A STUDY OF ATTITUDE CHANGES OF STUDENT TEACHERS TOWARD DISCIPLINE OF ELEMENTARY PUPILS AS MEASURED BY THE MINNESOTA TEACHER ATTITUDE INVENTORY

By

BROWNIE MITCHELL KIMBROUGH

Bachelor of Science
West Texas State University
Canyon, Texas
1941

Master of Education
West Texas State University
Canyon, Texas
1957

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of the Oklahoma State University
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Thesis Approved:

Idella Lahmann
Thesis Adviser

Josephine Hoffer

Daniel Selakovich

Gene Hall

D. Durham
Dean of the Graduate College

PREFACE

The work reported in this study was performed in three schools in Benton County, Arkansas. The purpose of this study was to determine whether cooperating teachers influenced student teachers toward making changes in expressed attitudes toward pupil discipline.

The investigator wishes to express appreciation to Dr. Idella Lohmann, chairman of her advisory committee, for the advice, encouragement, and direction provided in this study.

Acknowledgement is also extended to the other members of her advisory committee for their sincere interest and encouragement: Dr. Josephine Hoffer, Associate Professor and Acting Head, Department of Family Relations and Child Development; Dr. Daniel Selakovich, Associate Professor of Education; and Dr. Gene Acuff, Professor and Head of the Department of Sociology.

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I am especially grateful to my husband, Wade, and my son, Allen, for their understanding attitudes, patience, encouragement, and assistance throughout this study.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

This study was made to determine the attitude changes in student teachers placed with cooperating teachers with whom they agreed or disagreed in regard to pupil discipline.

Professional educators report the value and importance of the student teaching program in the preparation of prospective teachers. Lipscomb (34) reports that this experience does not produce a skilled teacher, but is an experience which allows the student teacher to apply the knowledge, skills, and attitudes toward children that he has been able to acquire. Steeves (51) records that student teaching is one professional program that both critics and friends of professional education approve. Brekke (3) reports that student teaching, as it is now being structured, is the most useful and productive part of the prospective teacher's preparation.

Since the value of student teaching is seldom questioned, the teacher education programs in most colleges need to increase the effectiveness of the student teaching experience, and emphasis needs to move to the individual teacher and to an individual plan providing for experiences that are suited to his specific need. (22) Gill (22) also thinks the emphasis on student teaching should move from college domination to joint responsibility of college and public school. When this is done, these goals can be met: goals of diversity, flexibility,

individualization, and teacher-pupil relationships.

According to Steeves (51) the student teaching experience is a time of integration when concepts that have been learned in the academic courses can be reorganized, modified, and adjusted. It is a time when attitudes are re-evaluated and re-enforced.

There is a difference of opinion among educators today regarding who should control the supervision of the student teacher in the public school. Underwood (17) takes the view that the public schools are better equipped to supervise student teachers because the cooperating teachers have more experience in all areas: discipline, evaluation of students and methods of teaching. Dordal (17), on the other hand, takes the view that the college must maintain its primacy in supervising the quality of the student's teaching experience because the college courses are built on developmental concepts that include behavioral goals, student-teacher relationships, and the newest trends in teaching methods. These two points of view relate to the immediate study since the investigator is attempting to determine the scope to which a cooperating teacher's attitude will influence a student teacher's attitude in the area of pupil discipline.

Specifically, this study is concerned with whether a cooperating teacher will have an influence on a student teacher's expressed attitude toward pupil discipline in the classroom. As Sherif (50) suggests, attitudes can be changed but the change must involve some form of communication. Hence, this study compares the cooperating teachers' attitudes toward pupil discipline to a possible change that might occur within the student teachers.

Importance of the Study

Many educators have expressed the need for a better relationship between the college education department and the public school setting. Chaltas (10) says that too many student teachers are blindly placed in a setting with little or no thought or planning as to what would give the student teacher maximum growth. The student teacher would benefit if there were better methods of collecting data about the setting, better ways to test the data, and ways to measure teacher success. This study attempts to collect and measure data concerning attitudes of both the student and cooperating teachers.

Price (42) assumes that student teachers are being placed under cooperating teachers for the best guidance and supervision possible; so a rationale needs to be established for the placing of student teachers so that they will experience the highest degree of motivation for the success of their experience.

According to Brekke (3) the cooperating teachers are guiding the student teachers through the most crucial point of their professional education; therefore, the college should assume the pressing responsibility for selecting the best teachers available for cooperating teachers so that professional guidance in the areas of pupil discipline may be observed and practiced.

Student teachers, according to Crow (14) have held their attitudes as their own, but during a student teaching experience, they must adopt these attitudes in the light of those attitudes displayed by the pupils.

Layman (32) reports that student teaching occupies the focal or climactic phase in teacher education, and to be effective, student teaching assignments must be suited to the specific needs of individul

student teachers. Many educators believe that pupil discipline is the chief problem faced by student teachers today. This study is attempting to find a way to decrease this problem.

Mazer (35) expresses the belief that the value of student teaching experiences is enormous, but those who are most familiar with the program are not making the most of the student teaching opportunities. Laboratory experiences of student teachers need vigorous study and extended experimental testing.

Research is further justified on teacher-pupil, student teacher-pupil-relations for the following reasons: (1) inexperienced first year teachers are having pupil discipline problems in their classrooms, (2) experienced teachers are seeking better ways to control the classroom with an atmosphere of self discipline, and (3) administrators are stressing the need for better communication between teachers and students.

Basic Assumptions

This study was based on the following assumptions:

1. Attitudes can be changed.

Sherif (50) says: "Of course attitudes do change, but the change must involve some form of communication."

Whittaker (54) expresses the belief that change of attitudes can take place and that small discrepancies yield small change, but large discrepancies yield negative change which becomes more pronounced as discrepancy increases.

Studies have been made by many psychologists, Butcher (7), Morrison (38), Mazer (35), and Johnson (29) in which the attitudes

of their subjects made a significant change.

Since these researchers have stated their results as positive, the investigator of this study is assuming that attitudes can change.

2. Attitudes can be mreasured by the use of the Minnesota Teacher Attitude Inventory.

According to Sherif (50) and Cope (11) no standardized attitude scale is a perfect instrument for measuring the attitude of an individual because attitude cannot be seen, but is a concept designating something "inside" the individual. Remmers (45) goes further to say that attitudes are measurable and vary along a linear continuum. This inventory has been used by more investigators who were doing attitude studies than any other instrument known to educators. (11)

3. Since the teachers and student teachers were instructed to answer each item as honestly as possible and to make choices as rapidly as possible, and no one else except the writer would see the results of their scores, it was assumed by the writer that the teachers and student teachers answered the questions of the instrument truthfully.

Hypothesis

This study proposes to test the following null hypothesis: There is no significant change at the .05 level of confidence in the student teacher's attitude toward pupil discipline after an experience of student teaching regardless of the expressed attitudes of the cooperating teacher toward pupil discipline.

Purpose of the Study

The purpose of the study was two fold:

1. To determine if student teachers who differed from the cooperating teachers in expressed attitudes toward pupil discipline would assume attitudes similar to those of the cooperating teacher as a result of observation and participation in the classroom during the student teaching experience.

2. To determine if the student teachers who were similar to the cooperating teachers in expressed attitudes toward pupil discipline changed their attitudes after a period of observation and participation in the classroom during their student teaching experience.

Authorities do not agree on the instrument which is best for measuring attitudes. The instrument used in this study, as well as those used in other studies, will be discussed at length in the review of literature.

General Nature of the Problem

According to Sherif (50) we are more aware today than ever before of the differing beliefs, values, ways of life, and idealogies of various groups and societies. Since these differences are frequently revealed in actual and potential conflict, problems of attitude and attitude change are among the most vital and timely in this world of rapid change.

Crow (14) expresses the belief that whether a student teacher's attitudes and ideas are innate or acquired, they can be improved as a result of intelligent and serious application to a student-teacher obligation.

One of the groups of our society is that group made up of elementary classroom teachers. Since the changing of attitudes is a vital problem today, this study capitalized upon the inter-relationship of cooperating teachers with the student teachers placed under their supervision. Of major concern is the teacher's influence toward the changing of the student teacher's attitude toward pupil discipline.

Definition of Terms

For the purpose of this study, the following definitions are used:

Cooperating teacher: The teacher in the elementary public schools in whose classroom the student teacher works day by day. (14)

Supervising teacher: The college teacher from the education department who is assigned to supervise and guide the student teacher's activities. (14)

Attitude: (Sherif's definition /507) An individual's set of categories for evaluating a stimulus domain which he has established as he comes into interaction with other persons and subjects.

Discipline: The type of pupil-teacher relations the teacher will maintain in the classroom.

Authoritarian: One who attempts to dominate; he tends to think in terms of his own status.

Permissive: One who is able to maintain a state of harmonious relations and sympathetic understanding; he tends to accept his subordinate's wishes.

Minnesota Teacher Attitude Inventory: An inventory consisting of one hundred and fifty items designed to predict teacher-pupil relationships.

Scope of Investigation

This study was limited to two schools in Benton County, Arkansas, and twenty teachers who taught in these schools. Twenty elementary student teachers were used who may not have been representative of all the student teachers enrolled at John Brown University. Due to the structure of the study the one variable tested was the influence of the cooperating teachers on the change of attitudes of student teachers toward pupil discipline.

Summary

The need for more research related to the influence cooperating teachers have on student teachers has been pointed out in Chapter I. It was suggested that knowing the attitude of a cooperating teacher concerning a teacher-pupil inter-relation would help in placing a student teacher about whom the same fact was known.

Chapter II will contain a review of the literature pertaining to student teacher and cooperating teacher relations, literature pertaining to attitude changes, and literature pertaining to the use of the instrument, Minnesota Teacher Attitude Inventory. Chapter III includes the methodology of the study. Chapter IV shows the results of the statistical analysis and findings. Chapter V contains the conclusions and recommendations for further study.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Literature pertaining to student teaching experiences, attitude changes, and the use of attitude scales for measuring student teachers' beliefs and opinions was reviewed, but only that portion needed to support this study is included in this chapter. The literature included has been divided into four categories: 1) that related to the changing of general attitudes; 2) that related to definite studies that have been conducted to support the hypothesis that change of attitude does take place during a student teacher's experience in the classroom; 3) that related to the use of the instrument used in this study, the Minnesota Teacher Attitude Inventory, and 4) that literature evaluating the Minnesota Teacher Attitude Inventory.

Literature Related to Changing General Attitudes

According to Insko (28), psychologists today are seeing the need for investigations that measure attitudes and attitude changes, and these studies are being carried on through controlled experimentation. Certain assumptions must be made to measure attitudes. Remmer (45) reports that these assumptions are 1) attitudes are measurable, 2) attitudes vary along a linear continuum, and 3) all measurable

attitudes are common to a group.

As long ago as 1929, Thurstone (52) purported that attitudes could be measured by the use of a numerical index in the form of a frequency distribution base line. He advocated the use of opinions as a mean for measuring attitudes because an opinion symbolized an attitude. Thurstone also attempted to prove that attitudes are subject to change by preparing an attitude scale, which is rated by the subject before and after some form of communication in which there is an attempt to change his opinion. The subjects who take this scale are asked to check only statements with which he agrees. This aspect makes the scale differ from scales that are being used today.

From the time of Thurstone's (52) attempts to change a subject's attitude to the present day assumption that attitudes are changeable, psychologists (50, 54) and educators (2, 6) are agreed that to change an attitude some form of communication must take place.

According to Sherif (50) the basic information for predicting a person's reaction to a communication is where he places the information position on the continuum and where he places the communication relative to himself. Whittaker (54) says that communicators must know the position or frame of reference of the individuals with whom they are communicating if a change in attitude takes place. This position must be determined on the basis of latitudes of acceptance or rejection by the subjects. He believes that if the communicators take a position substantially different from that of the subjects, the subjects will reject their positions completely, but if the position presented by the communicators is close to the subjects' own beliefs, they tend to perceive it to be closer than it objectively is.

Remmer (45) suggests that even though the realization is rapidly growing that attitudes, the way individuals and groups feel about various aspects of their world, can be changed; the fact still remains that attitudes are often temporary and subject to rationalization and deception. Sherif (50) takes a slightly different stand in stating that attitudes do change, but once formed they acquire a regulatory function such that, within limits, they are not subject to change with each "up and down" of everyday life functions or with every variation in the stimulus condition. Many studies have been conducted to support or reject the statements made by the above mentioned psychologists and educators. Some of these are reviewed here in an effort to establish the possibility of attitude changes and the time involved in making such changes.

Assuming that the Wickman scale, which was developed in 1929, actually measures a teacher's attitude toward pupil behavior, Gjerde and Schrupp (23) made a study in 1951 to determine if teacher's attitudes toward pupil behavior had improved during this twenty-two year period. This study found teachers of 1929 to be more concerned with transgressions against orderliness and morality and less concerned with traits of withdrawal. The investigators concluded that teachers in 1951 were more in agreement with psychologists than in 1929, but they did not reach the "ideal criterion attitudes."

In a study made by Ewing (19) an investigation to discover the factors that influence the attitudinal changes was conducted. He concluded that: 1) the more favorable the original opinion, the greater the change would be; 2) the majority opinion is quite effective in causing attitude changes; 3) the greater the difference between the

subject's opinion and the propagandist's opinion, the greater the change tends to be; and 4) originally negative changes persist to a greater degree than originally positive changes.

Hovland (26) studied the relation of students' attitudes to facts and issues in American history and government. The college students he used were asked to check a position from "agree strongly" to "disagree strongly" in connection with each statement. Then the students checked an authority group whose opinion they would most respect on each issue. After an interval of two weeks the questionnaires were returned to the students with a new position fictitiously marked on each issue and this new position was attributed to the authority group each student had selected. In some cases the fictitious check marks were close to those originally marked by the students, whereas in others they were further away. Students were again asked to indicate their opinions. When opinions on the second questionnaire were compared with those on the first, the investigators noted that greater discrepancy yielded greater change.

In a study of the 1960 election campaign, Sherif (50) assessed the attitudes of partisans on both sides and those adopting moderate stands. Two assessments were made about a week apart. The most extreme subjects, who could only change by becoming less extreme, were eliminated and predictions were made as to the direction of change based on the pattern of acceptance and rejection during the first session. Accurate prediction was made for over seventy per cent of the subjects who changed in attitude position.

Proshansky (43) investigated attitudes toward organized labor. Using the "Newcomb Attitude Scale" and the "Murray Thermatic

Apperception Test," he tested male college students on their attitudes concerning organized labor. The attitudes ranged from pro-labor to anti-labor. The attitude scale brought out attitude trends and individual differences. Short statements were written about the pictures in the apperception test and these were correlated with the individual attitudes derived from the Newcomb scale. A group of judges indicated the agreement of the attitude scale with the picture response and found the correlation to be .87.

These studies (52, 20, 54, 45, 23, 19, 26, 43) attempt to show that attitudes are changeable under certain conditions. Low involvement, unstructured stimulus situations, and highly valued sources increase the range of assimilation within which communication is increasingly effective in producing attitude change. High ego-involvement, structured communications, and less valued sources restrict the range of assimilations beyond which decreasing frequency and extent of attitude change occurs as the communication becomes more discrepant.

Sherif (50) reported that the time element involved in changing attitudes is a concern of psychologists in this present world of rapid change. Insko (28) wrote that most researchers have been content to demonstrate that the communicator has only an immediate effect on the subjects involved and has neglected to place an equally important value on a long range effect.

A few studies have been reviewed to investigate the effect of the time element involved in attitude change. In Bostron's (2) study of six weeks' duration, one hundred fifty eight students took a forty item Likert-type test measuring their attitudes on a variety of present-day issues concerning youth's problems. After a lapse of six weeks,

lectures were made to the subjects who had taken the attitude test in an attempt to influence the changing of their previous attitudes. Bostron (2) was attempting to change the attitudes toward dogmatism, rigidity, anti-intraception, and power-toughness. After the lectures the attitude test was again administered and with the use of the statistical factor of analysis of variance, Bostron (2) concluded, the only attitude that was significantly changed was that attitude toward power-toughness.

A year long study was conducted by Corey (12) in 1934. Two hundred thirty-four freshman girls were given an attitude test dealing with opinions about forms of government and war. At the beginning of their sophomore year, one hundred of the original were administered the same test to discover if their attitudes had been changed by the communication that had gone on in regular classrooms and dormitory talk-sessions. There was no statistically reliable change in attitude after one year of college, but the girls were more conservative toward war as sophomores and a negative change had occurred in their attitude toward communism.

Hunter (27) began a four year study in 1934 using college women enrolled as freshmen. He ended the study when the girls became college seniors. The "Hunter Test of Social Attitudes" was administered as a pre-test, during the freshman year, and as a post-test at the end of the senior year. The test was constructed to measure attitudes toward war, religion, social justice, and government. The results of the study showed that freshmen who had strong attitudes retained these strong attitudes as seniors, and freshmen with mild attitudes tended to have mild attitudes four years later. There were more seniors with

definite attitudes concerning the issues than freshmen. Seniors were more cautious concerning war than were freshmen. Here we find that the more involved a person becomes, the more cautious he is in his expressed attitude. The seniors had made gains in their attitudes toward social justice and government. There was no significant change in attitudes toward religion from the freshman year to the senior year. Hunter (27) reported that time to become more mature in experience and judgment was a factor in the attitude changes of these college women.

Bugelski (6) in a seven year study started in 1932 attempted to measure the attitude changes toward religion, social life, and national optimism. Two hundred twenty-one freshmen students were administered a Likert-type attitude test. The same test was administered again to all who were still enrolled as seniors, and the third time three years after graduation. As a group there was a significant change from a conservative score to a more liberal one. Women changed from a conservative position to a more liberal one on twenty-two of the twenty-five statements; men changed on twenty-one. The greatest change was made on statements relating to national optimism. Bugelski (6) reported these changes in attitude were due to the time element as well as to the general experiences of life itself.

In summary, the literature reviewed reveals that attitudes can undergo change. According to Sherif (50), Remmer (45), and Whittaker (54), a communicator is a necessary element in causing a change to occur. Bugelski (6) and Hunter (27) believe the elements of time and maturation are factors influencing changes in attitudes. Ewing (19) and Hovland (26) discovered that the strength of the propagandist is a basic element in causing attitude changes. Insko (28) indicated that

studies of attitude changes have come a long way since World War II, but knowledge concerning many problems is still far from complete and research is still needed to discover how and why attitudes are being changed.

Literature Related to Changing Attitudes During the Student Teaching Experience

Since psychologists and educators agree that attitudes can be changed, this investigator was interested in changes of attitudes toward discipline that were made during student teaching experiences. The following studies have been reviewed to give some insight into this area.

Corrigan and Griswald (13) considered three areas of attitudes in a study conducted at New York University and Teachers College, Columbia. These areas were 1) learners' purposes are recognized and utilized, 2) learner engages in problem solving, and 3) the learner is helped to develop generalizations which he can apply in a variety of life situations. These investigators developed an attitude inventory of eighty statements to measure these three principles. This attitude inventory was administered to sixty-three students enrolled at the above mentioned colleges. The inventory was administered before and after a student teaching experience. The mean attitude change was 9.8 points, which was significant at the .05 level of confidence. The twenty five students who made the most drastic changes on the five point scale were interviewed to discover possible reasons for their changes. Several factors influenced these changes in attitudes: 1) The college supervisor caused the most positive change because he helped the student

teacher clarify his attitudes. 2) The cooperating teachers who were rated average had more influence on the student teachers' attitudes than those rated superior. 3) The experience within the classroom itself caused twenty-four of the twenty-five to change their attitudes toward these three principles being evaluated.

Johnson (29) wanted to determine if change in student teacher dogmatism during the student teaching experience was a function of the degree of dogmatism of the cooperating teacher. He used a Likert-type scale with a high score representing closed-mindedness, and a low score representing open-mindedness. His hypothesis was: Those student teachers who scored lower on the pre-test of dogmatism than did their cooperating teacher would show a gain in dogmatism scores on the post-test and those who scored higher than the cooperating teacher on the pre-test would show a loss in dogmatism scores on the post-test. At the end of the student teaching experience, he gave the student teachers a post-test. Using a two-by-two contingency table utilizing the chi-square technique, Johnson concluded that there was a significant move at the .01 level toward the cooperating teacher.

Gentry, Newsome, and Stephens (21) conducted a study at the University of Georgia in 1964, involving sixty-two elementary and sixty-eight secondary education majors. They were administered the GNC Scale, a test of logical consistency of ideas about education, before and after their student teaching experience. The GNC has 100 items of classical and scientific philosophies including aims, methods, and discipline. The problem for this study centered around this question: Do students enter the student teaching experience with a set of ideas about education? The hypothesis stated that student teachers will

either lose or gain in consistency of ideas about education as a result of student teaching. All of the subjects were consistent on the first administration of the GNC Scale; on the second all were consistent except social studies majors. The hypothesis concerning gains and losses was rejected because the statistical t was not significant at the .05 level of confidence.

Edra Lipscomb (34) conducted a research project at Indiana University involving forty-four senior students enrolled as student teachers in elementary education. "The Lipscomb Scale of Teacher Attitudes" was developed and validated for this study. The reliability coefficient of the instrument was checked by the split-half of the Spearman-Brown formula and found to be .80. This test was administered to the student teachers at the beginning and again at the end of their student teaching experience. The purpose of the study was to determine whether the attitudes of student teachers in elementary education make a significant change during a student teaching experience. The focal point of this study was limited to the attitudes of student teachers toward children, toward the role of the teacher, and toward curriculum practices. The significance of change was computed for each of the forty-four student teachers. There were three students whose attitudinal change was not significant at the .05 level. Forty-one showed an attitudinal change which was significant at the .05 level or better. To observe whether the group had made a significant change, the McNear test for significant change was utilized. The null hypothesis was rejected for the group since there were significant changes for the group during the student teaching experience.

Butcher (7) compared the attitudes of experienced teachers

with the changes made during the student teaching experience in a study at the University of Manchester. He gave each subject three scales for numerating their attitudes. These scales were developed by the researcher and covered these categories: naturalism (N), radicalism (R), and tender-mindedness (T). The aims of the study were 1) to compare the attitudes to education of teachers in training with those of experienced teachers, and 2) to study changes in attitude toward education during the professional course of teacher training. Butcher (7) hypothesized that student teachers would obtain higher scores on all three categories than would experienced teachers. One hundred eighteen students from two colleges finished both the pre-test and post-test, and seventy-eight experienced teachers did likewise. For each of the three scales the mean scores of the three samples were tested for significant difference. The two student groups were combined and compared to the teacher group. If differences appeared, the samples were kept separate and individual comparisons were made by means of t tests. The results suggest a fairly consistent change in the directions of naturalism, radicalism, and tender-mindedness among teachers in training. There was no significant change in the attitudes of the student teachers, but on the R scale the value of t was 1.71 which is near the .05 level which is 1.99.

These same "N, R, T Scales" prepared by Butcher (7) were utilized in a study by Morrison (38) with one hundred teachers. These teachers had been given the same "N, R, T Scales" at the beginning of their training three years before. During this first year of teaching, a significant decrease in mean score on all three scales was found for graduate women ($p < .01$), but no signficant change for men. For the

two groups no significantly different scores were found except for the women on the T scale ($p < .05$). Primary teachers made a stable change on the N scale, which is largely concerned with opinions on methods and child-centered education.

Mazer (35) conducted a study using fifty-three student teachers at Western Michigan University. He divided his study into two phases; during the first phase the students were exposed to processes and experiences intended for shaping attitudes and promoting formal learning, during the second phase the students were taking part in a student teaching experience in an inner-city school. Before each of the two phases and at the end of the student teaching experience, the students' attitudes were obtained by use of the semantic differential (SD) as devised by C. E. Osgood. The Osgood instrument is comprised of a set of concepts and a set of bipolar adjective sub-scales averaged into a seven point Likert-type rating system for judging the concepts. Twenty teachers enrolled in an introductory graduate course were given the SD and used as the control group. A Mann-Whitney U was computed to test for significance. There were no statistically significant differences at the .05 level, but a comparison of the first and second phase tests indicated a continuation of attitude change in the right direction.

In summary, it was reported that the extent that the instruments for testing attitudes are valid, participants in all of these experiments were markedly influenced by their experiences. Attitudes of student teachers toward education can be significantly modified through experiences in our public schools.

The Minnesota Teacher Attitude Inventory as a Measure of Attitudinal Change

Yee (55) says:

> The Minnesota Teacher Attitude Inventory has been found imperfect in major aspects; however, it remains the most popular and perhaps the best indicant of teachers' attitudes toward children available in published form.

Walters (53) states that the problem of whether attitude tests of paper-and-pencil nature are sufficiently satisfactory to warrant their use in a serious investigation is one that has faced educators for a long time, but it is often necessary to use a device of this nature at the onset of an experiment.

Price (42) conducted a study in 1960 at the University of Texas to determine whether the attitudes of cooperating teachers influenced the attitudes of student teachers during their student teaching experience. The Minnesota Teacher Attitude Inventory was administered to one hundred student teachers and one hundred sixteen public school teachers. The twenty teachers with the highest scores, the twenty with the lowest scores, and the twenty with middle scores were selected to be matched with sixty of the student teachers. These student teachers were categorized in the same manner as the teachers, twenty highest, twenty lowest, and twenty with middle scores. The students were then placed with a teacher of like rank. Eight university supervising teachers assessed the cooperating teachers and the student teachers performance by regular visits to the classroom, using the "Sanders Observation Schedule." They spent four hours in each room with the cooperating teacher and four hours with the student teacher. Both cooperating teachers and student teachers were rated by the supervisors at the end

of the student teaching experience, and the Minnesota Teacher Attitude Inventory was again administered to the student teachers. The results of the study showed the cooperating teachers to have a wider range of scores than did the student teachers; the mean of the cooperating teacher was 39 and the student teachers 50.4. To determine significant changes in student teachers' attitudes F-tests were applied. No significant change occurred after one semester of student teaching. Analysis of variance was used to determine the direction the student teachers' score fell in relation to the cooperating teachers. There was statistical evidence at the .05 level that change had occurred in the direction of the cooperating teachers.

Price (42) used the Pearson Product Moment Correlation to check the hypothesis that the initial Minnesota Teacher Attitude Inventory scores and the "Sanders Observation Schedule," would be lower than the final correlation. His finding was not significant.

Brim (4) investigated the effect of an undergraduate teacher program on students' attitudes toward children. The Minnesota Teacher Attitude Inventory was administered to two hundred fifty undergraduate teacher education students at the beginning of the fall semester. Ten weeks later the same inventory was administered again and the scores of the pre-test were compared to the scores of the post-test by use of the statistical t. There was a significant overall change to a higher attitude mean at the .01 level. The thirty-two students who showed the greatest change were interviewed to determine causes for the change. According to the findings, the students' reason for change was the experiences they had had with children, both in and out of the education program.

McCaw (37) used the Minnesota Teacher Attitude Inventory to test the hypothesis that a student teacher can remain authoritarian in terms of personality structure and at the same time admit to a belief in permissive practices. The "F Scale" and the Minnesota Teacher Attitude Inventory were administered to two hundred twenty-one senior students both male and female, in an eastern teachers' college. The scores of the two tests were correlated and an inverse relationships between authoritarian and permissiveness above the .01 level of confidence was computed. This implies that an authoritarian teacher is low in declaring permissive teaching procedures. Permissive school practices are not held by student teachers with an authoritarian personality.

Hooker (25) conducted a study at the University of Texas in 1957 in which he utilized twenty-four student teachers and twelve certified beginning elementary teachers. At the beginning of the fall semester three evaluating instruments, the Edwards Personal Preference Schedule, the Minnesota Teacher Attitude Inventory, and The Teaching Evaluation Record, were administered to the thirty-six subjects. Hooker (25) was attempting to measure attitudes, personal preferences, and teaching abilities. Twelve of the student teachers participated full time in schools of excessive enrollment; twelve completed the part-time student teaching program at the university; and the twelve elementary teachers were employed in an average elementary classroom. Each of the three tests was administered twice, first after eight weeks of teaching and again at the end of the teaching experience. Analysis of variance was applied and no signficant difference was found among the three groups. The full-time student teacher was closer to the beginning teacher in attitudes, personal preferences, and teaching abilities than the part-time student teachers.

Another study conducted at the University of Texas in 1966 by Yee (55) tested the hypothesis that the cooperating teachers are a significant source of influence in student teaching. The Minnesota Teacher Attitude Inventory was administered to one hundred twenty-four student teachers and one hundred twenty-four cooperating teachers. Forty-three of these student teachers were placed in elementary schools and eighty-one in secondary. By using his new logical scoring key, which will be explained later (Chapter III), he concluded that the test results were higher in internal consistency, equivalent validity, and frequency distribution and was not significantly skewed. The scores were tested with the frequency-of-change-in product-moment technique and the findings included: stability of student teachers' attitudes were low; student teachers' attitude shifted and variability shifted from pre-test to post-test. The chi-square for the hypothesis showed a correlation of cooperating and student teachers' attitudes on pre-test, to .07 and on post test .11. Neither correlation is statistically significant. The practical significance of this study was that the attitudes of student teachers toward relationships with young people generally reflect the influence of their cooperating teachers.

Rodgers (48) worked with a group of liberal arts graduates in a six weeks summer seminar in an effort to prepare them for classroom teaching by September. With the assumption that attitudes afford a key to the prediction of the type of social atmosphere a teacher will maintain in the classroom, he administered the Minnesota Teacher Attitude Inventory to one hundred fifty college graduates. This inventory was administered at the beginning of the summer with a mean of 43.83 and again at the end of the summer with a mean of 70.13. The statistical *t* of 6.24 was significant at greater than .01 level. Rodgers concluded

that the summer program helped the persons preparing for teaching change their attitudes toward pupil behavior.

The purpose of Muuss's (39) study was to investigate the differential effects between being a student enrolled in a sequence of education courses and being a beginning teacher as measured by the Minnesota Teacher Attitude Inventory. This inventory was administered to fifty-two students in an experimental fifth-year graduate program in elementary education at Goucher College. Three test administrations followed the structure of the program: 1) before classes began, 2) before internship began, and 3) after a four and a half month internship. Two hypotheses were formulated: 1) the attitude of the education students in an academic program will increase, and 2) the attitude scores will decrease during the internship. The data for the tests given during the academic training show the t ratio between the means of two tests to be 7.23, significant at far beyond the .001 level. During the internship the mean dropped from 53.48 to 44.62. The t ration was 3.27, significant at the .001 level. Students' attitudes became more tolerant and more child-centered, as measured by the Minnesota Teacher Attitude Inventory, during the academic part of the program, but a teacher tended to become more traditional and more teacher centered in attitude toward children during a period of internship.

King (31) conducted a study at the University of Hong Kong in 1961 using forty-eight women and forty-nine men. The Minnesota Teacher Attitude Inventory was administered at the beginning of a graduate course in education to measure those attitudes which predict how well a teacher will get along with pupils, and indirectly how well satisfied he will be with teaching as a vocation. Students' scores were

analyzed in relation to their performance in an examination given in the practical teaching class at the close of the year. The Hong Kong study average norms were much lower than the average American norms due to the differences in educational philosophy. To test statistically, the mean scores of the Inventory were compared to the scores of those who passed, received credit or failed the "Practical Teaching Course." The mean difference between the Inventory scores and the credit and pass groups was considerable (23.65) and was significant at the .01 level. Significant relationship existed between students' attitudes toward teaching and their performance in education classes. This study showed that the Minnesota Teacher Attitude Inventory measures something which is related to student teachers' relationships with student teaching and education students relationship to academic course work.

Evaluation of the Minnesota Teacher Attitude Inventory

The Minnesota Teacher Attitude Inventory has been questioned as a measuring device for teacher attitude toward pupil discipline. Some of the criticisms include: that the validity of the instrument is low; that the scoring of the Inventory is biased in favor of the extreme response positions; that its empirical scoring key provides questionable weights which are sometimes illogical; and that subjects can fake their responses causing their scores to be unusually high. However, there are those who support the findings that the Minnesota Teacher Attitude Inventory can be used with confidence.

Evans (18) reports on a study made in the University of Manitoba in which he concluded that the instrument measures student-teacher attitude with a fair degree of validity and reliability. Day (16)

made a study of the Minnesota Teacher Attitude Inventory to determine its predictive validity for forecasting teaching effectiveness after one year of experience. One hundred ninety-six seniors, after a period of student teaching, were administered the Inventory. At the end of one year's teaching experience, the Inventory was mailed to each of these subjects. One hundred nine were returned answered. Principals of these teachers were asked to rate teachers on the "Leeds Principal - Teacher Rating Scale." Seventy of these were completed and returned; so the experiment included this seventy whose complete files were available. The predictive validity was found to be quite low when compared to principals' ratings. Day reported that this should not reflect discredit on the "goodness" of the instrument because the Minnesota Teacher Attitude Inventory purports only to assess attitudes the teachers hold toward pupils not to reveal the totality of a teacher's effectiveness.

Leeds (33), one of the authors of the Inventory, made a second validity study of the instrument, using the same method that the authors used when the validity was first established (Chapter III). One hundred teachers of fourth, fifth and sixth grades scored the Inventory. Principals, students, and the author rated the teachers on special rating scales. The validity coefficient found by correlating the teachers' scores with scores from the three rating groups was .59. The validity coefficient of .59 obtained in the earlier investigations was confirmed in this investigation. Comments made by the pupils lend further support to the validity of the instrument. The teachers which the children liked received such comments as: nice, kind, friendly, willing to help. The disliked teachers received

these comments: scolds a lot, bossy, talks too much, becomes angry easily. These comments refer to the personality and disposition of the teacher and to the effective and human relationship displayed by the teacher.

Budd (5) reported on a study made by the Bureau of Research who was checking the tendency for high scores on the Inventory to be associated with the choice of the extreme response positions on the individual items of the Inventory. Data confirmed the hypothesis that high scores are associated with the tendency to prefer extreme response instead of moderate response positions when taking the Inventory. Yee (56) and Gage (20) attempted to correct this by making new scoring keys for the instrument. Yee's Pentachotomous-logical key causes the scores to show positive skewness but no significant asymmetry. The distribution of the socres derived with this key can be judged the most advantageous for the application of the Minnesota Teacher Attitude Inventory to ascertain a teacher's attitude toward children. The non-significant skewness allows the ready identification of extreme negative and positive cases. Gage (20) was concerned with the empirical weights of the Inventory because they had lower validity than a logical set of scoring weights. Gage found the Inventory to have slightly higher validity and reliability when scored with a logical scoring key rather than with the published empirical key.

Rabinowitz (44) reported that answers to a large number of paper-and-pencil tests of personality and attitudes can be faked. To test this hypothesis, Rabinowitz employed a procedure in which a faking situation was set up using the Minnesota Teacher Attitude Inventory. Seventy-four female day-session students were divided into three

groups. Each of the three groups were tested twice: the first time each group was given standard instructions; the second time, which occurred immediately, one group had standard instructions, one group was told to mark the test so that they would be considered child centered teachers, and the third group was instructed toward positive authoritarianism. Only the data of the fifty-six in teacher education were used to tabulate results. The results of the first testing showed no difference, the value of F was not significant; on the second test the groups differed significantly. Analysis of variance showed F to be significant at the .01 level. Since this significance indicated that the three groups were from a common population, the differences are obviously a function of the differing instructions. This study concludes that the Minnesota Teacher Attitude Inventory is fakable and people are able to alter their scores. The Inventory then would have limited validity for teacher selection purposes, but most psychologists have found that self report instruments are generally ineffective for teacher selection.

Evans (18) reported on Stein and Hardy's study that "faking" was found to be done successfully when students were instructed to answer the questions in such a way as to favor one extreme or the other, but were less successful when they were merely instructed to fake in order to make a good score. Evans (18) made a check using fourteen students to see if the Inventory was fakable. The students were instructed to fill in the Inventory honestly, and after a fifteen minute interval they were instructed to fill in the Inventory a second time and make it favorable to the writer, a person who had lectured to them recently. The mean rose from 9.43 to 39.79. This rise cast doubt on

the claim by the authors (8) that it is difficult to fake the instrument.

> The administration of this test to candidates for admission to teacher training courses might be expected to improve slightly the selection procedure. Whether the amount of the improvement would justify the extra effort is doubtful, but in absence of a more reliable selection procedure it is worth consideration. (18)

Available research using the Minnesota Teacher Attitude Inventory has been reviewed, and each of the investigators has indicated that though the instrument is not perfect, it is as reliable as any of the other instruments being used to measure attitudes.

In summary, the related literature reveals that attitudes are changeable under certain conditions. Student teachers' attitudes are significantly influenced by cooperating teachers and can be changed during a student teaching experience. The Minnesota Teacher Attitude Inventory is as effective as any other instrument for indicating teachers' attitudes toward pupil discipline.

CHAPTER III

METHODOLOGY OF THE STUDY

The purpose of this study was to determine if a cooperating teacher has an influence on a student teacher's attitude toward pupil discipline. Following is a statement of the null form of the hypothesis tested in this investigation:

> There is no significant change in the student teacher's attitude toward pupil discipline after an experience of student teaching regardless of the expressed attitude of the cooperating teacher toward pupil discipline.

This study utilized a group of elementary classroom teachers of Benton County, Arkansas, and the students enrolled in student teaching at John Brown University, Siloam Springs, Arkansas. The Minnesota Teacher Attitude Inventory was administered to both groups at the beginning of the 1969 school year. At the end of the eight-week student teaching experience, the same inventory was again administered to the student teachers. In this study the first inventory will be referred to as the pre-test and the second inventory will be referred to as the post-test.

Population

All of the elementary teachers in Gentry and Siloam Springs, Arkansas were invited to participate in this study. Forty teachers took the attitude inventory and from this population, twenty were

selected to be matched with the twenty student teachers who had enrolled at John Brown University. Each student teacher was matched with a cooperating teacher who either agreed or disagreed in expressed attitudes toward pupil discipline. A more detailed discussion of the placement method will be found later in this chapter.

At the beginning of the school year, the forty teachers met with the respective principal of each building and the purpose of the study was explained. The Minnesota Teacher Attitude Inventory was then administered and scored. The ten teachers who scored highest on the inventory and the ten who scored lowest were selected to be involved in the study and will be referred to as the control group.

Twenty elementary majors at John Brown University who did their student teaching during the fall and spring semesters of 1969-70 were placed in the experimental group. These twenty students comprised the entire enrollment in the elementary student teaching course. These student teachers were also administered the Minnesota Teacher Attitude Inventory at the beginning of the school year in the fall.

Selection of the Instrument

In order to derive some measure of expressed attitudes, the Minnesota Teacher Attitude Inventory was used. This instrument was created by Walter W. Cook, Carroll H. Leeds, and Robert Callis (8). Investigations and experiments were carried on by the authors for ten years, and the results indicated to them that the attitudes of teachers toward the children in their classrooms could be measured with high reliability. The Minnesota Teacher Attitude Inventory has emerged from these research studies.

> This inventory is designed to measure those attitudes of a teacher which predict how well he gets along with pupils in interpersonal relationships, and indirectly how well satisfied he will be with teaching as a vocation. (7)

In building this attitude scale, the authors found it necessary to define the extremes of the scale. It is assumed that a teacher ranking at the positive end of the scale will be able to maintain a state of harmonious relations with his pupils characterized by mutual affection and sympathetic understanding. There should be an atmosphere of cooperative endeavor, of intense interest between pupil and teacher, and a feeling of security which has grown from a permissive atmosphere of freedom to think, speak, and act.

A teacher ranking at the other extreme or negative end of the scale will attempt to dominate the classroom. He will rule with an iron hand, create a feeling of distrust and hostility. Both teacher and pupils will attempt to hide their inadequacies. The teacher thinks more of his status than his obligation to the pupils, and feels that the subject matter to be covered is more important than the pupils' needs, wants, and feelings. (8)

These two extremes can not be explained completely in terms of attitudes toward children because the differences could be the composite result of several factors, including academic and social intelligence, and certain abilities and skills. However, the authors (8) have assumed that the attitudes of a teacher are the result of the interaction of these many factors and that attitudes afford a key to the prediction of the type of social atmosphere a teacher will maintain in the classroom.

Since scores on the Inventory reflect to some extent the

educational philosophy of the authors, a potential user should determine whether his own philosophy of education is in agreement before making use of the instrument. Attitudes measured by the Inventory are subject to change, and are only those attitudes that a teacher has toward classroom behavior. (8)

The Minnesota Teacher Attitude Inventory is practically self-administering. The subject reads the directions and then answers each of the 150 items. There is no time limit, but the subject is encouraged to answer rapidly and indicate his first impression rather than deliberate over any item very long. Due to possible ambiguity, there may be varying interpretations, but the subject's interpretation of the items is an important factor in the Inventory, and he should therefore answer the items according to his own understanding of them.

The answer sheets are made up in five categories: strongly agree, agree, undecided, disagree, and strongly disagree. The subject marks the appropriate category for each item according to his beliefs. There are no right or wrong answers, only agreement or disagreement with the specific attitude statements, but in order to avoid a change in accepted terminology of testing, the authors (8) have provided scoring keys that contain "rights" and "wrongs" labels; no indication of correctness or incorrectness of answers is intended.

There are three methods for scoring the Inventory. Gage (20) found that the empirical validity of the Minnesota Teacher Attitude Inventory could be improved by using a logical scoring key. He gave a +1 to the categories "agree" and "strongly agree," zero to "undecided,: and -1 to "disagree" and "strongly disagree." The difference of these scores is the final score on the paper. The

second method is the one provided by the authors of the Inventory. (8) There is a score card for "rights" and a score card for "wrongs." They are labeled in this manner to avoid a change in accepted terminology. The right answers are given a plus one value and the wrong answers are given a minus one value. The difference between the rights and wrongs is the final score on the paper. The possible range for a final score is from +150 to -150. The third method was also a logical scoring key created by Yee (56). He gave these values to each category: +2 for strongly agree, +1 for agree, zero for undecided, -1 for disagree, and -2 for strongly disagree. There is a possible range of +300 to -300.

The validity of the Minnesota Teacher Attitude Inventory is based on these assumptions:

> 1. The attitudes of pupils toward their teachers and school work are a reflection of their teachers' attitudes toward them and toward teaching procedures. Hence, if the attitude of teachers and of pupils are reliably measured there should be a high relationship between them.
>
> 2. A principal who has worked with a group of teachers for a long time can sense the emotional relationships between teachers and pupils and can discriminate reliably between teachers with good or poor rapport with their pupils.
>
> 3. An expert in the field of teacher-pupil relations can visit classrooms and using methods as nearly objective as possible judge reliably the social climate which prevails. (8)

In development of the Inventory, five areas of socio-educational literature about children was canvassed and 756 items were written for tryout purposes. These items were equally divided in two Tryout Forms (A and B) of 378 items each. After preparing these forms seventy schools in Pennsylvania and Ohio were visited and the cooperation of the principals were obtained. Each principal was asked to

designate one or two teachers who had excellent working relations with pupils and whom the pupils liked very much. The principal was then asked to designate one or two teachers who had these qualities to a low degree. These teachers were then visited and asked to complete Tryout Form A. A few weeks later the teacher was visited again and given Tryout Form B. This procedure was continued until 100 superior and 100 inferior teachers had completed both forms. Teachers from grades 1 through 12 were included in the two groups. Chi-square was computed to determine the extent to which each item discriminated between the two groups. It was found that 115 items discriminated at the five per cent level and 188 were discriminating at the ten per cent level. (8) From these items the 150 items on Form A used in this study were chosen.

The validity of Form A, which was the "Inventory" used in this study, was determined by administering the "Inventory" to a random sample of 100 teachers of grades 4 - 6 inclusive and correlating their scores with three outside criteria. The first criterion of teacher-pupil rapport involved the rating of the teachers by their pupils. Ratings were obtained from at least 25 pupils on each of the 100 teachers. The reliability of the rating scale used for 25 ratings was .93. The validity for the "Inventory" from this rating by the pupils was .45. (8)

The second criterion of teacher-pupil rapport involved the rating of the teachers by their principals. The reliability of the rating scale used was determined by the split-half method and was .87. The validity for the "Inventory" of the principal's ratings was .43. (7)

The third criterion of teacher-pupil rapport involved the rating

of the teachers by a specialist in the area of teacher effectiveness. The reliability of this scale was .92. The validity for the "Inventory" of the specialist rating was .49. (8) The combined validity coefficient for Form A of the Minnesota Teacher Attitude Inventory was .60. The reliability of the Minnesota Teacher Attitude Inventory was tested by the Spearman-Brown split-half method and the correlation was .92. (8)

The authors of the Inventory assumed that every teacher who had marked the Minnesota Teacher Attitude Inventory items believed that his attitudes toward pupils and teaching procedures were the proper ones. It may also be assumed that everyone tried to "fake good" the "Inventory" in the sense of making his answers conform to his beliefs. (8) The data shows that a poor teacher "fakes" in a different way from a good teacher. In order to determine the fakability of the "Inventory," three testing sequences were given. The subjects were first quarter juniors in the College of Education, University of Minnesota. They were divided into three groups and given these instructions: Group one - first testing: standard, second testing: fake good; group two - first test: fake good, second: standard; third group, standard on both tests. The first group gained 9.6 points when they "faked good" on the "Inventory," a gain of less than one half the standard deviation. The second group who "faked good" the first time increased their average score 1.8 points when they used standard directions. The third group who used the standard directions both times increased their average score 3.3. This evidence is the basis for the conclusion by the authors (8) that the Minnesota Teacher Attitude Inventory is only slightly susceptible to attempts to "fake

good." There seems to be no practicable way of really proving how much an experienced teacher can load responses in his own favor. (8)

As a result, some have questioned its use as a true measure for the expression of attitude. On the other hand, its reliability is widely acclaimed by educators in America, England, and Canada. (11) More than fifty psychologists and educators have used this "Inventory" as their measuring instrument in conducting attitudinal studies. (11) For this reason and others to be found in Chapter II, the investigator used this "Inventory" to measure the attitudes of the subjects in this study.

Administration of the Inventory

In order to obtain a numerical score which would indicate to some degree the expressed attitudes of experienced teachers toward pupil discipline, the Minnesota Teacher Attitude Inventory was given to forty elementary teachers of Siloam Springs and Gentry, Arkansas. Their answer sheets were scored by using the right-wrong keys prepared by the authors of the Inventory. (8) These keys are referred to as right and wrong only to keep the terminology established by other testing companies. (8) A plus one value was given to each right answer and a minus one to each wrong answer. The final score was tabulated by subtracting these two scores. The ten teachers with the highest plus scores and the ten teachers with the lowest minus scores were chosen for the study. The scores of these twenty teachers are found in Appendix A and B.

The Minnesota Teacher Attitude Inventory was administered to the twenty elementary majors who were enrolled in the directed teaching

course at John Brown University under the supervision of the author. These answer sheets were scored by the authors' (8) prepared keys and the final score obtained by subtracting the pluses for rights and the minuses for wrongs. The students' scores for this Inventory may be found in Appendix A under the title pre-test.

Ten student teachers were then placed with ten cooperating teachers whose expressed attitudes toward pupil discipline were within twenty points of theirs, an arbitrary range selected by the investigator. Ten student teachers were, also, placed with ten cooperating teachers whose expressed attitudes toward pupil discipline were distinctly unlike theirs, as indicated by the wide range on the continuum of the attitude scale.

At the end of the eight-week period of student teaching these students were administered the same Minnesota Teacher Attitude Inventory and will be referred to as the post-test. The scores may be found in Applendix B. According to the Minnesota Teacher Attitude Inventory Manual (8) enough insight is gained into the test if given after a four weeks interval to raise the average score 4.2 points. This insight could influence the scores of these students after eight weeks to a lesser degree.

The differences between the scores on the pre-test and the scores on the post-test were tabulated and a t test was computed to determine if there was a significant change in the student teacher's attitude toward pupil discipline at the .05 level of confidence.

The t test was used because the nature of the final score is a nominal interval scale measure and each response can be treated independently. When this occurs, a parametric test gives the most powerful results.

Summary

The purpose of this study was to determine whether the attitudes of student teachers toward discipline will change while they are under the supervising influence of cooperating teachers in the public schools.

Twenty teachers and twenty student teachers were administered the Minnesota Teacher Attitude Inventory at the beginning of the school year to determine their expressed attitudes toward pupil discipline. The twenty students were matched with twenty teachers; ten student teachers were placed with cooperating teachers of similar expressed attitudes, and ten were placed with cooperating teachers whose expressed attitudes were different from theirs. After eight weeks of student teaching, the twenty student teachers were given the same inventory as a post-test.

The *t* test was used to determine the significance of the difference between the means of the pre-test and post-test of the experimental group to determine if the .05 level of confidence was attained.

CHAPTER IV

ANALYSIS OF DATA

A group of cooperating teachers and a group of student teachers were used in the study.

The Minnesota Teacher Attitude Inventory was administered to both groups at the beginning of the school year. At the end of eight-week student teaching experience the Inventory was again administered to the student teachers. The raw data for these tests are found in Appendices A, B, C, D and E.

Results of the *t* test for the mean difference of the entire group are found in Table I.

The computed *t* for the group yielded a *t* statistic of 1.35. The minimum *t* value required for statistical significance at the .05 level of confidence is 2.101. The calculated *t* of 1.35 was not significant at the .05 level of confidence for a two-tailed test.

Results of the *t* test for the mean difference of those in the experimental group who were like the control group in attitude in comparison to the experimental group who were unlike the control group in attitude are in Table II.

The computed *t* yielded a statistical *t* of 1.578. The minimum *t* value required for statistical significance at the .05 level of confidence for a two-tail test is 2.101. The calculated *t* of 1.59 was not significant at the .05 level of confidence.

TABLE I

PRE-TEST AND POST-TEST SCORES
FOR THE EXPERIMENTAL GROUP

	Mean	Standard Deviation	
Pre-Test	25.3	35.8	$t = 1.35$
Post-Test	47.8	34.7	

The t test was computed. The value of t with eighteen degrees of freedom had to be 2.101 to be significant at the five per cent level. The calculated t was 1.35 and was not significant at the five per cent level. The formula to test the means of the t test was taken from Popham. (41)

TABLE II

DIFFERENCE OF THE MEANS OF THE
TWO EXPERIMENTAL GROUPS

	Mean	Standard Deviation	
Like Attitudes	11.8	24.16	$t = 1.578$
Unlike Attitudes	36.8	43.9	

The mean of the difference between the pre-test and post-test with like attitudes was 11.8 and the mean of the difference between the pre-test and the post-test with unlike attitudes was 36.8. The calculated t was 1.59 which was not significant at the five per cent level. Thus the entire experimental group did not change attitudes significantly during their student teaching experience. The formula to test this statistic was taken from Popham. (41)

Findings

The findings from the data analysis in this study indicated that no significant difference occurs in a student teacher's attitude toward pupil-discipline when placed with a teacher of like or unlike attitudes. However, the data shows that the mean change of the experimental group who were placed with the cooperating teachers of unlike attitudes was much larger than the mean change of the group who were placed with teachers of like attitude. The mean difference for the group with like attitudes was 11.8 and for the group with unlike attitudes 36.8.

Neither of the *t* tests were significant at the .05 level of confidence. Therefore, the result was failure to reject the null hypothesis that there was no significant difference at the .05 level of confidence in a student teacher's expressed attitude toward pupil discipline after a student teaching experience regardless of the expressed attitude of the cooperating teacher.

Summary

By the use of the statistical *t* a comparison was made of the mean difference of the two experimental groups, the student teachers who were placed with cooperating teachers of like attitude, and those placed with teachers of unlike attitudes. The computed *t* was found not to be significant at the five per cent level of confidence.

CHAPTER V

SUMMARY

Summary

This investigation was to explore the change of attitudes in student teachers toward pupil discipline in relation to being with a cooperating teacher of like or unlike attitudes.

The population utilized in this investigation consisted of twenty elementary teachers in the public schools of Benton County, Arkansas, and twenty elementary student teachers enrolled at John Brown University. Ten of these student teachers were placed with cooperating teachers who had expressed attitudes most like theirs, and ten were placed with cooperating teachers who had expressed attitudes most unlike theirs.

The Minnesota Teacher Attitude Inventory was administered to both cooperating and student teachers at the beginning of the experiment to determine their expressed attitudes toward pupil discipline. The same inventory was administered to the student teachers at the end of their student teaching experience to determine whether a significant change in attitude had occurred.

The statistical *t* test was applied to determine the significance of change in the expressed attitudes of the two groups of elementary student teachers.

When the attitudinal change was computed for the two groups,

"likes" and "unlikes," it was found that the attitudinal change was not significant at the .05 level of confidence; however, the group with unlike attitudes made a greater mean change than the group with like attitudes.

Recommendations

The investigator would suggest that further study might be done in this area to determine if there are specific experiences within the student teaching situation that would assist the student teachers in re-evaluating or changing their attitudes toward children. There is also need for further exploration of the specific effect the cooperating teacher has on the expressed attitude of the student teacher.

Further study should be conducted to determine the attitude changes of students with like attitudes who are placed with teachers who are on the opposing ends of the continuum of expressed attitudes.

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APPENDIX A

APPENDIX A

The scores made by the control group of twenty elementary teachers and the scores made by the twenty student teachers as an experimental group on their pre-test.

Control Group		Experimental Group	
Teacher	Test Score	Student	Pre-Test Score
Sp	-39	Ka	-21
Jo	-27	Cl	-20
Al	-19	Gu	-18
Br	-10	Ja	-16
Po	- 3	Mc	-15
Mu	7	Du	-12
Gu	10	Ho	-12
Wi	15	La	6
Pa	16	Fa	27
He	35	Pa	27
Th	37	Cu	33
Bo	43	Lu	40
Ho	50	Hu	42
Mi	53	Kl	44
Ro	55	Ma	53
Wa	75	Lo	56
Ki	78	Wi	66
Ce	77	Ca	66
Mg	84	Bl	105
Mean	29.6		25.3
Standard Deviation	36.3		35.8

APPENDIX B

APPENDIX B

The scores made by the control group of elementary teachers and the scores of elementary student teachers on a post-test given after eight weeks of student teaching experience.

Control		Experimental	
Teacher	Score on Inventory	Student Teacher	Post-Test
Sp	-39	Ho	-22
Jo	-27	Du	-20
Al	-19	Pa	5
Br	-10	Hu	14
Po	- 3	Cl	26
Mu	7	Le	29
Cu	10	Ka	30
Wi	15	Ja	44
Pa	16	Mc	46
He	35	Do	52
Th	37	Fa	55
Bo	43	Cu	58
Ho	50	Kl	58
Mi	53	Ma	64
Ro	55	Lo	65
Mc	57	La	81
Wa	75	Bl	84
Ki	76	Wi	86
Ce	77	Ca	98
Mg	84	Gu	103
Mean	29.6		47.8
Standard Deviation	36.3		34.7

APPENDIX C

APPENDIX C

Raw Scores of the Experimental Group
on Pre- and Post-Tests

Examinees	Pre-Test	Post-Test	Examinees	Pre-Test	Post-Test
Ka	-21	30	Cu	33	58
Cl	-20	26	Le	40	29
Gu	-18	103	Hu	42	14
Ja	-16	44	Kl	44	58
Mc	-15	46	Ma	53	64
Du	-12	-20	Do	55	52
Ho	-12	-22	Lo	56	65
La	6	81	Wi	66	86
Fa	27	55	Ca	66	98
Pa	27	5	Bl	105	84
Mean				25.3	47.8
Standard Deviation				35.8	34.7

APPENDIX D

APPENDIX D

Scores of Experimental Group and Control Group with Attitudes of Like Degree

Control	Experiment	Pre-Test (Control)	Pre-Test (Experimental)	Post-Test	Difference
Jo	Jo	-27	-16	44	60
Br	Ho	-10	-12	-22	10
Po	Du	- 3	-12	-20	8
Pa	Cu	16	33	58	25
He	Ma	35	53	64	11
Th	Le	37	40	29	-11
Bo	Hu	43	42	14	-28
Ro	Kl	55	44	58	14
Mc	Do	57	55	51	- 3
Ki	Ca	76	66	98	32
Mean		11.8			
Standard Deviation		24.16			

APPENDIX E

APPENDIX E

Raw Scores of the Experimental and Control Groups with Attitudes of Unlike Degree

Control	Experiment	Pre-Test (Control)	Pre-Test Experimental)	Post-Test	Difference
Sp	Fa	-39	27	55	28
Al	Pa	-19	27	5	-22
Mu	Bl	7	105	84	-21
Gu	Wi	10	66	86	20
Wi	Lo	15	56	65	9
Mi	Ka	53	-21	30	51
Wa	Mc	75	-15	46	61
Ce	Gu	77	-18	103	121
Mg	Cl	84	-20	26	46
Ho	La	50	6	81	75
Mean		36.8			
Standard Deviation		43.9			

VITA

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Brownie Mitchell Kimbrough

Candidate for the Degree of

Doctor of Education

Thesis: A STUDY OF ATTITUDE CHANGES OF STUDENT TEACHERS TOWARD DISCIPLINE OF ELEMENTARY PUPILS AS MEASURED BY THE MINNESOTA TEACHER ATTITUDE INVENTORY

Major Field: Elementary Education

Biographical:

Personal Data: Born near Childress, Texas, February 25, 1915, the daughter of William B. and Annie May Mitchell. Married Wade Kimbrough, June 6, 1941; one child, Allen.

Education: Attended grade school and high school in Childress, Texas; graduated from Childress High School in 1933; received the Bachelor of Science degree from West Texas State University, with a major in Physical Education, in January, 1941; received the Master of Education degree from West Texas State University, with a major in Education, in August, 1957; completed requirements for the Doctor of Education degree in July, 1970.

Professional Experience: Taught in elementary and secondary schools in Canyon and Childress, Texas; in Western Grove and Harrison, Arkansas; and Clovis, New Mexico. Taught six years as Associate Professor of Education, John Brown University, Siloam Springs, Arkansas, 1964-1970.

Professional Organizations: National Educational Association, Arkansas Education Association, Arkansas Association of Higher Education, Delta Kappa Gamma.