# A DESCRIPRION OF CHANGE IN ATIITUDES OF STUDENT TEACHERS AS MEASURED BY THE MINNESOTA TEAGHER ATITTUDE INVENTORY FOR THE WINTER QUARTER, 1969 

BY

## JAMES HARRIS SCROGGTNS III

A DESCRIPTION OF CHANGE IN ATTITUDES OF STUDENT TEACHERS

## AS MEASURED BY THE

MINNESOTA TEACHER ATTITUDE INVENTORY FOR THE WINTER QUARTER, 1969

A Research Paper
Presented to the Graduate Council of Austin Peay State University

In Partial Fulfillment<br>of the Requirements for the Degree<br>Master of Arts<br>in Education

by

To the Graduate Council:

I am submitting herewith a Research Paper written by James Harris Scroggins III entitled "A Description of Change in Attitudes of Student Teachers as Measured by the Minnesota Teacher Attitude Inventory for the Winter Quarter, 1969." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts in Education, with a major in Administration and Supervision and an Elementary Distributive minor.


## ACKNOW LEDGEMENTS

The author extends his appreciation to Dr. Fred Bunger for his helpful consideration and guidance in completing this research paper. The author would also like to give special recognition to his wife, Jan, for her encouragement and farsighted suggestions as the paper developed.

## TABLE OF CONTENTS

## CHAPTER

PAGE
I. NATURE OF THE STUDY ..... 1
The Problem ..... 1
Statement of the Problem. ..... 1
Importance of the Study. ..... 2
Limitations of the Study ..... 2
Assumptions ..... 3
Definitions of Terms Used ..... 4
Attitude. ..... 4
Minnesota Teacher Attitude Inventory (MTAI). . . 4
Student Teacher Categories. ..... 4
Pretest ..... 5
Posttest ..... 5
Method of Procedure ..... 5
Method of Collection ..... 5
Treatment of the Data. ..... 5
Organization of the Study. ..... 6
II. REVIEW OF THE LITERATURE. ..... 7
III. PRESENTATION AND DESCRIPTION OF THE DATA. 12
Pretest and Posttest Data for the Total Group. ..... 12
Pretest and Posttest Data for Males and Females ..... 13
Pretest and Posttest Data for Certification Levels. ..... 15
Pretest and Posttest Data for Subject Fields ..... 17
Pretest and Posttest Data for University Supervisor Groups ..... 20
Pretest and Posttest Data by Schools ..... 22
IV. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS. ..... 26
Summary. ..... 26
Conclusion ..... 26
Recommendations ..... 28
BIBLIOGRAPHY ..... 30
APPENDIX ..... 31

## LIST OF TABLES

## TABLE

PAGE
I. Differences from Pretest to Posttest for the Total Group. . ..... 13
II. Differences from Pretest to Posttest for Male and Female Groups ..... 14
III. Differences from Pretest to Posttest for Certification Levels. ..... 15
IV. Differences from Pretest to Posttest for Subject Fields. ..... 18
V. Differences from Pretest to Posttest for University Super- visors' Groups ..... 20
VI. Differences from Pretest to Posttest by Schools. ..... 23

## CHAPTER I

## NATURE OF THE STUDY

Student teaching at Austin Peay State University is an important part of the total teacher education program.

The Student Teacher Handbook of Austin Peay State University which is an Education Department publication, stated in the introduction that "the fundamental purpose of student teaching is to provide opportunity for the student teachers to have a variety of learning experiences in actual field situations...." If the fundamental purpose of student teaching was to provide in-the-field learning experiences, then it was logical to suggest that student teaching attitudes would be affected by these experiences. The measure of the attitudes of student teachers to suggest the effect of such experiences should prove valuable in the overall evaluation of the student teaching program.

## I. THE PROBLEM

Statement of the problem. The purpose of this study was to describe the change, if any, in the attitudes of certain groups of student teachers who did their student teaching during the Winter Quarter of 1969 , as measured in pre-student teaching and post-student
teaching testing using the Minnesota Teacher Attitude Inventory as the measuring instrument.

Importance of the study. This, the first administration of the pretest and posttest Minnesota Teacher Attitude Inventory, began with the aforementioned group of student teachers. It was suggested that the data gathered and the relationships which were shown in this initial study serve as a springboard for future studies of the same nature. Further, it was hoped that this study and those to follow would aid in the improvement of the student teaching program as it affected student-teacher attitudes toward pupils.

Limitations of the study. The subjects used in the study were seventy-seven Austin Peay State University students seeking certification in teacher education during the Winter Quarter, 1969. Only the scores of students who took the Minnesota Teacher Attitude Inventory prior to and after their student teaching experiences were used in this study.

Austin Peay State University drew most of its students from Clarksville, Tennessee, and its immediate surrounding areas; hence, this community was greatly responsible for attitude development of these students prior to their entrance to Austin Peay State University. Even though the preceding statement is true, the community effect upon attitudes in this study is largely disregarded since the study did
not involve a comparison of attitude scores with norms prepared by the authors of the test. However, the norms are available for a comparison in the appendix and a consideration of the conservative nature of the community and the liberal nature of the Inventory should be noted in making such a comparison.

Assumptions. The writer assumed that the Minnesota Teacher Attitude Inventory administered to these student teachers was accurately scored and the resulting data correctly recorded by the Education Department staff.

It was assumed that the subjects to whom the inventory was administered were sincere in answering the questions on the inventory and that they were under no threat of having the results used as an instrument for grading purposes.

Further, it was assumed that the student teaching experience which occurred between the pretest and posttest in some way exerted an influence on student teacher attitudes as they were measured by the Minnesota Teacher Attitude Inventory.

Lastly, it was assumed that this study would enable the reader to note characteristic attitude changes of various groups of student teachers and to use the results for further study in aiding in improvement of student teaching as an attitude-changing experience.

Attitudes. Attitudes, according to L. L. Thorndike, are inclinations, prejudices, or preconceived notions and feelings toward things, persons, situations, and issues. ${ }^{l}$ As used by the authors of the Minnesota Teacher Attitude Inventory, they are concerned with the teacher-pupil relationships in the classroom setting. They are concerned with how well a teacher will get along with pupils in interpersonal relations and also how much he may expect to enjoy teaching as a vocation.

## Minnesota Teacher Attitude Inventory (MTAI). This is a

 popular instrument for the measurement of teacher attitudes. The MTAI was developed at the University of Minnesota, and the Manual was published in 1951. More than fifty research studies using this instrument have been reported in the literature.Student teacher categories. The total number of student teachers for the Winter Quarter, 1969, were divided into categories for statistical analysis. The student teacher categories were arrived at on the following bases:

1. Sex--male and female
2. Certification level--elementary (grades l-6), secondary (grades 7-12), certification for grades 1-12 (art, music, and physical education)
3. Subject matter field
${ }^{l}$ L. L. Thorndike. Attitudes: I. Their Nature and Development. J. Gen. Psychol. 1939, 21, 357-399, as cited by Raymond F. Gale, Developmental Behavior (London: The Macmillan Company, 1969), p. 270.
4. University supervisor
5. Schools where student teachers were assigned

Pretest. The MTAI score secured when it was administered to each of the subjects prior to the student teaching experience in the Winter Quarter, 1969.

Posttest. The MTAI score secured when it was administered immediately following the student teaching experience of the Winter Quarter, 1969.

## III. METHOD OF PROCEDURE

Method of collection. The data used in this study were obtained from the Austin Peay University Education Department. The data consisted of pretest and posttest scores on the MTAI of student teachers for the Winter Quarter, 1969. Only those student teachers who completed student teaching and took both pretest and posttests were used in this study.

Treatment of the data. The student teachers' pretest and postscores were divided into categories according to sex, certification level, subject matter field, university supervisor, and school. For each of the student teacher categories, the range, median, and mean were calculated for the pretest and the posttest. Also calculated were the arithmetical differences between the pretest and posttest statistics in an effort to make generalizations concerning changes in attitudes
as a result of student teaching.

## IV. ORGANIZATION OF THE STUDY

The contents of the first chapter included the nature of the study, the problem and its importance, limitations, assumptions and the definitions of terms. The second chapter was concerned with summarizing the related literature. Chapter III consisted of presentation and analysis of the data. The summary and conclusions resulting from the study were contained in Chapter IV.

## CHAPTER II

## REVIEW OF THE LITERATURE

While there have been numerous studies and writings concerned with the MTAI, the writer has located very few items of literature which relate directly to his study. Nevertheless, the remainder of this chapter consists of summaries of selected literature which were related.

A study by Stein and Hardy (1957) was concerned with student teachers. These investigators used three samples of student teachers from the University and the Normal School in Manitoba. Two samples of fifty subjects each were in the elementary schools and the third, of twenty-six subjects, in the secondary schools. There were four types of classroom measures which were correlated with the MTAI: (1) ratings by pupils on an adaptation of the Leed's scale called "Our Student Teacher," (2) ratings by pupils of the student teacher's lessons apart from his personality, (3) advisor ratings (university supervisor), and (4) a combination of the three ratings. ${ }^{1}$
${ }^{1}$ H. L. Stein and J. Hardy. A validation study of the MTAI in Manitoba. J. Educ. Res., 1957, 50, 326.

One provocative finding was the difference in relationship between the MTAI and pupil ratings of the student teacher's personality on the "Our Student-Teacher" scale, and the MTAI and pupil ratings of the student teacher's lessons themselves. The former gave a significant correlation of . 507. The latter gave a non-significant correlation of .282 . It was found in a combined correlation that elementary teachers were at the .39 level and secondary teachers at the .56 level. ${ }^{2}$

Hence, the investigators concluded that student teacher attitudes are measured by the MTAI with a "fair degree of both validity and reliability. ${ }^{3} 3$

An investigation which appeared to find contradictory results to the one just mentioned was done by Sandgren and Schmidt (1956). They divided a sample of 393 student teachers into upper, middle, and lower groups based on their MTAI scores. No significant relationship could be established between the MTAI score and the critic teacher's rating of teaching effectiveness no matter how the student teachers were further subdivided (male versus female, elementary versus secondary, or according to curriculum followed). The investigators concluded that "...because there was no apparent

## ${ }^{2}$ Ibid.

${ }^{3}$ Ibid.
relation between MTAI scores and critic teacher's ratings the MTAI cannot be used to predict probable success in teaching if the ratings made by public school critic teachers on the Student Teaching Report are used as a criterion of success. 14

Oelke (1956) studied the relationship between the MTAI scores of forty-four senior student teachers and the ratings given them by their supervisors. He found that no relationship existed. 5

Another study dealing with MTAI scores and supervisor ratings was done by Fuller (1951). His sample was composed of nursery-kindergarten-primary teacher-training curriculum and he found no systematic relationships between MTAI scores and supervisor's ratings and concluded: "Therefore, while the MTAI may serve a highly useful purpose in selecting students from the general population for training in early childhood education, or even for refinement of selection policies within subdivisions of the College of Education, it does not identify the ablest or weakest student teachers within the experimental group. ${ }^{16}$
${ }^{4}$ D. L. Sandgren and L. G. Schmidt. Does practice teaching change attitudes toward teaching?, J. Educ. Res., 1956, 49, 679.
${ }^{5} \mathrm{~N}$. C. Oelke. A study of student teachers' attitudes toward children. J. Educ. Psychol., 1956, 47, 193-196.

6Elizabeth M. Fuller. The use of student-pupil attitudes, selfrating and measures of general ability in the pre-service selection of nursery school-kindergarten-primary teachers. J. Educ. Res. 1951, 44, 682 .

In Beamer and Ledbetter's study (1957), scores on the MTAI were examined for various types of educational personnel. The subjects were 212 graduate students and were divided into the following groups: (1) male and female, (2) elementary and secondary, (3) guidance workers, (4) administrators, and (5) inexperienced education majors. Some of the findings included the following:

1. Inexperienced education majors had higher mean scores than experienced teachers.
2. Female teachers had a higher mean score than male teachers.
3. Elementary teachers had a higher mean score than secondary teachers. ${ }^{7}$

A study by Callis (1950) classified a group of juniors and seniors majoring in education into three major curricular groupings: (1) early childhood education majors--nursery to elementary, (2) academic field majors, and (3) special field majors--art, home economics, industrial arts, music, and physical education. Callis found significant differences among the three groups. Early childhood education majors scored highest; special field majors scored lowest at the beginning and at the end of professional training. 8
${ }^{7}$ G. C. Beamer and Elaine W. Ledbetter. The relation between teacher attitudes and social service interest. J. Educ. Res. 1957, 50, 655-666.
${ }^{8}$ R. Callis. Change in teacher-pupil attitudes related to training and experience. Educ. Psychol. Measmt. 1950, 10, 718-727.

One of the developers of the MTAI, Cook, in his summary of some of the earlier findings about this test, included the finding that primary teachers have the most favorable attitudes toward children, intermediate grade teachers ranking next, with teachers at the high school level third, and junior high teachers ranking lowest. He also included the finding that at the high school level, teachers of academic subjects rank higher than teachers of special fields (art, music, home economics, industrial arts and physical education). ${ }^{9}$
${ }^{9}$ W. W. Cook, C. H. Leeds, and R. Callis. Predicting Teacher-Pupil Relations. The Evaluation of Student Teaching, Twenty-eighth Annual Yearbook, Association for Student Teaching (Lockhaven, Pa., State Teachers College, 1949) as cited by William H. Burton and Leo Brueckner, Supervision: A Social Process (New York: Appleton-Century-Crofts, Inc., 1955), p. 357.

## CHAPTER III

## PRESENTATION AND DESCRIPTION <br> OF THE DATA

The manipulation of the data consisted of calculating the mean, median and range of various groupings of student teachers who student taught during the Winter Quarter of 1969. These data were arranged in tables and the resulting statistics from the calculations were discussed particularly in terms of the evident change in student teaching attitudes toward children. Since the study was specifically of a descriptive nature the writer has attempted to refrain from direct comparisons between one category and another in the context of this chapter.

Furthermore, it should be noted that generalizations which have been made through presentation of the data have been attempts to describe generalized trends of score changes as indicated in central tendency measurements of pre-student teaching and post-student teaching administration of the MTAI. It was not concerned with the more specific changes as might be indicated by calculations of significance.

> Pretest and posttest data for the total group. The number of teachers in the sample was seventy-seven. The most evident change
in the student teacher scores was that as a group the scores generally went down after the student teaching experience, as shown in Table $I$.

## TABLE I

DIFFERENCES FROM PRETEST TO POSTTEST FOR THE TOTAL GROUP

No. $\mathrm{M}_{1} \quad \mathrm{M}_{2} \quad$ Diff $\quad \mathrm{Mdn}_{1} \quad \mathrm{Mdn}_{2}$ Diff Range $_{1}$ Range 2 Diff

Total
Group $\begin{array}{llllllllllll}77 & 34.09 & 29.23 & -4.86 & 34.0 & 32.0 & -2.0 & 107 & 141 & 34\end{array}$

The mean and the median both indicated attitude change in a negative direction with a difference in pretest and posttest mean scores of -4.86 and a difference in pretest and posttest medians of -2.0. The posttest range showed an increase over the pretest range of 34 points. Since the low score on the pretest was -9 , and the low score on the posttest was -40 , it was apparent that much of the increase of the range was due to a downward movement of scores. The downward movement of the posttest range was in keeping with the aforementioned downward movement of posttest measures of central tendency.

Pretest and posttest data for males and females. One of the categories used in analyzing the data was that of sex. Of the total group of student teachers thirty-three were males and forty-four
were females. From Table II it can immediately be seen that the generalized downward trend of student teacher attitudes as indicated in Table I was common to both sexes.

TABLE II

DIFFERENCES FROM PRETEST TO POSTTEST
FOR MALE AND FEMALE GROUPS

No. $\mathrm{M}_{1} \mathrm{M}_{2}$ Diff $\mathrm{Mdn}_{1} \mathrm{Mdn}_{2}$ Diff Range ${ }_{1}$ Range 2 Diff

| Male | 33 | 21.27 | 14.27 | -7.00 | 19.0 | 16.0 | -3.0 | 76 | 113 | 37 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Female | 44 | 43.70 | 40.45 | -3.25 | 44 | 43.5 | -.5 | 96 | 138 | 42 |

While both sexes contributed to the downward trend in attitudes, the difference in the degree of decrease of the sexes was notable. The mean for males dropped 7 points from pretest to posttest while the mean for females dropped only 3.25 points. The medians held relatively stable in both the pretest and posttest for both males and females. It was also apparent from Table II that the females scored higher than the males and this finding supported the conclusion from a study by Beamer and Ledbetter in which experienced female teachers scored higher than experienced male teachers.
${ }^{1}$ Beamer and Ledbetter, loc. cit.

The increase in range of both the male and female scores was due to the movement of scores in a negative direction while the positive end of the range remained relatively stable for both pretests and posttests of males and females.

Pretest and posttest data for certification levels. Another of the categories used in the analysis of data was certification levels. When the data were arranged by certification levels, the groups contained the following: 15 student teachers who sought certification at the elementary level, 37 at the secondary level, and 25 who sought certification in grades one through twelve (this group did half of their student teaching at the elementary level and half at the secondary level).

In Table III the downward trend is found in the mean of all three certification levels but the median does not show the same consistency.

## TABLE III

## DIFFERENCES FROM PRETEST TO POSTTEST

FOR CERTIFICATION LEVELS

|  | No. | M1 | $\mathrm{M}_{2}$ | Diff | $\mathrm{Mdn}_{1}$ | $\mathrm{Mdn}_{2}$ | Diff R | ang | Rang | Dif |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Elementary | 15 | 52.20 | 51.53 | -. . 67 | 52.0 | 60.0 | 8.0 | 63 | 121 | 58 |
| Secondary | 37 | 33.03 | 31.86 | -1.17 | 31.0 | 31.0 | 0 | 104 | 141 | 37 |
| Grades 1-12 | 25 | 24.80 | 11.96 | -12.84 | 19.0 | 3.0 | -16.0 | 70 | 93 | 23 |

The elementary level and secondary level showed relatively modest drops in mean differences in pretest and posttest scores while the one-through-twelve-level showed a more severe drop in mean score。

The median score of the elementary level increased 8.0 points. This can be attributed to the fact that eight of the elementary student teachers showed increases in score while only seven showed decreases. The secondary level medians showed no change from pretesting to posttesting while the one-through-twelve-level medians decreased by 16.0 points.

The range became greater in the posttest of each certification level. Once again the increase was due to the extension of the lower end of the range while the upper end remained stable at each level.

The statistics as recorded in Table III lent support to a study by Callis which classified education juniors and seniors into three major groupings: (1) Early childhood education majors--nursery to elementary, (2) Academic fields majors, and (3) Special fields majors-art, home economics, industrial arts, music, physical education. The first of Callis' groupings was essentially the same as the elementary certification level in this study. The third classification was composed of essentially the same special field majors as are found in this study's one-through-twelve-certification-level with the exceptions of home
economics and industrial arts. Wallis found that early childhood majors scored highest and special fields majors scored lowest. ${ }^{2}$ This study had similar results as can be seen in Table III. The elementary certification level experienced a substantial mean increase on the posttest while the one-through-twelve-certification level mean was lowest of the three levels and showed the greatest loss in attitude points on the posttest.

Cook, after summarizing a number of earlier studies, reported that primary teachers had the most wholesome attitudes toward children with intermediate grade teachers next. ${ }^{3}$ The findings of this study concurred with Cook's report.

Pretest and posttest data for subject fields. Another classification used in inspecting the data was that of subject fields. Only the scores of student teachers who did student teaching at the junior high and high school level were used in the statistics prepared for Table IV.

[^0]TABLE IV

## DIFFERENCES FROM PRETEST TO POSTTEST FOR SUBJECT FIELDS

|  | No. | $\mathrm{M}_{1}$ | $\mathrm{M}_{2}$ | Diff | $\mathrm{Mdn}_{1}$ | $\mathrm{Mdn}_{2}$ | Diff | nge ${ }_{1}$ | Range 2 | Diff |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Biology | 7 | 32.86 | 22.14 | $-10.72$ | 28.0 | 17.0 | -11.0 | 96 | 103 | 7 |
| Business | 6 | 34.00 | 23.33 | $-10.67$ | 36.0 | 28.5 | -7.5 | 47 | 106 | 59 |
| English | 11 | 48.09 | 53.55 | 5.46 | 48.0 | 53.0 | 5.0 | 96 | 79 | -17 |
| History | 8 | 22.00 | 34.88 | 12.88 | 27.5 | 36.5 | 9.0 | 42 | 63 | 21 |
| Music | 5 | 31.60 | 26.40 | - 5.20 | 26.0 | 15.0 | $-11.0$ | 55 | 67 | 12 |
| Health and <br> Physical <br> Education | 17 | 22.06 | 6.47 | -15.59 | $16.0-$ | - 2.0 | $-18.0$ | 67 | 85 | 18 |

Using the mean as an indication of central tendency the subject fields we re ranked according to most favorable attitudes on the pretest as follows: (1) English, (2) Business, (3) Biology, (4) Music, (5) Health and Physical Education, and (6) History.

The most revealing findings were the differences of mean scores from pretest to posttest and the direction of these differences. Following student teaching, Health and Physical Education majors dropped an average
of 15.59 attitude points, registering the poorest attitudes according to the MTAI. Business and Biology student teachers averaged drops of nearly eleven points following student teaching. Music student teachers had the smallest mean drop of 5.20 points. English and History were the only subject fields in which the mean increased following student teaching. History had the bigger increase and moved from next to last in the attitude ranking of subject fields to second, only surpassed in attitudes as a group by English majors.

Again using the mean as an indicator of central tendency the subject matter fields were ranked according to most favorable attitudes on the posttests. The ranking was as follows: (1) English, (2) History, (3) Music, (4) Business, (5) Biology, and (6) Health and Physical Education. The ranking after student teaching was also in keeping with the information in Cook's summarization that academic field majors tend to score higher than non-academic field majors. ${ }^{4}$ The lone discrepancy in the ranking was the rank of Biology majors, as a group, who occupied the fifth place in the rankings after student teaching.

With the exception of Music, the median of each subject area changed in keeping with the mean. For Music the mean fell 5.20
${ }^{4}$ Cook, loc. cit.
points while the median fell 11 points. Accounting for this was the fact that four out of the five student teachers in Music had attitude scores to fall following student teaching.

The differences in the ranges as shown on pretests and posttests indicated a generally wider dispersal of scores following student teaching with the exception of English where the range narrowed 13 points.

Pretest and posttest data for university supervisor groups. In classifying student teachers according to university supervisors the student teachers who had more than one university supervisor during the course of the quarter were eliminated from consideration. It was felt that since these student teachers were exposed to two university supervisors that it would have been unfair to include them in this analysis.

TABLE V
DIFFERENCES FROM PRETEST TO POSTTEST
FOR UNIVERSITY SUPERVISORS' GROUPS

No. $\mathrm{M}_{1} \quad \mathrm{M}_{2}$ Diff $\mathrm{Mdn}_{1} \mathrm{Mdn}_{2}$ Diff Range $_{1}$ Range2 Diff

| Dr. Bunger's | 4 | 18.00 | 17.25 | .- .75 | 16.5 | 20.0 | 3.5 | 35 | 55 | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Dr. Burns' | 5 | 27.40 | 39.80 | 12.40 | 37.0 | 41.0 | 4.0 | 54 | 39 | -15 |
| Dr. Crutcher's | 8. | 51.88 | 55.62 | 3.74 | 51.0 | 63.0 | 12.0 | 63 | 121 | 58 |

## TABLE V (continued)

No. M1 M2 Diff Mdnl Mdn2 Diff Rangel Range2 Diff
Dr. Lambert's $11137.27 \quad 28.36 \quad 8.91 \quad 31.0 \quad 23.0$ $\begin{array}{llllllllllllll}\text { Mrs. Oakley's } & 7 & 52.57 & 46.86 & -5.71 & 52.0 & 48.0 & -4.0 & 36 & 50 & 14\end{array}$ $\begin{array}{llllllllllll}\text { Mr. Williams' } & 17 & 35.47 & 35.24 & -.23 & 33.0 & 33.0 & 0 & 100 & 130 & 30\end{array}$

Using the mean as an indicator of central tendency the university supervisors' groups were ranked according to most favorable attitudes on the pretest as follows: (1) Mrs. Oakley's, (2) Dr. Crutcher's,
(3) Dr. Lambert's, (4) Mr. Williams', (5) Dr. Burns', and (6) Dr. Bunger's.

The most apparent changes in mean scores for the groups from pretest to posttests can be seen in Table V. Dr. Burns' group showed the greatest mean improvement in attitude followed by Dr. Crutcher's group. Dr. Bunger's and Mr. Williams' group means showed very little change while Dr. Lambert's group had the greatest mean loss followed by Mrs. Oakley's group. The resulting revised ranking of university supervisor student teacher groups was as follows: (1) Dr. Crutcher's, (2) Mrs. Oakley's, (3) Dr. Burns', (4) Mr. Williams', (5) Dr. Lambert's, and (6) Dr. Bunger's.

The change in the median for each university supervisor group was in keeping with the change in mean except in the case of Dr . Bunger's group in which the median rose 3.5 points while the mean fell. 75 points. This difference, however, was difficult to assess since Dr. Bunger's group was so small.

The ranges of the university supervisor groups showed an increase in variability from a 14 point minimum in Mrs. Oakley's group to a 58 point maximum in Dr. Crutcher's group. Dr. Burns' group was the lone exception in that the range of that group contracted 15 points. This indicated that the scores in Dr. Burns' group which moved up in mean moved up in a more unified manner especially since the upper limits of the range for this group did not vary substantially.

Pretest and posttest data by schools. Table VI was concerned with presenting the data by schools. Student teachers in the one-through-twelve certification level were eliminated from this portion of the study since they spent half of their student teaching experience in elementary schools and half of their time in secondary schools. Also, only those schools were included which had at least four student teachers for the winter quarter seeking certification at either the elementary or secondary level.

## TABLE VI

## DIFFERENCES FROM PRETEST TO POSTTEST <br> BY SCHOOLS

No. $\mathrm{M}_{1} \quad \mathrm{M}_{2} \quad$ Diff $\quad \mathrm{Mdn} 1 \quad \mathrm{Mdn}_{2}$ Diff Range $_{1}$ Range $_{2}$ Diff

Clarksville
High School
$6 \quad 24.33 \quad 26.50$
$2.17 \quad 16.5 \quad 20.0$
3.565

86
21
Hopkins ville
High School
$6 \quad 32.50 \quad 38.83$
$6.33 \quad 34.5 \quad 45.5 \quad 11.0 \quad 65$
130
65
New Providence

| Junior High | 4 | 32.50 | 17.00 | -15.50 | 37.0 | 20.0 | -17.0 | 46 | 36 | -10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Moore
$\begin{array}{lllllllllll}\text { Elementary } & 4 & 52.75 & 41.00 & -11.75 & 49.0 & 59.0 & 10.0 & 63 & 92 & 29\end{array}$

According to highest mean score on MTAI taken prior to student teaching the schools ranked as follows: (l) Moore Elementary School,
(2) Hopkinsville High School and New Providence Junior High School,
(3) Clarksville High School.

The greatest change in mean score as recorded on the posttest was registered by New Providence Junior High School which as a group lost 15.50 points.

In view of the previous discussion on Table III, page 15, where the study by Callis was cited, it was surprising that Moore Elementary School, although scoring the highest as a group on the pretest, sustained such a great loss on the posttest--a loss of 11.75 points. Also from Table III, page 15 , it should be noted that Moore Elementary student teachers lost considerably more in posttest mean points than did all student teachers at the elementary certification level.

The revised ranking according to mean scores by school after student teaching was as follows: (1) Moore Elementary School (2) Hopkinsville High School (3) Clarksville High School (4) New Providence Junior High School.

Moore Elementary School remained at the top of the ranking although losing substantially in mean score points on the posttest. New Providence Junior High School as a group suffered the greatest loss in mean score points following student teaching placing it last in the ranking by a rather substantial margin.

Clarksville and Hopkinsville High Schools both registered moderate increases in mean score points. Clarksville High School student teachers gained 2.17 points while Hopkinsville High School student teachers did somewhat better with a 6.33 point gain.

The medians changed in keeping with the means except in the case of Moore Elementary School which lost 11.75 points but gained 10 points in median. The increase in median for Moore Elementary School was because of the increase in the two middle scores by student teachers at that school while the upper and lower end of the range came down. The significance of the range in this part of the study could only be of minimal value since the number of scores being considered was so small. However, in the case of New Providence Junior High School it might be noted that the mean and median both dropped accompanied by a decrease in the size of the range which indicated that the scores moved downward on the posttest as a unit.

## CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary。 The Minnesota Teacher Attitude Inventory was administered to seventy-seven student teachers prior to and following their student teaching experiences for the Winter Quarter of 1969 , under the auspices of the Austin Peay State University Education Department. This study was an analysis of the data compiled from the results of the pretesting and posttesting of the seventy-seven student teachers.

The student teachers were grouped on the bases of sex, certification level, subject field, university supervisor, and school. The calculations of mean, median, and range were made for each of the groups as well as for the total group.

Conclusions. An analysis of the data revealed the following conclusions:

1. As a group the sample used in this study tended to show losses in attitude as measured on the MTAI following student teaching.
2. The trend in poorer attitudes following student teaching occurred in both males and females.
3. As a group male student teachers had poorer attitudes than female student teachers prior to student teaching and male attitudes dropped further than female attitudes following student teaching.
4. The downward trend in average attitude scores following student teaching was found at all certification levels.
5. The one-through-twelve certification level showed the poorest attitudes as a group on the pretest and also showed the most severe drop in attitude scores following student teaching.
6. The elementary certification level student teachers as a group had the best attitudes prior to student teaching and sustained the smallest drop in attitude scores following student teaching.
7. Of the subject fields considered, English majors showed the best attitudes prior to and following student teaching.
8. Of the subject fields Health and Physical Education majors showed the poorest attitudes prior to student teaching and experienced the greatest drop in attitude following student teaching.
9. History majors experienced the greatest improvement of attitudes following student teaching.
10. When the scores were categorized by university supervisors it was found that only two of the groups showed improvements in attitude. The most notable change in attitudes of these groups was registered by Dr. Burns' group and this change was in a positive direction.
11. When the scores were categorized by schools it was found that two schools had only slight increases and that two schools suffered rather severe decreases in student teacher attitudes as measured by the MTAI prior to and following student teaching for the Winter Quarter, 1969.

Recommendations. As was mentioned in Chapter I, this group of student teachers was the first at Austin Peay State University to be used in a study of this nature, and it was hoped that it would be followed by others.

Only trends and descriptions of change could be measured with the use of mean, median, and range computations on pretest and posttest scores. To the writer it appears that it would have been more
desirable to have had larger groups to work with especially in subject field areas.

Further, it is recommended that computations of significance be run on future studies of this nature in an effort to arrive at more conclusive results.

Finally, there are no recommendations at this time of a constructive nature that the writer feels competent to make regarding improvement of the teacher preparation program at Austin Peay State University. However, it is the opinion of the writer that the findings from this study may be helpful to those involved in teacher preparation as they seek attitude improvement in student teachers.

## A. BOOKS

Cook, W. W., C. H. Leeds, and R. Callis. "Predicting TeacherPupil Relations," The Evaluation of Student Teaching. Twentyei ghth Annual Yearbook, Association for Student Teaching: Lockhaven, Pa., State Teachers College, 1949. Cited by William B. Burton and Leo Brueckner. Supervision: A $\frac{\text { Social }}{1955 .}$

## B. PERIODICALS

Beamer, G. C. and Laine W. Ledbetter. The relation between teacher attitudes and social service interest. J. Educ. Res. 1957, 50, 655-666.

Callis, R. Change in teacher pupil attitudes related to training and experience. Educ. Psychol. Measmt. 1950, 10, 718-727.

Fuller, Elizabeth M. The use of student-pupil attitudes, self-rating and measures of general ability in the pre-service selection of nursery school, kindergarten, primary teachers. J. Educ. Res. 1951, 44, 682.

Oelke, M. C. A study of student teachers attitudes toward children. J. Educ. Psychol. 1956, 47, 193-196.

Sandgren, D. L. and L. G. Schmidt. Does practice teaching change attitudes toward teaching? J. Educ. Res. 1956, 49, 679.

Stein, H. L. and J. Hardy. A validation study of the MTAI in Manitoba. J. Educ. Res. 1957, 50, 526.

APPENDIX

FREQUENCY DISTRIBUTION OF SECONDARY STUDENT TEACHERS USING STUDENT TEACHING MTAI SCORES BASED ON NORMS FOR SECONDARY TEACHERS WITH FOUR YEARS TRAINING (including l-12 certification level student teachers)

Percentile Rank

| 99 | $88-103$ |
| :--- | :--- |
| 95 | $82-87$ |

90

80

75
68-81

58-67

51-57

35-50

24-34

14-23

2-13
40

30

25

20 $(-4)-1$ $(-11)-(-5)$

$$
(-28)-(-12)
$$

10

$$
(-42)-(-29)
$$ $(-57)-(-43)$

$(-58)$ and below
*This range represents scores at or below the 5 th percentile but above the lst percentile.

FREQUENCY DISTRIBUTION OF ELEMENTARY STUDENT TEACHERS USING STUDENT TEACHING MTAI SCORES BASED ON NORMS FOR
ELEMENTARY TEACHERS WITH FOUR YEARS TRAINING

Percentile Rank
Raw Scores

102-114
101-103

89-100
1
90
83-88
80

75
80-82

70

$$
71-79
$$

60
61-70
6

3
50-60
50

40
43-49
37-42
30

25

$$
23-36
$$

$$
8-22
$$

20

$$
(-17)-7
$$

10 $(-49)-(-18)$
( -50 ) or below
1

| Frequency |
| :---: |
| Winter Quarter, 1969 | 1969


[^0]:    ${ }^{2}$ Cullis, loco. cit.
    ${ }^{3}$ Cook, hoc. cit.

