this study was to determine the significance of attitude changes of student teachers of different socio-economic backgrounds. The null hypothesis was: There is no significant difference between the change of attitude scores of student teachers with different socio-economic backgrounds. Data were collected for three socio-economic background groups: upper, middle and low. The basis for placement of student teachers into one of these three categories was the occupation of the father or guardian. The data from these groups were statistically treated to determine if any significant attitude changes took place between: upper and middle
socio-economic levels; upper and low socio-economic levels; and middle and low socio-economic levels. Table 6 presents data which show the significance of the changes between attitude scores of student teachers in the upper and middle socio-economic levels.

### Table 6

**Attitude Changes of Student Teachers of Different Socio-Economic Levels: Upper and Middle**

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>$\overline{D}$</th>
<th>$M_1 - M_2$</th>
<th>t</th>
<th>Significant at 0.05 level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>42</td>
<td>1.93</td>
<td>2.97</td>
<td>.787</td>
<td>No</td>
</tr>
<tr>
<td>Middle</td>
<td>101</td>
<td>4.90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When the $t$-test was applied to the data collected from the student teachers of these two socio-economic levels, a $t$-value of .787 resulted. When this $t$-value was compared to the probability table, it was revealed that there was no significant difference of attitude changes between student teachers of the upper and middle socio-economic levels. The 0.05 level of confidence was used in testing for significance. The null hypothesis therefore was not rejected.

When comparing the attitude changes between the upper and low socio-economic levels of student teachers, the same procedure was followed as that used for comparing upper and middle and middle and low socio-economic levels. Table 7 presents data which show a $t$-value of 1.32 for the attitude changes which occurred between the
upper and the low socio-economic levels of student teachers. A comparison of this $t$-value with the probability table showed that at the 0.05 confidence level this value was not significant.

Table 7

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>$\bar{D}$</th>
<th>$M_1 - M_2$</th>
<th>$t$</th>
<th>Significant at 0.05 level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>42</td>
<td>1.93</td>
<td>4.84</td>
<td>1.32</td>
<td>No</td>
</tr>
<tr>
<td>Low</td>
<td>111</td>
<td>6.77</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The changes which occurred between the 153 student teachers who made up the upper and low socio-economic groups, according to the findings of this study, were not the result of their socio-economic backgrounds. This statement results from the conclusion that socio-economic backgrounds considered in this study were not significant in the changes of attitudes which did occur.

The final comparison for socio-economic groups was made between the middle and the low socio-economic groups. Table 8 contains the data that have been presented as evidences of attitude changes between these two groups.

When the $t$-test was used with the data collected for these two sub-groups of student teachers, a $t$-value of .50 was calculated for the attitude changes which took place between the student teachers of the middle and the low socio-economic groups. A comparison of this
Table 8

Attitude Changes of Student Teachers of Different Socio-Economic Levels: Middle and Low

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>$\bar{D}$</th>
<th>$M_1 - M_2$</th>
<th>t</th>
<th>Significant at 0.05 level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle</td>
<td>101</td>
<td>4.90</td>
<td>1.87</td>
<td>.50</td>
<td>No</td>
</tr>
<tr>
<td>Low</td>
<td>111</td>
<td>6.77</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The t-value with the probability table showed that at the 0.05 confidence level it was not significant. The null hypothesis, therefore, was not rejected. This finding showed that membership in either the middle or the low socio-economic levels apparently did not significantly affect attitude changes which occurred during student teaching.

Between the three pairings which were made of the socio-economic levels of the student teachers in this study, there were no evidences that significant changes had taken place during the student teaching experience. The conclusion may be reached that this study has produced no evidences that the socio-economic level of student teachers significantly influenced attitude changes which occurred during the period of student teaching.

**Attitude Changes of Male and Female Student Teachers**

A ninth and final concern of this study was to determine if any significant changes had taken place between male and female student teachers who participated in the study. The null hypothesis was: There is no significant difference between the change of attitude
scores of male and female student teachers. Table 9 shows the data which have been used in determining the significance of changes which occurred for male and female student teachers during student teaching.

Table 9

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>$\bar{D}$</th>
<th>$M_1 - M_2$</th>
<th>t</th>
<th>Significant at 0.05 level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>62</td>
<td>13.71</td>
<td>8.48</td>
<td>1.86</td>
<td>No</td>
</tr>
<tr>
<td>Female</td>
<td>192</td>
<td>5.32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From Table 9 it may be determined that a $t$-value of 1.86 was calculated for the attitude changes which took place between the male and female student teachers in this study. The comparison of this $t$-value with the probability table showed that at the 0.05 confidence level there was no significance in the attitude changes which took place. The null hypothesis for this sub-group was accepted. From the results of this study it may be concluded that the fact that a student teacher happened to be male or female had no significant bearing on any attitude changes that occurred during student teaching. There were changes in attitudes, but there was no evidence to support the assumption that these changes had a significant relationship to the sex of the participants in the study.
SUMMARY

Data presented in this chapter have shown that there were attitude changes which occurred in student teachers during the student teaching experience. These changes were negative. This was true for the total group of student teachers and for each of the subgroups for which pre-test and post-test scores were collected and analyzed. When the t-test was applied to the data collected from the various groups of student teachers, it was found that the changes in their attitudes were significant for the total group and for those student teachers assigned to transition schools. For the total group, a t-value of 4.57 was calculated. A t-value of 2.76 was calculated for the transition school group. A comparison of these t-values with the probability table showed significance at the 0.05 level for the total group as well as for the transition school sub-group. The null hypotheses for these two groups were rejected since attitude changes were found to be significant. These findings permit the conclusion to be drawn that significant changes which took place during the student teaching experience were due to some factors directly related to student teaching. However, when the t-test was applied to the twelve remaining sub-groups which participated in the study, it was determined that the attitude changes for each of these sub-groups were not significant. For these remaining sub-groups then, the study did not present data which would support a belief that changes in the attitudes of the student teachers could be attributed to the particular
characteristic of these sub-groups. The question of whether attitude changes which occurred during the student teaching experiences was the result of student teaching itself or some other variables was not answered by this study.
Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

INTRODUCTION

This, the concluding chapter in the study, proposes to summarize the findings which have been derived from the analysis of the data gathered during the study. In addition to presenting a summary of these findings, this chapter also proposes to capsule the conclusions which were reached. In the presentation of the summary and conclusions of the study, the chapter will follow the order of the questions raised for consideration in Chapter 1.

SUMMARY AND CONCLUSIONS

The primary purpose of this study was to make a general determination of whether attitude changes occurred in a select group of student teachers during their student teaching experience. A second purpose was to determine whether any attitude changes which did occur were positive or negative. A third purpose was to determine whether attitude changes occurred within and between certain subgroups of student teachers as identified by the study. A fourth purpose was to determine if any changes which took place during the period of student teaching were statistically significant. A fifth and final purpose of this study was to produce data which could prove useful to persons involved in the conduct of the student teaching program at Southern University, specifically, and in student teaching
programs generally. Useful data could be utilized in devising strategies for operating these programs more effectively and more efficiently. The data produced by this study could also make possible the continued study, evaluation, and improvement of the student teaching phase of teacher education programs.

The summary of the findings reached by this study and the conclusions which have been drawn from these findings follow.

**Total Group Attitude Changes**

Data presented by this study show that there was a change in attitude of student teachers between the beginning and the ending of the student teaching experience. This change was reflected by the difference between the pre-test and the post-test scores of the subjects. The pre-test mean of 85.14 and the post-test mean of 80.40 showed a difference of -4.74—a negative change in attitudes. In addition to this mean loss in attitudes, the total group of student teachers showed a $t$-value of 4.57 for the attitude changes which occurred. This change is significant at the 0.05 confidence level. It may be concluded that significant changes in attitudes took place during student teaching, and that these changes were negative.

**Attitude Changes in Predominantly White Schools**

Twenty student teachers were assigned to predominantly white schools for their student teaching activities. The analysis of the data collected for this group of student teachers showed a mean loss
in attitudes of -5.65. When the t-value of the attitude change was calculated it was determined that this attitude change was not significant.

**Attitude Changes in Predominantly Black Schools**

One hundred and nine student teachers were assigned to predominantly black schools. These student teachers showed a mean attitude loss of -4.13. Calculation of the t-value of the attitude change resulted in the conclusion that this change was not significant.

**Attitude Changes in Transition Schools**

In transition schools, a total of seventy-one student teachers showed a mean loss in attitudes during student teaching of -6.00. The attitude changes for this group were significant, as determined by the t-test.

**Attitude Changes in a College Community School**

The Southern University Laboratory School, the only cooperating school in this category, accepted fifty-four student teachers, all of whom participated in the study. The mean attitude loss for these student teachers was -2.63. The t-test calculations of the data collected for this group showed that the attitude changes which occurred were not significant.
School Community Characteristics and Attitude Changes

The types of schools which were grouped into a category based on the community characteristics of the communities in which they are located were; predominantly white, predominantly black, transition, and college community. Significant attitude changes were found among student teachers in only one of these four subgroups. The data collected and analyzed enabled the investigator of this study to conclude that the community characteristics of the cooperating schools was a significant factor in attitude changes of student teachers assigned to transition schools only.

Attitude Changes of Elementary and Secondary Student Teachers

Student teachers whose college majors determined their assignment at the elementary or the secondary level were grouped for this study. Sixty-six elementary and one hundred and eighty-eight secondary student teachers comprised these two groups. Between-group comparisons were made for these groups. The change which took place between these groups was not considered significant. The level of assignment of student teachers received no support from this study for an assumption that assignment level significantly affects attitude changes.

Attitude Changes of Rural and Urban Student Teachers

A comparison was made of the attitude changes between student teachers whose high schools were located in urban areas. This
comparison indicated that attitude changes which occurred during student teaching for these student teachers were not the result of the rural or urban location of their high schools.

**Socio-economic Background and Attitude Changes**

All of the 254 student teachers who participated in this study were placed into three socio-economic groups: upper, middle, and low. Efforts were made to determine if significant attitude changes took place between these groups of student teachers. Between-group comparisons were made for the upper and middle socio-economic groups, the upper and low groups, and the middle and low groups. Attitude changes did take place between these groups of student teachers. The changes in attitudes, however, were insignificant for each of these between-group comparisons. Using the data derived from this study, one may infer the conclusion that the socio-economic background of student teachers does not cause significant attitude changes.

**Attitude Changes of Male and Female Student Teachers**

The male-female category of student teachers was studied to determine whether significant attitude changes occurred between these two groups. The results indicate that attitude changes which occurred between male and female student teachers in this study were not significant. The conclusions which can be drawn from this finding is that their sex did not significantly affect attitude changes of these student teachers.
From the data collected, analyzed, and presented in this study, and summarized in this chapter, the following general conclusions may be drawn.

1. Attitude changes did take place during the period of student teaching. The data, however, point to only one variable—transition school assignment—which had significant influences on these attitude changes.

2. The attitude changes which occurred between the beginning and the ending of the student teaching experiences were negative ones. This was true for the total group and for each of the thirteen sub-groups for which data were collected and analyzed.

3. The attitude changes which occurred during the period of student teaching were significant for the total group of student teachers and for the transition school sub-group. It was not significant for any of the twelve remaining sub-groups of student teachers.

The findings that attitude changes do occur during the period of student teaching raises the following question. What conditions in the student teaching experience were responsible for the significant changes which the study indicated occurred for the total group? Since only one of the separate variables and none of the combination of variables caused significant attitude changes, a companion question could be: Does the student teaching experience itself bring about changes in attitudes of student teachers? The answer to this question holds serious implications for persons
responsible for the organization and direction of student teaching programs. Student teaching personnel should be concerned that significant changes did occur, and that these changes were negative. Stated another way, the findings of this study showed that student teachers did have attitude changes which resulted from their experiences in student teaching. Those persons responsible for the program of student teaching should feel the need for conducting further studies and investigations with the objective being to determine what features in the student teaching experience are responsible for the negative attitude changes which take place during student teaching.

RECOMMENDATIONS

The value of this study, then, has been to point out that student teachers, during their student teaching experience, lose some of their ability to develop wholesome interpersonal relationships with their students; they also lose some of their enthusiasm for teaching as a vocation. These are two of the aspects of teaching which the Minnesota Teacher Attitude Inventory was designed to measure. Good teacher-pupil relationships and satisfaction with teaching as a career are two of the characteristics which are generally associated with good teaching. Student teaching personnel, then, should be concerned about the significant losses which occur in these two vital areas of concern during student teaching.
This study concludes with some suggestions and recommendations for those persons responsible for the student teaching phase of teacher education.

The first recommendation is that care be exercised in assigning student teachers to transition cooperating schools, since this variable in the study had significant effects on attitude changes. School assignment, otherwise, should not be permitted to pose problems of assignment to cooperating schools.

A second recommendation is that efforts be made during the pre-student teaching preparation period to lessen the possibility that prospective teachers may be developing levels of expectations relative to teaching that are unrealistic. It may be that negative attitude changes result from disappointments which student teachers experience when their expectations regarding students, teachers, and the teaching process are not realized.

A third recommendation is to increase the frequency and the length of pre-student teaching laboratory experiences. This should prove helpful in providing the prospective teacher with a realistic appraisal of classroom experiences. Earlier introduction to the classroom activities could allow an interaction of these prospective teachers with students and teachers before they are held responsible and accountable for their teaching activities.

Since studies have shown that the supervising teacher does exert some influence on student teacher behavior, a fourth recommendation is that a greater concern be shown for the selection of
supervising teachers and for the assignment of student teachers to those supervising teachers who will most likely contribute to the development of positive and desirable characteristics in student teachers.

The final recommendation is that the student teaching experiences be introduced earlier in the teacher preparation program. Early introduction to live teaching experiences could enable those persons who find out early in their college careers that they are not likely to be satisfied with teaching as a career to transfer to some other career preparation area.
REFERENCES CITED

A. BOOKS


B. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES, AND OTHER ORGANIZATIONS


C. PERIODICALS


D. UNPUBLISHED MATERIALS

Callis, Robert. "Change in Teacher-Pupil Attitudes Related to Training and Experience." (Unpublished Doctor's dissertation, the University of Minnesota, Minneapolis, 1948, p. 7-8.)
BIBLIOGRAPHY

A. BOOKS


Gardner, John W. *Excellence: Can We Be Equal and Excellent Too?* New York: Harper and Brothers, 1961, Chapters II, VII, VIII, XII, and XIII.


B. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES, AND OTHER ORGANIZATIONS


C. PERIODICALS


D. UNPUBLISHED MATERIALS

APPENDIX A

ITEMS ELIMINATED FROM THE
MINNESOTA TEACHER ATTITUDE INVENTORY

32. A pupil should not be required to stand when reciting.
45. Course grades should never be lowered as punishment.
53. There is too much emphasis on grading.
58. Children "should be seen and not heard."
59. A teacher should always have at least a few failures.
99. Children have no business asking questions about sex.
112. Grading is of value because of the competition element.
122. It is difficult to understand why some children want to come to school so early in the morning before opening time.
123. Children that cannot meet the school standards should be dropped.
APPENDIX B

INSTRUCTIONS FOR ELIMINATING NON-RELEVANT ITEMS FROM THE MINNESOTA TEACHER ATTITUDE INVENTORY

THE MINNESOTA TEACHER ATTITUDE INVENTORY

The Minnesota Teacher Attitude Inventory is an instrument designed to assess the attitude of teachers and prospective teachers toward students and toward teaching generally. This instrument will be used in assessing attitude changes that take place during the student teaching experience of student teachers assigned from the College of Education of Southern University during the spring semester of the current school session.

Because there has been no recent revision of the assessment of items to reflect changes in the overall philosophy of teaching and learning, an effort is being made to determine the relevancy and appropriateness of these items. Please read each of the 150 items of the Inventory. If you are convinced that any item is no longer relevant or appropriate as it relates to teaching today, circle the number of that item.

You are one of six persons who are being asked to provide this service. If three or more of the six persons responding circle the same item, that item will be eliminated from the Inventory.

Please, then, read through the items very carefully. Then reread the items and circle the number of any item which you feel should be eliminated. Remember: elimination should be based on your
belief that the item has no relevancy to our current philosophy of teaching and learning.
APPENDIX C

LETTER SENT TO SUPERVISING TEACHERS WHOSE STUDENT TEACHERS MISSED THE FIRST INVENTORY ADMINISTRATION

SOUTHERN UNIVERSITY LABORATORY SCHOOL
Post Office Box 9414
Baton Rouge, Louisiana 70813

March 24, 1973

Dear Supervising Teacher:

I have the approval of the Office of Student Teaching here at the University to administer the Minnesota Teacher Attitude Inventory to all persons enrolled in the student teaching program during the current semester. One (or both) of the student teachers assigned to you was not present when the Inventory was administered to the group of student teachers on Friday, March 16.

May I solicit your help by asking that you have your student teacher(s) complete the Inventory and return both the booklet(s) and the answer sheet(s) to me in the self-addressed return envelope. Data collected from the Inventory responses will be used in completing a dissertation which will enable me to complete my degree requirements at Louisiana State University.

An instruction and information sheet is enclosed to help the student teacher(s) in completing the Inventory.

An early response to this request will be greatly appreciated.

May I thank you in advance for your cooperation.

Sincerely,

Thomas J. Wilcox, Jr.
APPENDIX D

DIRECTIONS AND GENERAL INFORMATION FOR COMPLETING THE MINNESOTA TEACHER ATTITUDE INVENTORY

Please complete the Inventory according to the printed instructions on the Inventory booklet. There is no time limit. Do not write on the booklet.

Please supply the information requested on the answer sheet and on the mimeographed Data Sheet attached to the answer sheet. You may mark your responses on the answer sheet with pencil or pen.

Clarifications (DATA SHEET)

Location of your high school. Indicate whether the high school from which you graduated was located in an urban or a rural area.

Occupation of father. Give the occupation of the father or the male head of your household. If the father or male head of the household is deceased, give the last occupation held.

Return the Inventory booklet and your answer sheet with the attachment to your supervising teacher.
APPENDIX E

DATA SHEET

<table>
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<tr>
<th>Name (Last)</th>
<th>(First)</th>
<th>(Middle)</th>
</tr>
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<tbody>
<tr>
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<td></td>
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</tbody>
</table>

( ) Male ( ) Female ( ) Elementary Major ( ) Secondary Major

Location of Your High School ( ) Urban ( ) Rural

School Assigned to for Student Teaching ________________________________

Occupation of Father or Male Guardian (Check One)

- Physician
- Barber
- Instructor, College
- Truck Driver
- Instructor, public school
- Store Clerk
- Lawyer
- Milk Route Man
- Dentist
- Restaurant Cook
- Minister
- Filling Station Attendant
- Military Officer
- Railroad Section Hand
- Building Contractor
- Night Watchman
- Farm Owner and Operator
- Restaurant Waiter
- Undertaker
- Taxi Driver
- Policeman
- Farm Hand
- Tenant Farmer
- Janitor
- Insurance Agent
- Bartender
- Carpenter
- Clothes Presser, Laundry
- Postal Worker
- Sharecropper
- Auto Mechanic
- Sanitation Worker
- Playground Director
- Other (Identify)
APPENDIX F

LETTER SENT TO SUPERVISING TEACHERS WHOSE STUDENT TEACHERS MISSED THE SECOND INVENTORY ADMINISTRATION

SOUTHERN UNIVERSITY LABORATORY SCHOOL
Post Office Box 9414
Baton Rouge, Louisiana 70813

May 5, 1973

Dear Supervising Teacher:

Once again we solicit your cooperation in collecting data which we need from student teachers for the completion of a research study.

The student teacher whose name appears on the attached forms was not present on Friday, May 3 when the second administration of the Minnesota Teacher Attitude Inventory was made. Please have the student teacher complete the Inventory and return it and the accompanying answer sheet to us. It is most important that we receive the materials at your very earliest convenience. A self-addressed, stamped envelope is provided for this return.

A letter addressed to student teachers who missed this second Inventory administration is also enclosed.

Your continued cooperation is most highly appreciated.

Sincerely,

Thomas J. Wilcox, Jr.
APPENDIX G

LETTER ADDRESSED TO STUDENT TEACHERS WHO MISSED
THE SECOND INVENTORY ADMINISTRATION

SOUTHERN UNIVERSITY LABORATORY SCHOOL
Post Office Box 9414
Baton Rouge, Louisiana  70813

May 5, 1973

Dear Student Teacher:

Once again we solicit your cooperation in collecting
information which we need for the completion of a research project.

Please complete the Inventory which you will receive. This
is the second time you have been asked to complete this inventory.
Your reaction to the Inventory items at the beginning and at the end
of the student teaching experience will help us identify some of the
concerns which you may have had during the period of student teaching.
It is necessary then that you do not try to remember how you answered
the items the first time you completed the Inventory. Give answers
or reactions based on the opinions you have now.

In the upper left hand corner of the answer sheet, please
write "urban" or "rural" to indicate whether the high school from
which you graduated was located in an urban or rural area. Your name
is the only other information needed on the answer sheet.

When you have completed the Inventory, please return the
answer sheet and the inventory booklet to your supervising teacher.

We appreciate very much the cooperation which you have given
us in our data collection efforts.

Sincerely,

Thomas J. Wilcox, Jr.
### APPENDIX H

**Enrollments in East Baton Rouge Parish Cooperating Schools**

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<thead>
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<th>Predominantly White Schools</th>
<th>Blacks</th>
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<th>Whites</th>
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*All percents are shown as whole numbers.
VITA

Thomas J. Wilcox, Jr., was born in Baton Rouge, Louisiana on November 7, 1923, the son of Rev. Thomas J. Wilcox, Sr., and Mrs. Amanda Brown Wilcox. On January 15, 1944, he was married to Audrey Lee Bivens. They are the parents of four children: Thomas J., III, Carolyn Ann, Eleanor Irene, and Meredith Yul.

He received his elementary and secondary education in the Laboratory schools of Southern University and Leland College, Baker, Louisiana. His college training was received at Leland College and at Southern University where he received the Bachelor of Arts degree in 1948. His Master of Education degree was earned from Louisiana State University in August, 1954.

His work and military service experience include: three years (1943-46) in the United States Marine Corps; three years (1948-51) as teacher-principal in the Madisonville Rosenwald School, St. Tammany Parish; four years (1951-55) as teacher of English, social studies and general science in the Capitol Avenue Junior-Senior High School, East Baton Rouge Parish; nine years (1955-64) as principal of the Carver High School, St. Martin Parish; two years (1964-66) as Director of Elementary Student Teaching, Southern University; and six years (1966-70); 1971-73) as principal of the Southern University Laboratory School.

He has held active membership in the Association of Teacher Educators, the Laboratory School Administrators' Association, the
Louisiana Committee of the Southern Association of Colleges and Schools, the Louisiana Education Association, the Louisiana Association of Secondary School Principals, and the National Association of Secondary School Principals.

The writer is currently employed as an Associate Professor of Education and Principal of the Laboratory School, Southern University, main campus.
EXAMINATION AND THESIS REPORT

Candidate: Thomas J. Wilcox, Jr.

Major Field: Education

Title of Thesis: A STUDY OF ATTITUDE CHANGES OF SELECTED STUDENT TEACHERS DURING THE STUDENT TEACHING EXPERIENCE

Approved:

[Signatures]

Major Professor and Chairman
Dean of the Graduate School

EXAMINING COMMITTEE:

[Signatures]

Date of Examination:

November 13, 1973