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PROSPECTIVE TEACHERS TOWARD EDUCATION
BEFORE AND AFTER A SEQUENCE OF TEACHER
PREPARATION EXPERIENCES.

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AN ANALYSIS OF ATTITUDE MODIFICATIONS OF PROSPECTIVE
TEACHERS TOWARD EDUCATION BEFORE AND AFTER
A SEQUENCE OF TEACHER PREPARATION
EXPERIENCES

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
degree of
DOCTOR OF PHILOSOPHY

BY
ALTON HARRISON, JR.

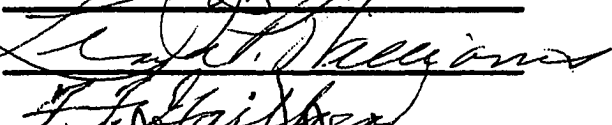
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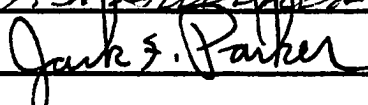
1967

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APPROVED BY







DISSERTATION COMMITTEE

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CHAPTER I

THE PROBLEM AND RESEARCH DESIGN

Introduction

For the past decade, the American people have been displaying an increasing concern for quality education in the public schools. Strong public reaction to progressive education which occurred during the late 1940's was heightened again in the latter part of the 1950's by Russian scientific and technological advances, and more recently by congressional appropriations for planning and financing such programs as "Operation Headstart" and "Domestic Teacher's Corps."

Although attention flits sporadically from one area of education to another, Americans are basically concerned with its quality. Since teacher competence is so closely related to the quality of educational programs, considerable attention has been focused on teacher education. Most teacher education institutions recognize that a teacher's attitudes

are generally considered basic to her effective performance in the classroom and try to encourage in their students an educational point of view that will insure appropriate classroom use of teaching skills. A survey of research in the area of teacher education and more specifically in attitude modifications indicates a noticeable lack of agreement among researchers and has produced few reliable generalizations. The differentiation of the characteristics of the good teacher from the good person have not yet been revealed by research. After more than fifty years of research, very little is known about the relation between teacher personality and teaching effectiveness.

Background and Need for the Study

The concept of attitudes as a central variable was first established in a publication by Thomas and Znaniecki in 1918. Largely through their efforts the term attitudes came to be used to communicate the concept of the unifying force which integrates discrete and arbitrary overt behavior. They defined attitude as an internalized accompaniment of an external object symbolizing an individual's covert disposition to act toward that object.¹ Thorndike stressed the crucial importance of attitudes when he asserted:

¹W. I. Thomas and Frank Znaniecki, The Polish Peasant in Europe and America (Boston: Badger, 1918), p. 12.

The attitude or set or adjustment of a man is a chief determiner not only of what he thinks and does, but also of what he will welcome or reject-- of what will satisfy or annoy him.¹

A fund of accurate knowledge and understanding in the subject-matter area is every bit as important a part of the teacher's total equipment as his acceptance of and relationships with people, but the former alone would be sterile and ineffective. The attitude of the prospective teacher is a vital determinant in predicting success. Cox attested to this fact when he stated:

First of all the teacher's attitude will limit in a very real way her progress in learning to teach. It will determine the kinds of modifications that she is willing to attempt in her teaching; the energy with which the charges are pursued and the learning that takes place.²

Waller's pioneering study of the conflict between values of the student and the educator has been substantiated

¹E. L. Thorndike quoted by Frederic T. Neuman, "The Progressive Attitude," Educational Administration and Supervision, XXXI (December, 1945), pp. 357-362.

²Dan Cox, "An Objective and Empirical Study of the Effects of Laboratory Experience in a Professional Education Course Prior to Student Teaching," Journal of Experimental Education, XXIX (September, 1960), p. 89.

³Willard Waller, "The Teacher's Roles," Sociological Foundations in Education, ed. J. S. Roucek (New York: Crowell, 1942), pp. 204-222.

in a number of more recent studies made by Coleman,¹ Cutright,² and Gordon.³ In a discussion of the current curriculum in teacher education programs, with particular emphasis on professional laboratory experiences, Goodlad stressed a strong need for improved curriculum planning. He stated:

But one must look at curriculum planning in teacher education with a more jaundiced eye. Our objectives are not clear. Our evaluation stresses low₄ level cognitive abilities but sidesteps performance.

Studying a sample composed of 327 prospective secondary teachers enrolled in a foundation course in education, Better used an instrument containing ten assumptions that carried implications for modern educational theory to determine whether,

¹James S. Coleman, "Academic Achievement and the Structure of Competition," Harvard Educational Review, XXIX (Fall, 1959), pp.330-351.

²Phillip Cutright, "Students' Decision to Attend College," The Journal of Educational Sociology, XXXIII (February, 1960), pp. 292-299.

³Wayne Gordon, "The Role of the Teacher in the Social Structure of the High School," The Journal of Educational Sociology, XXIX (September, 1955), pp. 21-29.

⁴John I. Goodlad, "An Analysis of Professional Laboratory Experiences in the Education of Teachers," The Journal of Teacher Education, XVI (September, 1965), p. 270.

. . . in light of a given educational experience, existing attitudes could be modified to be more in line with contemporary knowledge of learning and learners.¹

Newcomb's study at Bennington dealt with the changes in student values relative to faculty impact. In this case, it appeared that the faculty's interest in social and political issues was internalized by the juniors and seniors and especially by the student leaders.² Although other studies such as those reported by Epley,³ Henry,⁴ Hughes,⁵ and Goldsen et al⁶ bear on the educational implications of close teacher-student identifications, the impact of teachers as conveyers of new values was not entirely clear.

¹Morris Better, "An Analysis of Attitude Modifications Toward Educational Assumptions by Prospective Secondary Teachers in a Teacher Training Experience," Dissertation Abstracts, Vol. XXV (1964), p. 1768.

²Theodore M. Newcomb, Personality and Social Change: Attitude Formation in a Student Community (New York: Holt, Rinehart, and Winston, 1943), pp. 28-50.

³D. G. Epley, "Adolescent Role Relationships in the Dynamics of Prejudice," (Unpublished Ph.D. dissertation, Dept. of Psychology, Michigan State University, 1953), pp. 1-132.

⁴J. Henry, "Docility or Giving Teacher What She Wants." Social Issues, XI (November, 1955), pp. 33-41.

⁵Everett C. Hughes, "Stress and Strain in Professional Education," Harvard Educational Review, XXIX (Fall, 1959), pp. 319-329.

⁶Rose K. Goldsen et al. What College Students Think (Princeton, N. J.: Van Nostrand, 1960, pp. 76-94.

As pointed out by Nagle, student teaching has long been regarded as the most important phase of teacher education programs. When asked what they considered most valuable in their undergraduate professional program, teachers invariably listed student teaching.¹ When Mrs. Lawana Trout won the Teacher of the Year Award in 1965, she exclaimed, "Practice teaching was my most valuable course."² Reynard pointed out that this is an area which has been least challenged in teacher education.³ According to Corrigan and Griswold, however, there does not seem to be ". . . any strong research evidence regarding the value of student teaching."⁴ Newsome et al concluded:

Although the desirability of student teaching is not often questioned by educators, critics, or students, studies of the value of this training are often based upon opinions rather than upon observable changes in behavior. From the studies which have been made of teacher behavior, few reliable generalizations follow.⁵

¹Marshall Nagle, "Some Effects of Student Teaching Patterns Upon Professional Attitudes," Journal of Educational Research, LII (May, 1959), pp. 355-357.

²Lawana Trout quoted by Joe A. Howell, "Student Teaching--Is It Helpful?" Virginia Journal of Education, LVIII (April, 1965), p. 15.

³Harold E. Reynard, "Pre-Service and In-Service Education of Teachers," Review of Educational Research, XXXIII (October, 1964), pp. 369-380.

⁴Dean Corrigan and Kenneth Griswold, "Attitude Changes of Student Teachers," Journal of Educational Research, LVII (October, 1963), p. 93.

⁵George L. Newsome, Jr., Harold W. Gentry, and Lester D. Stephens, "Changes in Consistency of Educational Ideas Attributable to Student-Teaching Experiences," Journal of Teacher Education, XVI (September, 1965), p. 319.

Analyzing changes in students' attitudes resulting from the student teaching experiences, Corrigan and Griswold found that student teachers regarded certain teaching principles as being important to the extent that their college supervisors, cooperating teachers, and cooperating schools implemented them in practice. When the principles were advocated verbally without being implemented, the student teachers tended to regard them skeptically.¹ In the sample studied by Vittetoe, superior student teachers placed with outstanding cooperating teachers started, maintained, improved, and finished with better over-all opinions toward teaching than the poor students placed with fair cooperating teachers.²

Price found a tendency for student teachers to change their own attitudes in the direction of those held by their supervising teachers. He concluded:

The general conclusions based upon this study indicated that the teaching performances of cooperating teachers have some influences upon the teaching performances of their student teachers. Very little is known about student teacher-cooperating teacher relations and it is strongly recommended that additional research be conducted in this area.³

¹Corrigan and Griswold, loc. cit.

²Jack Orin Vittetoe, "The Influence of Cooperating Teachers on Attitudes of Student Teachers," Dissertation Abstracts, XXIV (1964), pp. 3223-3224.

³Robert David Price, "Relations Between Cooperating Teachers' and Student Teachers' Attitudes and Performances," Dissertation Abstracts, XXI (1961), p. 2615.

Anderson found that in general there was only a slight change in the attitudes of student teachers toward education and teaching during the student teaching experience.¹ In their conclusions, Newsome, Gentry, and Stephens pointed out that,

Undergraduate students enrolled in teacher education programs at the University of Georgia enter student teaching with consistent ideas about education. Statistically significant losses in consistency after student teaching occurred in the total group and in three subgroups. These losses suggest that student teaching² experiences affect students' ideas about education.

The attitudes of selected groups of students before and after the student teaching period were analyzed by Hines and reported in her doctoral dissertation. She found no apparent change in the attitudes of prospective teachers during their four years in college. She summarized:

Such changes in attitude as might be noted by inspection rather than statistical analysis indicate a tendency to favor methodology³ over subject matter on the part of the students.

In a study at Arizona State, Hoover, Kaiser, and Podlich attempted to determine the expressed feelings of greater or lesser competency relative to twenty-five selected

¹Sara Elizabeth Anderson, "The Changes in Attitudes of Prospective Teachers Toward Education and Teaching in Secondary Schools," Dissertation Abstracts, XXV (1965), pp. 4557-4558.

²Newsome, Gentry, and Stephens, loc. cit.

³Marjorie Lamothe Hines, "A Study of the Comparison of the Attitudes of Selected Groups of Students Before and After the Student Teaching Period Through the Use of the Q-Sort," Dissertation Abstracts, XXIV (1964), p. 312.

teaching techniques by prospective teachers before and after their student teaching experiences. They found that the student teaching experiences contributed to substantially lower ranks in four of the twenty-five aspects of teaching. Subsequent to student teaching, some of the respondents felt relatively less secure in the utilization of instructional resources.¹

Studies of a somewhat different nature suggested that student teaching has considerable impact upon beginning teachers. For example, McAulay found that student teachers appeared to be ". . . greatly influenced by their cooperating teachers in methods of teaching, techniques of classroom housekeeping, and relationships with children."²

A series of three studies by Turner et al suggested that young teachers, during their first year of teaching, experience a "reality shock" which may be manifested by negative attitudes toward what is commonly called democratic teaching.³ Berryman found that changes in attitudes toward

¹Kenneth H. Hoover, L. H. Kaiser, William F. Podlich, Jr., "A Comparison of Expressed Teaching Strengths Before and After Student Teaching," Journal of Teacher Education, XVI (September, 1965), pp. 324-328.

²J. D. McAulay, "How Much Influence Has a Cooperating Teacher?" Journal of Teacher Education, XI (March, 1960), p. 83.

³Richard L. Turner et al. "Skill in Teaching Assessed on the Criterion of Problem Solving: Three Studies," Bulletin of the School of Education, Indiana University, XXXIX (January, 1963), pp. 10-15.

democratic teaching did occur during the student teaching experience. Except in the case of students of relatively low academic ability, significant positive changes were associated with favorable placement situations.¹

The need for research in this area has recently been expressed by the U. S. Office of Education. With an initial five-year grant of \$2,972,975 from the U. S. Office of Education, the University of Texas established a Research and Development Center in teacher education in the Fall of 1965. The Center in cooperation with fourteen southern and southwestern colleges and universities and several public schools formed under this plan a regional network for cooperative research and development in teacher education.² With a five-year grant of \$3,500,000, Stanford established a similar center under the auspices of the U. S. Office of Education.³

As pointed out by Koerner, the training of teachers for the public schools, unlike most educational controversies, is a perpetually hot issue. He asserted:

A kind of rhythm characterizes other issues--
why Johnny can't read, or college freshmen can't
write, why IQ tests are unreliable or whether schools

¹Charles Berryman, "Attitude Toward Democratic Teaching and Democratic Performance of Student Teachers Under Various Placement Conditions," Dissertation Abstracts, XXV (1964), p. 1834.

²"Research in Teacher Education at the University of Texas," School and Society, March 5, 1966, p. 121.

³"Teacher Education Research at Stanford," School and Society, March 5, 1966, p. 122.

should be palaces; such controversies wax and wane. But the problem of how best to prepare teachers, being central to everything else in education, is a war without end.¹

Koerner concluded that teacher preparation programs were in a sorry state and in need of radical reform.² Like Koerner, Conant regarded teacher education programs as the key to improved public schools. Although taking a different and more moderate approach, Conant also enumerated a long list of badly needed changes in the area of teacher education.³ The published studies of these two eminent educators brought into focus widespread feelings of discontent with teacher education--feelings which also have been expressed by many of those, commonly called "educationists," who are actively involved in teacher preparation programs.

In his discussion, Neumann not only emphasized the cruciality of attitudes but also the particular type of attitude possessed. He commented:

What, then, can we rely upon as the factor which best distinguishes one educational configuration from the other? For me, it is attitude. Whatever we grasp or grasp for, work with or work toward, is a function of our attitudes. If the teacher's attitude is progressive, his materials, methods, and objectives will of necessity manifest the effect. On the other hand, if the teacher is Essentialist in spirit, no matter what basically Progressive tools or terms he employs,

¹James D. Koerner, "How Not to Teach Teachers," Atlantic Monthly, CCXI (February, 1963), p. 59.

²Ibid.

³James B. Conant, The Education of American Teachers (New York: McGraw-Hill, 1963), pp. 60-216.

his handling of them in all but purely mechanical applications will be a lifeless distortion--and produce actually a worse product--disintegrated personalities in his students--than if he had relied upon Essentialist tools and terms to which he is emotionally predisposed and intellectually attuned.¹

In a similar vein, Harper stressed the importance of possessing a progressive attitude.

Other things being equal, the greater the conservatism the less stable, the less independent, the less consistent, the less scientific in attitude is the thinking on the problems involved in the test. Conversely, it has appeared that the greater the nonconservatism, the greater the resources adapted to reflective reaction to the more primary and essential social conceptions and issues. It would seem that conservatism is characterized not by cautious and alert inquiry but by dangerous and satisfied blindness.²

There is a substantially large and vociferous group who, like Keats, regard educational theory or professional education courses as ". . . sheer piffle."³ These people are convinced that if an individual knows the subject matter he can teach it. A strong liberal arts education is regarded as sufficient preparation for teaching. With Max Rafferty at the helm, California appears to be moving in

¹Frederic T. Neumann, "The Progressive Attitude," Educational Administration and Supervision, XXXI (December, 1945), pp. 540-548.

²M. H. Harper, "Social Beliefs and Attitudes of American Educators," cited by A. J. Harris, H. H. Remmers, and C. E. Ellison, "The Relation between Liberal and Conservative Attitudes in College Students, and Other Factors," Journal of Social Psychology, III (August, 1932), p. 321.

³John Keats, "How Well Are Our Teachers Being Taught? Never Worse," Better Homes and Gardens, XXXVI (May, 1958), p. 52.

this direction. These issues raise a number of pertinent questions regarding the relative value of professional education courses.

Purpose of the Study

This study evolved from the premise that educational attitudes can be measured, and that attitudes of teachers are a vital factor in teaching success. As such, they should be subjected to research study. It was the purpose of this study to discover differences existing among educational attitudes of all students enrolled in the professional semester at Kansas State College of Pittsburg during the Fall semester of 1966. The secondary purpose of the study was to determine whether or not educational attitudes of students change during the professional semester. If their scores do change, does the shift occur during the professional education course work or during student teaching and in what direction is the change.

Definition of Terms

General Supervisor--The college instructor of professional education course work in secondary or elementary education during phase I (first seven weeks) of the professional semester. The General Supervisor was responsible for the over-all direction of the student's experiences during the entire semester. He was the student's counselor-advisor. His objective was to help the student in the

integrative process of deriving meaning from related theory and practice.

Supervising Teacher--was the laboratory school supervisor who taught the methods courses and supervised the laboratory school experiences preceding and following off-campus student teaching.

Cooperating Teacher--The public school teacher in the off-campus cooperating school who supervised the full-time student teaching experiences of the students during the seven weeks off-campus phase.

Professional Semester--was a full semester of about eighteen weeks which was comprised of an educational sequence for seniors (generally, their last semester before graduation) who planned to become teachers. The professional semester was an entire semester devoted to professional education, consisting of intensive course work (two periods a day, five days a week) and related professional laboratory experiences. It was organized or integrated into three phases.

Phase I--was the first seven weeks (September-November) of the professional semester. It consisted of intensive professional education course work and pre-student-teaching laboratory experiences. The methods courses were under the direction of the Laboratory School Supervising Teacher in the appropriate major field. The first seven weeks period was directed toward preparation

of the student for his full time, off-campus student teaching assignment.¹

Phase II--was the second seven weeks (November-January) of the professional semester, generally referred to as off-campus student teaching. It was devoted to experiencing the full time job of the teacher in the public school and community. During this period, the student was guided, supervised, and directed into the life and activities of a teacher by a designated member of the school staff. In effect, he became an intern member of the public school staff.²

Phase III--was the last four weeks (January) of the professional semester. The final period, on campus, was an evaluative and remedial phase. Its purposes were to assist the student in generalizing upon his experience and to direct him into additional study and other experiences appropriate to his revealed needs.³

Educational Attitude--Valued components of education. Educational variables for which a preference is expressed. "Values always involve choices--between "good" and "bad," "better" or "worse" and so on. Attitudes, too,

¹"A Guide for Students in the Secondary Professional Semester," (School of Education, Kansas State College of Pittsburg, Pittsburg, Kansas), (Mimeographed), 1967, pp. 1-21.

²Ibid., p. 11.

³Ibid., p. 13.

are "choices," "already made" choices, in that they are sets or predispositions to certain kinds of behavior."¹ More specifically, in this study educational attitudes referred to the extent of agreement or disagreement with the items in Education Scale VI (ES VI)² developed by Kerlinger. He theorized that an individual's attitudes toward educational issues would fall somewhere along a continuum between the two extremes of A (Progressivism) and B (Traditionalism).³

Progressivism--Kerlinger's definition best represented the meaning of progressivism for this study. He characterized progressivism as permissiveness.

Permissiveness, on the other hand, is characterized by emphasis on problem-solving and relative de-emphasis on subject matter and knowledge, education as growth, children's interests and needs as basic to education, equality and warmth in interpersonal relationships, internal discipline, liberal social beliefs which emphasize education as an instrument of social change, and a morality⁴ based on social and individual responsibility.

Traditionalism--The meaning of this term was derived from Kerlinger's definition. He characterized traditionalism as restrictiveness.

¹Fred N. Kerlinger, "The Attitude Structure of the Individual: A Q-Study of the Educational Attitudes of Professors and Laymen," Genetic Psychology Monographs, LIII (March, 1956), p. 289.

²Appendix A, p. 111.

³Kerlinger, loc. cit.

⁴Fred N. Kerlinger, "Progressivism and Traditionalism: Basic Factors of Educational Attitudes," Journal of Social Psychology, XLVIII (August, 1958), p. 112.

. . . I would say that the former restrictiveness means a generally narrow and practical (in a limited and limiting sense) educational viewpoint. Emphasis is on subject matter for its own sake, impersonal superior-inferior relationships with considerable importance attached to the hierarchical nature of such relationships, external discipline, and conservative status quo preserving social beliefs, "Morality" is strongly emphasized and based on external "higher" authority.¹

Statement of the Problem

The problem of this study was to determine the educational attitudes of secondary and elementary education majors, their General Supervisors, and their Cooperating Teachers as measured by ES VI in order to answer the following questions:

- 1) Are the educational attitudes of students upon completion of seven weeks of professional education courses significantly different from their attitudes at the beginning of the semester?
- 2) Are their educational attitudes following seven weeks of student teaching significantly different from their attitudes at the beginning of the semester?
- 3) Are the educational attitudes of students following seven weeks of student teaching significantly different from their attitudes at the beginning of student teaching?
- 4) Are the educational attitudes of the elementary education majors significantly different from the educational

¹Ibid.

attitudes of secondary education majors at the beginning of the semester, at the conclusion of seven weeks of intensive professional education courses, and upon completion of seven weeks of student teaching?

5) Are the educational attitudes of the students significantly different from the educational attitudes of their respective Cooperating Teachers at the beginning of student teaching?

6) Are the educational attitudes of the students significantly different from the educational attitudes of their respective Cooperating Teachers at the culmination of the seven weeks of student teaching?

7) If the educational attitudes of the students do change, between the beginning and the end of the student teaching period, are they in the direction of the attitudes held by their respective Cooperating Teachers?

8) Are the educational attitudes of the elementary Cooperating Teachers significantly different from those held by the secondary Cooperating Teachers?

9) If the educational attitudes of the students do change, between the beginning and the end of the period of intensive professional education course work, are they in the direction of the attitudes held by their respective General Supervisors?

Limitations of the Study

This study was limited to the educational attitudes of all the elementary and secondary education majors enrolled in the professional semester during the fall of 1966-67 at Kansas State College of Pittsburg, Pittsburg, Kansas. The study was further limited to the attitudes of the Cooperating Teachers and General Supervisors designated for these students. The study was delimited in terms of the traditional and progressive attitude variables which ES VI, developed by Kerlinger, is purported to assess.

Hypotheses

The following null hypotheses were formulated to determine whether or not differences existed between test scores.

Ho₁ There are no statistically significant differences between the mean scores of students obtained at the beginning of the semester (September) and those obtained upon completion of seven weeks of intensive professional education course work (November) for elementary education majors.

Ho₂ There are no statistically significant differences between the mean scores of students obtained at the beginning of the semester (September) and those obtained upon completion of seven weeks of intensive professional education course work (November) for secondary education majors.

Ho₃ There are no statistically significant differences between the mean scores of students obtained at the

beginning of the semester (September) and those obtained upon completion of seven weeks of student teaching (January) for elementary education majors.

Ho₄ There are no statistically significant differences between the mean scores of students at the beginning of the semester (September) and those obtained upon completion of seven weeks of student teaching (January) for secondary education majors.

Ho₅ There are no statistically significant differences between the mean scores of students obtained upon completion of seven weeks of student teaching (January) and those obtained at the beginning of the student teaching period (November) for elementary education majors.

Ho₆ There are no statistically significant differences between the mean scores of students obtained upon completion of seven weeks of student teaching (January) and those obtained at the beginning of the student teaching period (November) for secondary education majors.

Ho₇ There are no statistically significant differences between the obtained mean scores of the elementary education majors and those of the secondary education majors at the beginning of the semester (September), at the culmination of seven weeks of intensive professional education course work (November), and upon completion of seven weeks of student teaching (January).

Ho₈ There are no statistically significant differences between the obtained mean scores of elementary student teachers at the beginning of the student teaching period (November) and those of their respective Cooperating Teachers.

Ho₉ There are no statistically significant differences between the obtained mean scores of secondary student teachers at the beginning of the student teaching period (November) and those of their respective Cooperating Teachers.

Ho₁₀ There are no statistically significant differences between the mean scores of elementary student teachers at the conclusion of seven weeks of student teaching (January) and those of their Cooperating Teachers.

Ho₁₁ There are no statistically significant differences between the mean scores of secondary student teachers at the conclusion of seven weeks of student teaching (January) and those of their Cooperating Teachers.

Ho₁₂ Any change in the obtained mean scores for educational attitudes of elementary student teachers during the student teaching period from November to January is not in the direction of the mean scores of their respective Cooperating Teachers.

Ho₁₃ Any change in the obtained mean scores for educational attitudes of secondary student teachers during the period of student teaching from November to January is not in the direction of the mean scores of their respective Cooperating Teachers.

Ho₁₄ There is no statistically significant difference between the mean score of elementary Cooperating Teachers and the mean score obtained for secondary Cooperating Teachers.

Ho₁₅ Any change in the obtained mean scores for educational attitudes of the students during the first seven weeks (September-November) is not in the direction of the scores of their respective General Supervisors.

The Sample

The sample for this study was comprised of 361 subjects. All those students majoring in elementary and secondary education at Kansas State College of Pittsburg, Pittsburg, Kansas, who were enrolled in the professional semester during the fall semester of 1966-67, their Cooperating Teachers and their General Supervisors were included. There were 57 elementary education majors, and 120 secondary education majors in the professional semester. At the elementary level, there were 57 students, 57 Cooperating Teachers, and 3 General Supervisors. At the secondary level, there were 120 students, 120 Cooperating Teachers, and 4 General Supervisors.

Instrument Used in the Study

Kerlinger's ES VI was developed from a series of research studies of attitudes toward education. He dichotomized educational values and attitudes into two extremes

which correspond generally to restrictive and permissive or traditional and progressive modes of looking at education. Individuals differ in degree of dichotomization and the dichotomy pervades all areas of education. Educational attitudes may be analyzed so that a meaningful picture of a given individual's educational structure will emerge. Attitudes toward education may be broken down into two broad classes corresponding to more or less authoritarian trends. People, particularly educators, can be categorized, with relative accuracy and objectivity, on the restrictive-traditional and permissive-progressive dimensions.¹

On the assumption that an individual's attitudes toward education would fall somewhere along a continuum between the two extremes of progressivism and traditionalism, Kerlinger developed a relatively short, valid, and reliable scale ES VI for the assessment of these attitudinal dimensions. ES VI is a list of 46 statements of educational ideas and problems with which the respondent indicates his degree of agreement from +3 (agree very strongly) to -3 (disagree very strongly). Some of the statements are highly loaded with progressivism or traditionalism and some of them are buffer items (moderate loadings of progressivism and

¹Fred N. Kerlinger and Esin Kaya, "The Construction and Factor Analytic Validation of Scales to Measure Attitudes Toward Education," Educational and Psychological Measurement, XIX (Spring, 1959), pp. 13-29.

traditionalism).¹ A copy of the instrument is included in Appendix A.

Kerlinger's validation studies indicated that ES VI is a reliable and factorially valid instrument. This validity and reliability was established by computing inter-correlations of all the test items. These computations yielded three R matrices which were factor analyzed using the Thurstone Centroid method and orthogonal rotations. Then, product-moment item-total correlations were computed between each item and its total factor score. The result was not only an item-analysis but also another check on the independence of the factors.² The reliability of the scale is about .85. It has been used extensively in a U. S. Office of Education Project.³

Research Procedure

The descriptive-survey method of research was selected as most appropriate for solving this problem. Good described the descriptive-survey method as follows:

Descriptive studies may include present facts or current conditions concerning the nature of a group of persons, a number of objects, or a class

¹Ibid.

²Ibid.

³Letter from Dr. Fred N. Kerlinger, Professor of Educational Psychology, New York University, Washington Square, New York, N. Y., April 7, 1965.

of events, and may involve the procedures of induction, analysis, classification, enumeration, or measurement. The terms survey and status suggest the gathering of evidence relating to current conditions.¹

A brief outline of the procedures followed in this study provides a general overview of the research design.

1) A comprehensive survey of related research was made to provide a basis for clarifying the need for the study.

2) Kerlinger's ES VI was selected to measure attitudes toward education.

3) A visit was made to Kansas State College of Pittsburg to discuss the study and obtain administrative cooperation.

4) ES VI was administered to all elementary and secondary education majors and the General Supervisors and Cooperating Teachers designated for these students.

5) Each scale was hand scored.

6) Appropriate statistical formulas were selected for treatment of the data.

7) The .05 level of confidence was selected as the rejection region for the hypotheses.

8) A descriptive analysis was made of the ES VI scores of the students, their General Supervisors, and

¹Carter V. Good, Introduction to Educational Research (New York: Appleton-Century-Crofts, Inc., 1959), p. 167.

their Cooperating Teachers in regard to progressivism or traditionalism.

9) Results of statistical analyses were interpreted, and reported descriptively.

CHAPTER II

REVIEW OF RELATED RESEARCH

Attitude Change Relevant to the Traditionalism- Progressivism Continuum

The research literature is permeated with the topic of attitude modification. After reaching a peak in the early 1950's there was a gradual decline in the number of studies and articles related to attitudes. A comprehensive review of research relevant to educational attitudes, as defined by Kerlinger, follows. Kerlinger regards progressivism as a liberal-permissive philosophy of education emphasizing the individual's needs; traditionalism is characterized as a restrictive or narrow and practical educational viewpoint.¹ Since the attitudinal dimensions of progressivism and traditionalism closely parallel liberalism and conservatism, studies dealing with the latter are also included.

As early as 1922, Harper attempted to determine the degree of liberal or conservative attitudes possessed by American educators and the factors related to these

¹Kerlinger, "Progressivism and Traditionalism: Basic Factors of Educational Attitudes," pp. 111-135.

attitudes.¹ In an effort to get at the same characteristics, Symonds constructed a Social Attitudes Questionnaire in 1925. He obtained a correlation coefficient of .28 between an information test and liberalism and .28 between intelligence and liberalism indicating no significant relationship between amount of education and liberalism. Men in this sample were slightly more liberal than women.² In 1928 Allport constructed a questionnaire which was designed to reveal an individual's political conservatism or liberalism.³ Harris, Remmers, and Ellison checked the relationships between liberalism-conservatism discovered by Harper,⁴ Symonds,⁵ and Allport⁶ and investigated the presence of other relationships. They found only a slight relationship between intelligence and liberalism, and practically no relationship between the size of home town, percentage of college expenses earned, and father's

¹Harper, op. cit., III, p. 321.

²Percival M. Symonds, "A Social Attitude Questionnaire," Journal of Educational Psychology, XVI (May, 1925), pp. 316-322.

³Gordon W. Allport, "The Composition of Political Attitudes," American Journal of Sociology, XXXV (September, 1929), pp. 220-238.

⁴Harper, op. cit., III, p. 321.

⁵Symonds, loc. cit.

⁶Allport, loc. cit.

occupation and liberalism. Men in this sample were slightly more liberal than women with liberals tending to be less religious. There were no systematic differences between proponents of the two major political parties in regard to liberalism.¹ Their findings tended to confirm those reported by Harper,² Symonds,³ and Allport.⁴

Exploring the liberalism-conservatism continuum further, Fay and Middleton surveyed a student sample at Depauw University. Using five of the Thurstone scales for The Measure of Social Attitudes (Communism, Patriotism, Constitution, Law, and Censorship), they investigated the extent of liberalism-conservatism of the college student and its relationship to their father's occupation and the size of their home town. Statistically reliable differences were found in attitudes toward censorship, law, the constitution, patriotism, and communism between groups of college students whose fathers engaged in different

¹A. J. Harris, H. H. Remmers, and C. E. Ellison, "The Relation Between Liberal and Conservative Attitudes in College Students, and Other Factors," Journal of Social Psychology, III (August, 1932), pp. 312-335.

²Harper, op. cit., III, p. 321.

³Symonds, loc. cit.

⁴Allport, loc. cit.

occupations, and who lived in communities of various sizes.¹

At Purdue University, Breemes, Remmers, and Morgan studied the changes in liberalism-conservatism of college students. To some extent their findings contradicted those of Harper,² Symonds,³ Allport,⁴ Harris, Remmers, and Ellison.⁵ They found no significant differences between sexes in liberalism for different groups. A significant relationship was found between intelligence measurements and liberalism.⁶

Attempting to measure the influence of a semester's work on the conservative-progressive tendencies of students, Major used a test constructed by Raup, Williamson, and

¹Paul J. Fay and Warren C. Middleton, "Certain Factors Related to Liberal and Conservative Attitudes of College Students: Father's Occupation; Size of Home Town," Journal of Social Psychology, XI (February, 1940), pp. 91-105.

²Harper, op. cit., III, p. 321.

³Symonds, loc. cit.

⁴Allport, loc. cit.

⁵Harris, Remmers, and Ellison, loc. cit.

⁶E. L. Breemes, H. H. Remmers, and C. L. Morgan, "Changes in Liberalism-Conservatism of College Students Since the Depression," Journal of Social Psychology, XIV (August, 1941), pp. 99-107.

Peterson. For the group as a whole, there was a slight swing toward a more progressive point of view.¹

During the time that Hartmann was at Columbia, an attitude was assumed to be a function of the nature, history, and affiliations of the organism, and causally correlated with these factors. In a national survey, he investigated these assumed determiners of teachers' attitudes. Teachers in this sample who were most directly concerned with controversial problems were somewhat more likely than others to move away from the conservative position. Scores for males indicated that they were more liberal than females, and those of married groups were considerably more liberal than those of the single groups. He found no relationship between the degree of conservatism-liberalism and the occupational roles of the teacher's father, number of dependents, or the number of non-teaching experiences. On the basis of his data, he concluded that liberalism as an attitude in the field of human relations is most readily found among men teachers, among married teachers of either sex, and among instructors having few or no dependents. He readily conceded that his data did not show what caused

¹C. L. Major, "Measuring the Effects of a Semester of College Work on the Conservative-Progressive Tendencies of Students," School and Society, LXIV (September, 1946), pp. 174-175.

teachers to be liberal but rather what liberal teachers did.¹

Following a four day field trip, Epstein investigated the social and political attitudinal changes among high school students revealed by scores on a questionnaire which had been constructed to indicate the respondent's conservatism or liberalism. No statistically significant changes in the social and political attitudes of the experimental group were found. The field trip appeared to cause the students to become more liberal in their attitudes toward governmental participation in these projects. The attitudes of the control group remained relatively unchanged during the same period.²

All the studies cited above deal with the liberal-conservative or progressive-traditional dichotomy, and allude to the educational attitude concept developed by Kerlinger.³ The term "educational attitude" first appeared in an article authored by Neidt and Merrill in 1951. They

¹George W. Hartmann, "Some Assumed Determiners of Teachers' Attitudes," Journal of Educational Research, XXXI (December, 1937), pp. 357-362.

²Leon J. Epstein, "Attitudinal Changes Attendant upon Variations in Experience," Journal of Educational Research, XXXIV (February, 1941), pp. 453-457.

³Kerlinger, "Progressivism and Traditionalism: Basic Factors of Educational Attitudes," pp. 111-135.

constructed a scale designed to measure attitudes toward education, but due to its low reliability coefficient, they recommended that it be subjected to further research.¹ Two years later, Neidt and Edmison modified the scale and used it in a study at the University of Nebraska. The modified form was composed of forty-five paired statements followed by a three-category qualification response. They concluded that it contributed significantly to the prediction of course marks.²

In the same year, Ryans made a statistical analysis of certain educational viewpoints held by teachers. Although the instrument he developed was referred to as an Educational Viewpoints Inquiry, basically, it was a measure of attitudes toward education. He commented:

A composite score based upon responses to the inquiry might reasonably be employed to indicate the general tendency of the teacher to associate himself with so-called "modern" educational viewpoints as contrasted with viewpoints that sometimes have been called "traditional."³

¹Charles O. Neidt and William R. Merrill, "Relative Effectiveness of Two Types of Response to Items of a Scale on Attitudes Toward Education," Journal of Educational Psychology, XLII (November, 1951), pp. 432-436.

²Charles O. Neidt and Lyle D. Edmison, "Qualification Responses Used with Paired Statements to Measure Attitudes Toward Education," Journal of Educational Psychology, XLVI (May, 1953), pp. 305-311.

³David C. Ryans, "A Statistical Analysis of Certain Educational Viewpoints Held by Teachers," Journal of Experimental Education, XXII (December, 1953), p. 131.

Following the efforts of Neidt and Merrill,¹ Neidt and Edmison,² and Ryans,³ the term educational attitudes disappeared in the literature until 1956 when it was revived by Kerlinger at New York State and developed into a full-blown theory. Starting from the premise that the many psychological studies of attitudes made during the last thirty years had left the attitude-value structure of individuals almost completely untouched, Kerlinger moved on to setting up a theory of educational values or attitudes, and then conducted a study in which he attempted to test his theory. The following four hypotheses best express his theory.

1. Individuals having the same or similar occupational or professional roles will hold similar attitudes toward a cognitive object which is significantly related to the occupational or professional role. Individuals having dissimilar roles will hold dissimilar attitudes.

2. There exists a basic dichotomy in the educational values and attitudes of people, corresponding generally to "restrictive" and "permissive," or "traditional" and "progressive" modes of looking at education.

3. Individuals will differ in degree or strength of dichotomization, the degree or strength of dichotomization being a function of occupational role, extent of knowledge of the cognitive object (education), the importance of the cognitive object to the subjects and their experience with it.

4. The basic dichotomy will pervade all areas of education, but individuals will tend to attach

¹Neidt and Merrill, loc. cit.

²Neidt and Edmison, loc. cit.

³Ryans, loc. cit.

differential weights to different areas, specifically to the areas of (a) teaching-subject matter-curriculum, (b) interpersonal relations, (c) normative, and (d) authority-discipline.¹

Kerlinger's methodology was based on Stephenson's Q-technique because he believed it offered a unique advantage in the study of attitudes and values. Employing this procedure, subjects sorted the statements into different piles or stacks according to the degree that they favored or did not favor the statements. The result was a unique sort for each individual which could be analyzed quite objectively and exactly. He believed that this not only permitted a determination of the individual's degree of liberalism-conservatism but also consistency of attitude structure. Kerlinger's study supported all the hypotheses quoted above except for part two of number four (differential weights being given to different areas of education).²

Kerlinger later replicated the study cited above which upheld the findings of his original study. He considered the discovery of two basic dimensions or factors underlying attitudes toward education (progressivism and traditionalism) to be the most important finding of both studies. This was regarded as particularly significant

¹Kerlinger, "The Attitude Structure of the Individual: A Q-Study of the Educational Attitudes of Professors and Laymen," pp. 289-290.

²Ibid.

because there had been very little scientific research on educational progressivism-traditionalism, and most of the work was theoretical speculation.¹

Based on Kerlinger's theory of educational attitudes, Kerlinger and Kaya constructed and validated two scales to measure attitudes toward education. These two scales were constructed in order to compare the relative strengths and weaknesses of Likert-type and rank-order forced-choice attitude scales. Their basic concern, however, was not with the instruments, but the validity of the theoretical framework on which the instruments were based.² In a second study, they investigated the predictive validity of the two scales. This was primarily an investigation of the empirical validity of the instruments. Basically, they were still concerned with construct validity, but focused their attention on the predictive validity of the scales as determined by the successful differentiation of group responses to the instruments. Both scales were found

¹Kerlinger, "Progressivism and Traditionalism: Basic Factors of Educational Attitudes," pp. 111-135.

²Kerlinger and Kaya, "The Construction and Factor Analytic Validation of Scales to Measure Attitudes Toward Education," pp. 13-29.

to differentiate among criterion groups. They conceded, however, that the reliabilities of the scales were not all that could be desired.¹

In a more recent investigation, Kerlinger studied the use of factor invariance in the measurement of attitudes toward education. This was considered an exploratory study which pointed favorably toward factorial invariance. He recommended that more work be done in this area with different samples, different items, and longer scales.²

In 1963, Miller conducted a study in an effort to determine whether there were differences in attitudes between defined subgroups of professional educators in regard to the controversy over educational procedures. He identified two basic attitudinal dimensions which he called "child centeredness" and "subject centeredness." He suggested that these two dimensions corresponded to Kerlinger's "progressivism" and "traditionalism," and that it was quite probable that they were attempting to sample the same variables.³

¹Fred N. Kerlinger and Esin Kaya, "The Predictive Validity of Scales Constructed to Measure Attitudes Toward Education," Educational and Psychological Measurement, XIX (Autumn, 1959), pp. 305-317.

²Fred N. Kerlinger, "Factor Invariance in the Measurement of Attitudes Toward Education," Educational and Psychological Measurement, XXI (Summer, 1961), pp. 273-285.

³Robert S. Miller, "Educators' Attitudes Toward Educational Practices," Journal of Educational Research, LVI (April, 1963), pp. 424-427.

Kramer studied and reported the relationship between the educational attitudes of individual school teachers and their belief systems in his doctoral dissertation. He used Kerlinger's education scale to measure the teacher's educational attitudes and Rokeach's Dogmatism Scale to designate their belief systems as "open-minded" or "close-minded." He found that "open-minded" teachers generally held more progressive attitudes and were more consistent.¹

The Minnesota Teacher Attitude Inventory (MTAI) constructed by Cook, Leeds, and Callis probably represents the best known attempt to develop an instrument to assess one area of educational attitudes. Published in 1951 by the Psychological Corporation, the MTAI has spawned a myriad of studies related to an individual's attitude toward pupil-teacher relationships.²

Standlee and Popham investigated the use of the MTAI as a predictor of over-all teacher effectiveness. They tested the hypothesis that a teacher's performance scores on the MTAI were significantly related to an administrator's evaluation of the teacher's over-all teaching

¹Abe Sidney Kramer, "The Interrelation of Belief Systems and Educational Values: A Study of the Educational Attitudes of Individual School Teachers," Dissertation Abstracts, Vol. XXV (1964), p. 1382.

²Walter W. Cook, Carroll H. Leeds, and Robert Callis, Minnesota Teacher Attitude Inventory Manual (New York: The Psychological Corporation, 1951), pp. 1-14.

effectiveness. They found a positive relationship between MTAI scores and administrative ratings, and concluded that the MTAI was not only an index of teacher-pupil rapport but also an index of effective classroom teaching.¹

Course Instruction and Attitude Change

In 1934, Boldt and Stroud investigated the effect of college training upon the attitudes of college students relative to social, political, religious, and international questions. Their primary aim was to determine whether, as a result of college training, students became more liberal or more conservative, or remained unaffected in their attitudes toward these issues. Using Harper's test of Social Beliefs and Attitudes, they found that the scores increased progressively toward liberalism with each succeeding level of college attainment. Their data did not support the contention that the increment in liberalism was the direct result of college training; nevertheless, they were inclined to attribute the results to this influence. Students in this sample majoring in the social sciences exhibited a

¹Lloyd S. Standlee and W. James Popham, "The MTAI as a Predictor of Over-all Teacher Effectiveness," Journal of Educational Research, LII (April, 1959), pp. 319-320.

more liberal tendency than those majoring in any of the other fields.¹

In a comprehensive study which extended over a period of six years and included a follow-up of two college classes from freshmen through senior year, Jones investigated the conservatism-liberalism changes in attitudes of college students during four years in college. The attitudes singled out for study were those toward war, race, religion, and the church. The instruments used to measure attitudes were five of the scales developed by Thurstone. Jones was concerned not only with what changes occurred in the conservatism-liberalism attitudes of students during four years of college but also with the relationship between their attitudes and attitude changes and such factors as intelligence, major subject, political preference, and religious affiliation. He was also interested in the consistency of their attitudes.² He found that the scores changed in a positive direction in every attitude except toward the Negro where the differences were so small that they were not statistically significant. In all other

¹W. J. Boldt and J. B. Stroud, "Changes in the Attitudes of College Students," Journal of Educational Psychology, XXV (November, 1934), pp. 611-619.

²Vernon Jones, "Attitudes of College Students and the Changes in Such Attitudes During Four Years in College," Journal of Educational Psychology, XXIX (January, 1938), pp. 14-25.

areas, the differences were in the direction of liberalism and were in every case statistically reliable. Jones regarded the discovery of this consistent trend toward the liberal end of the scale in attitudes toward war, religion, and the church as the most important contribution of the study. His data indicated a relationship between high intelligence and liberal attitudes, however, the correlation coefficients were very low in the case of every attitude studied. No significantly large differences were found between the conservatism-liberalism of attitudes among students of different major subjects. He did note, however, that at the end of the senior year the natural science majors as a group were the most liberal while the history-geography majors as a group were the most conservative; a finding which is in contradiction to the one reported by Boldt and Stroud.¹ The correlation coefficients among attitudes in the fields of war, race, and religion were positive but small. Thus, he concluded that individuals were not completely radical or completely conservative. The degree of liberalism or conservatism depended largely upon whether the subjects were tested in the field of war, race, or religion. Jones commented,

Of course, on the average, one individual stands higher on the conservative-liberal continuum than

¹Boldt and Stroud, loc. cit.

another, but the process of averaging conceals the marked degree to which an individual usually fluctuates back and forth on this continuum as he is measured from attitude to attitude.¹

Researching factors that influence attitudes and attitude modifications, Ramseyer showed documentary motion picture films dealing with soil erosion and the work of the Works Progress Administration to a number of experimental groups in Ohio. He found statistically significant attitude shifts but not all of the changes were positive. Some attitudes remained unchanged while others were less favorable than they were before viewing the stimulus material. Ramseyer concluded that these variations were produced by something within the individual or in his social environment.²

In their investigation of attitude modifications in a group of college students during college and again at graduation, Bugelski and Lester found a statistically significant change in their attitudes between their freshman and senior years, a change which was in the direction of greater liberalism. Using a representative sampling of these same students two and three years after graduation,

¹Vernon Jones, "Attitudes of College Students and the Changes in Such Attitudes During Four Years in College, Part II," Journal of Educational Psychology, XXIX (February, 1938), pp. 133-134.

²Lloyd L. Ramseyer, "Factors Influencing Attitudes and Attitude Changes," Educational Research Bulletin, XVIII (January 4, 1939), pp. 9-14.

they found no evidence of attitudinal changes between males and females or of a shift in attitude away from the one held as seniors. They concluded that changes in attitudes from freshmen to senior year were related to the general college experience. Their data revealed low correlation coefficients between initial liberality as freshmen and liberality as seniors, also low coefficients between intelligence and the liberality of freshman scores, and between intelligence and the amount of change in attitudes. Social Science majors as seniors were found to be considerably more liberal than the other groups.¹

At Syracuse University, Rogers and Smith studied the development of professional attitudes of students involved in the Intensive Teacher-Training Program. They attempted to determine the possibility of building desirable professional attitudes concerning children and teaching during a six weeks summer session. The MTAI was administered at the beginning and at the end of the six weeks term. The t of 6.24 was significant at greater than the .001 level.²

¹Richard Bugelski and Olive P. Lester, "Changes in Attitudes in a Group of College Students During their College Course and after Graduation," Journal of Social Psychology, XII (November, 1940), pp. 319-332.

²Vincent R. Rogers and James A. Smith, "Professional Attitudes of Students in an Intensive Teacher-Training Program," The Elementary School Journal, LVIII (November, 1956), pp. 100-101.

At Vassar, Webster investigated attitude changes occurring among college students. His data supported previous findings that substantial changes occurred in attitudes during college, and that the attitudes expressed varied with age, sex, and culture. His results supported those personality theories which emphasized increasing complexity, differentiation, ability, and independence during late adolescence, but rejected the view that college students became more alike in their general attitudes while attending college.¹

Using a sample of 193 college seniors, Callis found significant differences in Teacher Attitude Inventory scores among three subgroups. When categorized according to the teaching fields they intended to enter, the early childhood education majors scored the highest and special field majors scored the lowest; these differences were about the same, however, at the beginning and end of the period of professional training.²

In 1928 Wickman found a negative correlation between the teacher ratings of the seriousness of fifty

¹Harold Webster, "Changes in Attitudes During College," Journal of Educational Psychology, XLIX (June, 1958), pp. 109-117.

²Robert Callis, "Change in Teacher-Pupil Attitudes Related to Training and Experience," Educational and Psychological Measurement, X (Winter, 1950), pp. 718-727.

behavior problems and the ratings given by thirty clinicians.¹ Similar studies were made by Thompson,² Hunter,³ Gronlund,⁴ Gage and Suci,⁵ and Amos and Washington.⁶ Their findings have emphasized the need for more understanding and education on the part of teachers and student teachers concerning the behavior problems of young children.

In 1953, Schrupp and Gjerde replicated the Wickman rating technique to determine if any progress had been made in the teacher's ability to interpret psychological problems manifested in child behavior. Their data revealed that differences in teacher-clinician ratings were still

¹E. K. Wickman, Children's Behavior and Teachers' Attitudes (New York: Commonwealth Fund, 1928), p. 38.

²Charles E. Thompson, "The Attitude of Various Groups Toward Behavior Problems of Children," Journal of Abnormal Social Psychology, XXV (January, 1940), pp. 120-125.

³E. C. Hunter, "Changes in Teachers' Attitudes Toward Children's Behavior Over the Last Thirty Years," Mental Hygiene, XLI (January, 1957), pp. 3-11.

⁴N. E. Gronlund, "The Accuracy of Teachers' Judgments Concerning the Sociometric Status of Sixth Grade Pupils," Sociometry, XIII (March, 1950), pp. 329-357.

⁵N. L. Gage and George Suci, "Social Perception and Teacher-Pupil Relations," Journal of Educational Psychology, XLII (March, 1951), pp. 144-152.

⁶Robert T. Amos and Reginald M. Washington, "A Comparison of Pupil and Teacher Perceptions of Pupil Problems," Journal of Educational Psychology, LI (October, 1960), pp. 255-258.

present, but that the disparity was not as great as it had been in the earlier studies.¹

In an effort to determine the degree to which an academic course influences changes in student teachers' attitudes, Pinckney, in 1962, designed a study similar to those cited above. He investigated the extent to which changes in rating of childhood behavior problems were related to the experience in psychology courses. His data supported the hypothesis that psychology courses play an important role in the formulation of teachers' attitudes. He concluded:

. . . it seems apparent from the results of this investigation that introductory courses in psychology can meet the needs of student teachers for better understanding of the basic principles of behavior.²

In 1962, Dutton conducted a follow-up study of attitudes toward arithmetic which he had investigated in 1954. He was interested in finding out if there had been changes in attitudes of prospective elementary school teachers toward arithmetic since 1954. The attitudes of these students toward arithmetic in 1962 were almost

¹Manfred H. Schrupp and Clayton M. Gjerde, "Teacher Growth in Attitudes Toward Behavior Problems of Children," Journal of Educational Psychology, XLIV (April, 1953), pp. 203-214.

²George A. Pinckney, "Changes in Student Teachers' Attitudes Toward Childhood Behavior Problems," Journal of Educational Psychology, LIII (December, 1962), pp. 275-278.

identical to the attitudes held by students in the 1954 sample. On the basis of these findings he concluded that students were the product of a type of teaching based on mechanical-drill methods and that university level instruction in the teaching of arithmetic did not change the attitudes held by these students.¹

To investigate changes in critical thinking ability, stereotypic beliefs, dogmatism, and values, Lehman administered a battery of cognitive and affective measures to 1051 students as freshmen and then as seniors. He found that seniors were considerably more "outer-directed" than they were as freshmen, were significantly more efficient in critical thinking, and were more homogeneous in certain attitudinal traits. There was a considerable decrease in stereotypic beliefs and unreceptivity to new ideas in the scores of students as seniors with most of the changes occurring during the freshman and sophomore years.²

Considerable evidence has been compiled which indicates the effects of teachers' attitudes upon the attitude formation of their students. As early as 1934, Krall found

¹Wilbur H. Dutton, "Attitude Change of Prospective Elementary School Teachers Toward Arithmetic," The Arithmetic Teacher, IX (December, 1962), pp. 418-424.

²Irvin J. Lehman, "Changes in Critical Thinking, Attitudes, and Values from Freshman to Senior Years," Journal of Educational Psychology, LIV (December, 1963), pp. 305-315.

that students had a tendency to shift toward the position held by the teacher.¹ A positive relationship between a teacher's attitudes and the value systems of his pupils was found by Della Piana and Gage.² More recently, Hoyt and Cook found a positive correlation between the MTAI scores of teachers and their pupils' ratings of the total school experience.³

In 1961, McCullough investigated the attitudinal changes of two groups of prospective secondary teachers. He found that the MTAI scores of both groups changed in a positive direction during the period of intensive professional education courses and in a negative direction during the period of student teaching.⁴

At Illinois State Normal University, Ofchus and Gnagly investigated the factors related to the shift of professional attitudes of students in teacher education.

¹Abraham Krall, "The Teacher's Influence upon the Social Attitudes of Boys in the Twelfth Grade," Journal of Educational Psychology, XXV (April, 1934), pp. 274-280.

²G. M. Della Piana and N. J. Gage, "Pupils' Values and the Validity of the Minnesota Teacher Attitude Inventory," Journal of Educational Psychology, XLVI (March, 1955), pp. 167-178.

³Cyril J. Hoyt and Walter W. Cook, "The Predictive Validity of the Minnesota Teacher Attitude Inventory Based on Pupil Attitudes Toward School," Journal of Teacher Education, X (March, 1959), pp. 42-44.

⁴Henry E. McCullough, Jr., "Comparison of the Change in Attitudes Toward Youth of Two Selected Groups of Student Teachers," Dissertation Abstracts, XXII (1962), p. 2302.

They postulated that a college instructor by the designation of a particular test, the choice of lecture and discussion topics, and by the selection of films indirectly influenced the attitudes of his students. The MTAI was administered to a group of sophomore women enrolled in a one semester course in child growth at the beginning and at the end of the semester. Using the California F Scale and a personal rating form, they investigated the correlates of attitude shifts during the course. Ofchus and Gnagly concluded:

Under the conditions of this study neither the students authoritarianism nor their perception of their instructor's competence, permissiveness, and agreement with their own attitudes toward children were associated with a change in the student's professional attitudes as measured by the MTAI.¹

The finding that students tend to transfer on to the instructor their feelings about a mother-father authority figure was considered by Ofchus and Gnagly to be one of the most important contributions of the study.²

¹Leon T. Ofchus and William J. Gnagly, "Factors Related to the Shift of Professional Attitudes of Students in Teacher Education," Journal of Educational Psychology, LIV (June, 1963), p. 153.

²Ibid.

Laboratory Experiences, Student Teaching,
and Attitude Change

To explore the nature of changes in student teachers' attitudes toward children during initial teaching experiences, Oelke used a test-retest procedure with forty-four senior student teachers and a group of fifty junior students in education. Significant differences in amount of change were found for students in some subject matter areas; however, as far as total scores were concerned no statistically significant differences were found between the two groups. There was some indication that home economics and social science student teachers were more acceptant of children than student teachers in other fields. The teaching group was found to be more accepting and more optimistic than the pre-teaching groups. The Thematic Apperception Test proved to be better than the MTAI in discriminating between the best and poorest student teachers. The highest rated teachers expressed greater acceptance of children's behaviors after student teaching. Those rated as poorest tended to become less acceptant of children's behaviors after teaching. His findings raised so many unanswered questions that he recommended a thorough study of student teacher attitudes.¹

¹Meritt C. Oelke, "A Study of Student Teachers' Attitudes Toward Children," Journal of Educational Psychology, XLVII (April, 1956), pp. 193-198.

Studies which purport to measure the attitudes of college students preparing to teach have been reported by Fuller,¹ Jones,² Proff,³ and Ringness.⁴ The most widely used instrument for this purpose has been the MTAI. These researchers concluded that teaching attitudes and personality could be measured and that training tended to improve scores. They further determined that there were distinct differences in attitudes toward teaching among students in different teaching fields.

In a more recent study, Sandgren and Schmidt investigated the attitude modifications of student teachers following practice teaching experiences. More specifically, they tried to find out if the attitudes of student teachers changed as a result of practice teaching and

¹Elizabeth M. Fuller, "The Use of Teacher-Pupil Attitudes, Self-Ratings, and Measures of General Ability in the Pre-Service Selection of Nursery School and Kindergarten Teachers," Journal of Educational Research, XLIV (May, 1951), pp. 675-686.

²Charles J. Jones, "Reactions of Prospective Teachers to Pupil Behavior Problems," Educational Administration and Supervision, XXXVIII (May, 1952), pp. 283-292.

³Fred C. Proff, "The Relation Between Attitudes Toward Teaching and Educational-Vocational Choice," Studies on the Effectiveness of Teaching, (Department of Psychology, University of Missouri, 1952), pp. 37-52 (Mimeographed.)

⁴Thomas A. Ringness, "Relationships Between Certain Attitudes Toward Teaching and Teaching Success," Journal of Experimental Education, XXI (September, 1952), pp. 1-55.

whether or not these attitudes correlated with ratings of teaching efficiency. The instruments used were the MTAI and the Student Teaching Report which consisted of twenty-seven rating scales dealing with teaching methods, planning, pupil-teacher relationships, and teaching effectiveness. A statistically significant increase in scores was found for the entire group of student teachers. The women had significantly higher scores on the attitude inventory both before and after practice teaching than did the men.

When grouped according to the teaching fields they intended to enter, the greatest amount of increase was made by the secondary group, but the elementary group had the higher initial and final scores. The secondary academic group had the next highest scores followed by the secondary non-academic group. The student teachers who completed two terms of practice teaching had higher initial and final scores than did those who completed only one term of practice teaching. Student teachers in the elementary curriculum were found to possess more favorable attitudes toward school work and children as expressed by their MTAI scores than student teachers following other curricula. Sandgren and Schmidt also concluded that if the ratings made by public school critic teachers were used as a criterion of success, then the MTAI could not be used to predict probable success in teaching because there was no

apparent relationship between critic teachers' ratings and MTAI scores.¹

Using the MTAI, Osmon investigated the factors related to the attitudinal changes of secondary student teachers. He reported that the attitudes of student teachers toward children became significantly less permissive during student teaching. An increase in permissiveness was associated with a good experience, however, the reverse was not associated with a less permissive attitude.²

In 1959, Troisi used the MTAI to investigate the attitudinal changes of student teachers. Although he found a significant increase in student teachers' MTAI scores during the student teaching experience, he did not find a significant relationship between the scores of the student teachers and scores made by their cooperating teachers.³

After their initial teaching experiences, Day investigated the attitude changes of beginning teachers.

¹Duane L. Sandgren and Louis G. Schmidt, "Does Practice Teaching Change Attitudes Toward Teaching?" Journal of Educational Research, XLIX (May, 1956), pp. 673-680.

²Robert V. Osmon, "Associative Factors in Change of Student Teachers' Attitudes During Student Teaching," Dissertation Abstracts, XX (1959), p. 1281.

³Nicholas F. Troisi, "The Effect of Student-Teaching Upon Student Teachers' Objectives and Their Relation to Achievement and Attitudes Toward Children," Dissertation Abstracts, XX (1959), p. 609.

The MTAI was administered to 196 college seniors immediately following their practice teaching in the public schools, and again one year later. A comparison of the test results for the teaching group revealed a mean loss of 20.0 after the first six months of teaching; however, MTAI authors reported a mean loss of only 3.94 for a similar study. Day reported a mean loss of only 1.5 for the non-teaching group. He commented,

It thus appears that very little change takes place in the attitudes, as measured by the MTAI, of graduates of Florida State University who prepared for but did not enter teaching. This is in sharp contrast to the rather drastic shift in the direction of less desirable attitudes experienced by the teaching graduates of the University.¹

Day also administered the MTAI to a second group of 154 students immediately before and after their practice teaching internship. This group exhibited a mean loss of 4.2 as compared to a mean gain in score of 3.39 for a similar group tested by the MTAI authors.²

Using the MTAI, Cross examined various phases of professional training for 123 elementary education students.

¹Harry P. Day, "Attitude Changes of Beginning Teachers after Initial Teaching Experience," The Journal of Teacher Education, X (September, 1959), p. 327.

²Ibid.

He found no significant change in attitude toward pupil-teacher relations during the semester of student teaching.¹

In a study at Southeastern State College of Oklahoma, Nagle compared the professional attitude changes occurring during two types of student teaching programs--professional semester and the traditional program. Significant improvements in aspects of professional attitudes were made during the semester of student teaching experiences, and improvement appeared to be associated with the professional semester type of program. His study supported contentions that a semester providing an integrated program of teaching theory and method with student teaching was significantly better than the typical semester providing one to two hours a day of student teaching.²

Campbell, on the other hand, reported that the mean attitude scores of both the control and experimental groups in his sample decreased after the period of student teaching.

¹Arthur E. Cross, "A Comparative Analysis of the Expressed Attitudes of Elementary Education Students, Their University Instructors and Their Supervising Teachers Toward Pupil-Teacher Relations as Measured by the Minnesota Teacher Attitude Inventory," (unpublished doctoral dissertation, Dept. of Education, Indiana University, 1959), pp. 47-70.

²L. Marshall Nagle, "Some Effects of Student Teaching Patterns Upon Professional Attitudes," Journal of Educational Research, LII (May, 1959), pp. 355-357.

The MTAI scores of the control and experimental groups did not differ significantly on the final testing.¹

Closely related to student teaching are those programs usually referred to as professional laboratory experiences. At Indiana State Teachers College, Darrow studied the effects of such a program on the attitudes of prospective teachers. Based on the premise that professional laboratory experiences were an attempt to bridge the gap between theory and practice, she designed a study to determine the extent to which participation in the laboratory school changed the attitudes of prospective teachers toward children and the profession. She concluded that students' attitudes toward teaching were more likely to be strengthened or even unchanged than weakened or changed in a negative direction by the participation experience. However, she also reported some evidence that would suggest the experience might influence a decision on the part of some pupils not to teach.²

Popolo investigated the relationship of the authoritarian personality structure to an individual's

¹Carl Campbell, "An Experimental Investigation of the Value of One Method of Self-Appraisal in Developing Certain Attitudes Among Student Teachers," Dissertation Abstracts, XXIII (1962), p. 2433.

²Harriet Driskell Darrow, "The Effects of a Participation Program on the Attitudes of Prospective Teachers at Indiana State Teachers College," The Teachers College Journal, XXXI (November, 1959), pp. 18-21.

opinions and attitudes toward pupil-teacher relationships and his observable behavioral traits in a classroom setting. His data disclosed a significant relationship.¹

Rabinowitz and Rosenbaum attempted to measure changes in teaching attitudes that accompanied teaching experience. Their data, like Day's,² provided clear evidence that the interval between the administration of the MTAI to subjects as student teachers and again as experienced teachers was accompanied by a statistically significant decrease in scores. They interpreted the decline in scores as indicating deterioration in teacher attitudes that were associated with the ability to establish rapport with pupils. Favorable attitudes developed in college by members of this sample appeared to be destroyed by teaching experience in the classroom. However, Rabinowitz and Rosenbaum suggested that it might be indicative of a realistic adaptation to the demands of classroom life.³

Scott and Brinkley investigated the predictive validity of the MTAI for success in student teaching, and also used the data to study attitude changes of student

¹Joseph A. Del Popolo, "Authoritarian Trends in Personality as Related to Attitudinal and Behavioral Traits of Student Teachers," Journal of Educational Research, LIII (March, 1960), pp. 252-257.

²Day, loc. cit.

³William Rabinowitz and Ira Rosenbaum, "Teaching Experience and Teachers' Attitudes," The Elementary School Journal, LX (March, 1960), pp. 313-319.

teachers. Of the many factors associated with attitude modifications, they considered only one--the attitude of the supervising teacher. Student teachers working with supervising teachers whose attitudes toward pupils were superior to their own were found to improve significantly in their attitudes toward pupils. Supervising teachers whose attitudes were inferior to those held by their student teachers did not significantly influence the student teacher's attitudes. Using the Classroom Personal Relations booklet as criteria, they found that the MTAI had neither predictive nor concurrent validity--a finding in conflict with those reported by Hoyt and Cook,¹ Sandgren and Schmidt,² Stein and Hardy,³ and Stogdill and Coons.⁴

Cox investigated the attitudinal changes of teaching candidates resulting from laboratory experiences which were integrated into a pre-student teaching course, Human Growth and Development. The experimental group had course instruction plus the laboratory feature; the control group received only course instruction. Both groups made gains

¹Hoyt and Cook, loc. cit.

²Sandgren and Schmidt, loc. cit.

³Harry L. Stein and James Hardy, "Validation of the Minnesota Teacher Attitude Inventory in Manitoba," Journal of Educational Research, L (January, 1957), pp. 321-328.

⁴R. M. Stogdill and A. E. Coons, "Leadership Behavior: Its Description and Measurement," Ohio State University Bureau of Business, Research Monograph, Number 88 (1957), pp. 1-14.

from pretest to post-test that were statistically significant, however, the experimental group did not show a statistically significant gain over the corresponding control group. According to Cox, the thesis that the attitudes of prospective teachers toward teaching could be improved as a result of a professional education course was strongly supported by the empirical evidence; however, the empirical evidence was not supported by the objective data.¹

The doctoral dissertation of Hrudka dealt with an attempt to determine whether, as a result of student teaching experience, student teachers significantly change their concepts concerning their ability to deal with selected problems. He found that prior to student teaching, students in the sample had realistic concepts concerning the problems which they ranked as causing the most difficulty. Although student teaching was found to cause significant changes in students' concepts concerning their ability to deal with some of the selected problems investigated, Hrudka concluded that these changes did not indicate a need for a major revision of the professional education program completed by these teachers.²

¹Cox, op. cit., XXIX, pp. 89-94.

²Quinn L. Hrudka, "Changes that Take Place as a Result of Student Teaching in Students' Concepts Concerning their Ability to Deal with Selected Problems of Student Teachers," Dissertation Abstracts, XXIII (1962), pp. 2436-2437.

Previous studies indicated that the attitudes of students were likely to improve during the student teaching period while the experience of regular teaching usually decreased MTAI scores. In his investigation of anxiety as a variable in attitude modifications, Dutton found significant changes occurring in a negative direction during student teaching. These changes were in the direction of the attitudes held by the supervising teachers. Both highly anxious and nonanxious student teachers had negative changes in attitudes in the direction of their supervising teachers.¹

In those cases where the student teachers made lower initial scores than their supervising teachers, Scott and Brinkley also found a slight degree of association between attitude changes of student teachers and the attitudes of their supervising teachers. However, the attitude changes were reported to be in a more positive direction.² Dutton's findings indicated attitude modifications of student teachers in the direction of supervising teachers regardless of initial scores. He also found that students who were not

¹Wilbur H. Dutton, "Attitude Change of Elementary School Student Teachers and Anxiety," Journal of Educational Research, LV (May, 1962), pp. 380-382.

²Owen Scott and Sterling G. Brinkley, "Attitude Changes of Student Teachers and the Validity of the Minnesota Teacher Attitude Inventory," Journal of Educational Psychology, LI (April, 1960), pp. 76-81.

in student teaching maintained high positive MTAI scores. Dutton suggested that the student teaching experience was either very realistic and similar to regular teaching situations or unduly stressful.¹

In his doctoral dissertation, Nichols reported results from administration of the MTAI and the Thompson Teaching Practices Scale to thirty-one seniors before and after they engaged in student teaching. The scores on the tests were compared to see if any gain or loss occurred in attitudes and in the selection of teaching practices. For a control group he used sixty-nine seniors who were to do their practice teaching a semester later. A comparison of mean scores before and after practice teaching did not yield a statistically significant difference. The control group showed a significant gain in mean scores on both scales after the ten-week interval, although no teaching was done. Nichols concluded that student teachers could profit from observing competent teachers under the direction of college supervisors during or preceding the junior year.²

The research findings and the philosophy pertaining to the supervising teachers was studied by Harven. She found that the work of the supervising teacher had been

¹Dutton, loc. cit.

²Lloyd George Nichols, "Changes in Attitudes and Selection of Teaching Practices after Student Teaching Experience," Dissertation Abstracts, XXIV (1963), p. 1089.

limited largely to making the student teacher "feel at home." She concluded that the contributions of the supervising teachers had not been fully explored.¹

Using the questionnaire survey method, Howell investigated the value of student teaching. He decided that the best judges of the value of practice teaching would be the administrators who hire and the teachers who teach. On the basis of his findings, he concluded that student teaching was extremely valuable to the first year teacher.²

At Northwestern University, Mathis and Park investigated some of the factors related to success in student teaching. They attempted to quantify data obtainable from the student's personnel records and to relate these measures to a criterion of success or lack of success in the student teaching experience. They found the student teaching grade to have the highest predictive value.³

Ingle and Robinson investigated the value of classroom observation for prospective teachers and found no evidence to support the contention that observation of pupils in classroom situations improved attitudes toward children

¹Jeraline D. Harven, "The Supervising Teacher: A Synthesis of Research Findings and Thought in Two Volumes," Dissertation Abstracts, XXVI (1965), pp. 2601-2602.

²Howell, op. cit., LVIII, pp. 15-16.

³Claude Mathis and Young H. Park, "Some Factors Relating to Success in Student Teaching," Journal of Educational Research, LVIII (May-June, 1965), pp. 420-422.

any more than studying about them in a class. On the other hand, they pointed out that sacrificing one class period a week for observation did not have an adverse effect on students' attitudes toward children. Although the objective data failed to verify the value of observation, the authors felt that the non-quantified data seemed to suggest that there was some value in it.¹

In her doctoral study, Smith investigated the influences which teachers identified as affecting their adoption of recommended practices. Contrary to the literature in this area, she found pre-professional training to be a positive influence on the adoption of recommended practices.²

In a thorough and comprehensive survey of the literature and research from 1920 to 1959 pertaining to off-campus student teaching programs, Mercer found a wide variety of practices. There appeared to be very little

¹Robert B. Ingle and Edward W. Robinson, "An Examination of the Value of Classroom Observation for Prospective Teachers," Journal of Teacher Education, XVI (December, 1965), pp. 456-460.

²Priscilla R. Smith, "The Influences which Teachers Identified as Affecting Their Adoption of Recommended Teaching Practices," Dissertation Abstracts, XXIV (1963), pp. 5257-5258.

uniformity among the different institutions, and it was difficult to detect any practice which could be called a trend.¹

¹Walter A. Mercer, "What Research and Related Literature Have to Say About Off-Campus Student Teaching and Professional Laboratory Experiences," Journal of Experimental Education, LVII (May-June, 1964), pp. 489-491.

PRESENTATION OF DATA

CHAPTER III

Statistical Analysis

The data for this study consisted of test scores obtained from the administration of Kerlinger's attitude scale, ES VI, to 361 subjects. Scores were divided into three categories then were further analyzed according to class sections for eighteen subdivisions of these three categories. The distribution and description of the categories and subdivisions are presented in Table 1.

Obtained means and standard deviations of the raw scores computed for each section of student teachers and for each section of cooperating teachers are presented in Appendix B, Tables 12, 13, 14, and 15.

The F ratio was employed to test for homogeneity of variance and was calculated according to the following formula,

$$F = \frac{S^2_1}{S^2_2}$$

where S^2_1 = the larger of the two estimated population variances with degrees of freedom = $n_1 - 1$, and S^2_2 = the

TABLE 1

DISTRIBUTION AND DESCRIPTION OF SUBJECT SUBGROUPS
REPORTED BY CODE, NUMBER, AND SUBGROUP

Code	N	Description
I-SE	18	Students-Elementary-Section I
II-SE	19	Students-Elementary-Section II
III-SE	20	Students-Elementary-Section III
I-II-III (SE)	57	Students-Elementary-Combined
IV-SS	29	Students-Secondary-Section IV
V-SS	30	Students-Secondary-Section V
VI-SS	30	Students-Secondary-Section VI
VII-SS	31	Students-Secondary-Section VII
IV-V-VI-VII (SS)	120	Students-Secondary-Combined
I-CE	18	Cooperating Teachers-Elementary-Section I
II-CE	19	Cooperating Teachers-Elementary-Section II
III-CE	20	Cooperating Teachers-Elementary-Section III
I-II-III (CE)	57	Cooperating Teachers-Elementary-Combined
IV-CS	29	Cooperating Teachers-Secondary-Section IV
V-CS	30	Cooperating Teachers-Secondary-Section V
VI-CS	30	Cooperating Teachers-Secondary-Section VI
VII-CS	31	Cooperating Teachers-Secondary-Section VII
IV-V-VI-VII (CS)	120	Cooperating Teachers-Secondary-Combined
I-GE	1	General Supervisor-Elementary-Section I
II-GE	1	General Supervisor-Elementary-Section II
III-GE	1	General Supervisor-Elementary-Section III
IV-GS	1	General Supervisor-Secondary-Section IV
V-GS	1	General Supervisor-Secondary-Section V
VI-GS	1	General Supervisor-Secondary-Section VI
VII-GS	1	General Supervisor-Secondary-Section VII

smaller of the two estimated variances with degrees of freedom = $n_2 - 1$.¹

Snedecor's Table of the F Distribution was consulted to determine the values necessary for significance. Specific values for the particular degrees of freedom for the greater and lesser mean square of each group were determined by linear interpolation according to Laubacher's formulas.³ F ratios did not, however, indicate where variations occurred.

Students' t tests of differences between means were computed to test the significance of differences occurring between specific pairs of means. For determining differences between the uncorrelated means, the following formula from Guilford was used.

$$t = \frac{M_1 - M_2}{\sqrt{\left(\frac{\sum x^2_1 + \sum x^2_2}{N_1 + N_2 - 2} \right) \left(\frac{N_1 + N_2}{N_1 N_2} \right)}}$$

where M_1 and M_2 = means of the two samples

$\sum x^2_1$ and $\sum x^2_2$ = sums of squares in the two samples

N_1 and N_2 = numbers of cases in the two samples

¹Wilfred J. Dixon and Frank J. Massey, Jr., Introduction to Statistical Analysis (New York: McGraw-Hill Book Company, Inc., 1951), p. 84.

²George W. Snedecor, Statistical Methods (5th ed.; Ames, Iowa: The Iowa State University Press, 1956), p. 246.

³Nico Laubacher, "Interpolation in F-Table," The American Statistician, XIX (February, 1965), pp. 28-43.

The complete numerator should read $M_1 - M_2 - 0$, to indicate that it represents a deviation of a difference from the mean of the differences. The denominator as a whole is the SE of the difference between means, as the t ratio requires.¹

For testing differences between correlated means the following formula was used,

$$t = \frac{M_d}{\sqrt{\frac{\sum X_d^2}{N(N-1)}}$$

where M_d = mean of the N differences of paired observations and X_d = deviation of a difference from the mean of the differences The number of df to use with t in this case is $N-1$, where N is the number of pairs of observations.²

The .05 level of significance was selected as the rejection region and a two-tailed test was applied since the assumption of no significant difference between mean scores was made. All the computed t values are presented in Appendix B, Table 16, by selected subgroup comparisons.

¹J. P. Guilford, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill Book Co., Inc., 1956), p. 220.

²Ibid.

Interpretation of Data

The null hypotheses tested were:

Ho₁ There are no statistically significant differences between the mean scores of students obtained at the beginning of the semester (September) and those obtained upon completion of seven weeks of intensive professional education course work (November) for elementary education majors.

Students' t values computed to test hypotheses one and two are presented in Table 2. For the total group, a t value of .76 was obtained which, at 238 degrees of freedom, did not come near the 2.24 value necessary for significance at the .05 level of confidence. The t value, 1.17, for section I-SE was the largest obtained for the three sections, but it was not significant even at the .10 level. The hypothesis was accepted for all three sections.

Ho₂ There are no statistically significant differences between the mean scores of students obtained at the beginning of the semester (September) and those obtained upon completion of seven weeks of intensive professional education course work (November) for secondary education majors.

The t value obtained for Section V-SS was 2.20 which exceeded the t value, 2.00, necessary for significance at the .05 level, but did not approach the necessary 2.39 value for significance at the .02 level. The t test of difference

TABLE 2

t TESTS OF DIFFERENCES BETWEEN MEAN EDUCATIONAL ATTITUDE SCORES OF STUDENTS IN SEPTEMBER AND NOVEMBER

Group	N	<u>t</u>
I-SE	18	1.17
II-SE	19	.35
III-SE	20	.53
I-II-III (SE)	57	.76
IV-SS	29	.21
V-SS	30	2.20207*
VI-SS	30	2.070*
VII-SS	31	.96
IV-V-VI-VII (SS)	120	.78

Code: SE - elementary education students.
 SS - secondary education students.

*Significant at .05 level.

between means for Section VI-SS yielded a value of 2.07 which was also significant at the .05 level. The t values of .21, .96, and .78 for Section IV-SS, Section VII-SS, and the combined sections respectively were not significant even at the .10 level of confidence. The hypothesis was accepted for Sections IV-SS, VII-SS, and the sections combined as a total group; it was rejected for Sections V-SS and VI-SS whose t values both indicated that the differences occurring between the means were greater than could have occurred by chance.

Ho₃ There are no statistically significant differences between the mean scores of students obtained at the beginning of the semester (September) and those obtained upon completion of seven weeks of student teaching (January) for elementary education majors.

A summary of the analysis of data for hypotheses three and four is presented in Table 3. The obtained mean scores in September for each section of elementary students and for all three sections taken as a whole were almost identical with their obtained mean scores in January. The hypothesis was accepted for the sections taken as a whole and for each of the three sections.

Ho₄ There are no statistically significant differences between the mean scores of students at the beginning of the semester (September) and those obtained upon completion of seven weeks of student teaching (January) for secondary education majors.

The hypothesis was accepted for each section and subsequently for all sections as a total. The highest t value obtained was 1.25 for Section V-SS, and it was not even close to that required for significance at the .10 level.

Ho₅ There are no statistically significant differences between the mean scores of students obtained upon completion of seven weeks of student teaching (January) and those obtained at the beginning of the student teaching

period (November) for elementary education majors.

TABLE 3

t TESTS OF DIFFERENCES BETWEEN MEAN EDUCATIONAL ATTITUDE SCORES OF STUDENTS IN SEPTEMBER AND JANUARY

Group	N	<u>t</u>
I-SE	18	.62
II-SE	19	.64
III-SE	20	.014
I-II-III (SE)	57	.014
IV-SS	29	.33
V-SS	30	1.25
VI-SS	30	.94
VII-SS	31	.18
IV-V-VI-VII (SS)	120	.55

Code: SE - elementary education students.
 SS - secondary education students.

The results of Students' t tests computed to test hypotheses five and six are presented in Table 4. Hypothesis five was accepted for all sections considered as a whole and for each section. Results of the t tests indicated virtually no change in the educational attitudes of elementary student teachers. Even at the .10 level, none of the t values, .335, .84, .66, and .76 were significant.

TABLE 4

t TESTS OF DIFFERENCES BETWEEN MEAN EDUCATIONAL ATTITUDE SCORES OF STUDENTS IN NOVEMBER AND JANUARY

Group	N	<u>t</u>
I-SE	18	.335
II-SE	19	.84
III-SE	20	.66
I-II-III (SE)	57	.76
IV-SS	29	.53
V-SS	30	.35
VI-SS	30	1.00
VII-SS	31	.65
IV-V-VI-VII (SS)	120	.209

Code: SE - elementary education students.
 SS - secondary education students.

Ho₆ There are no statistically significant differences between the mean scores of students obtained upon completion of seven weeks of student teaching (January) and those obtained at the beginning of the student teaching period (November) for secondary education majors.

Section VI-SS had the greatest difference between mean scores with a t value of 1.00, but this did not even closely approximate the 2.00 value necessary for significance at the .05 level. The hypothesis was accepted for the sections taken as a whole and for each of the sections of

secondary student teachers since none of the differences were greater than that which could be attributed to chance occurrence.

Ho₇ There are no statistically significant differences between the obtained mean scores of the elementary education majors and those of the secondary education majors at the beginning of the semester (September), at the culmination of seven weeks of intensive professional education course work (November), and upon completion of seven weeks of student teaching (January).

A summarization of the statistical analysis of data for hypothesis seven is presented in Table 5. The greatest difference between the mean scores of elementary students and those of secondary students occurred in September for which a t value of 1.35 was obtained. The difference diminished in November to the point that a t value of only .61 was obtained. The students were even more similar in January as indicated by the t value of .088. The hypothesis was accepted for each of the three dates. It was quite noticeable that the mean scores of the sections gradually shifted in the direction of traditionalism.

Ho₈ There are no statistically significant differences between the obtained mean scores of elementary student teachers at the beginning of the student teaching period (November) and those of their respective Cooperating Teachers.

TABLE 5

t TESTS OF DIFFERENCES BETWEEN MEAN EDUCATIONAL ATTITUDE SCORES OF ELEMENTARY STUDENT TEACHERS AND SECONDARY STUDENT TEACHERS

Group	N	Test Date	<u>t</u>
I-II-III (SE)	57		
IV-V-VI-VII (SS)	120	Sept.	1.35
I-II-III (SE)	57		
IV-V-VI-VII (SS)	120	Nov.	.61
I-II-III (SE)	57		
IV-V-VI-VII (SS)	120	Jan.	.088

Code: SE - elementary education students.
 SS - secondary education students.

Table 6 contains a summary of the analysis of data for hypotheses eight and nine. The mean score of the student teachers in Section III-SE was significantly different from that of their Cooperating Teachers at the .01 level. The t value of 3.85 greatly exceeded the value of 2.71 necessary for significance at the .01 level. The mean score of the student teachers in Section II-SE was remarkably similar to the mean score of their Cooperating Teachers. A t test between the mean scores of student teachers in Section I-SE and their Cooperating Teachers yielded a value of 1.104 which was different but not enough to be significant even at the .10 level. The hypothesis was rejected for Section III-SE but accepted for Section I-SE and for Section II-SE.

TABLE 6

t TESTS OF DIFFERENCES BETWEEN MEAN EDUCATIONAL ATTITUDE SCORES OF STUDENT TEACHERS IN NOVEMBER AND THEIR COOPERATING TEACHERS

Group	N	<u>t</u>
I-SE & I-CE	36	1.104
II-SE & II-CE	38	.07
III-SE & III-CE	40	3.85**
IV-SS & IV-CS	58	2.376*
V-SS & V-CS	60	4.444**
VI-SS & VI-CS	60	3.30**
VII-SS & VII-CS	62	1.78

Code: SE - elementary education students.
 CE - elementary Cooperating Teachers.
 SS - secondary education students.
 CS - secondary Cooperating Teachers.

* Significant at .05 level. **Significant at .01 level.

H_{09} : There are no statistically significant differences between the obtained mean scores of secondary student teachers at the beginning of the student teaching period (November) and those of their respective Cooperating Teachers.

The obtained mean score of student teachers in Section V-SS was highly significant since the t value, 4.44, greatly exceeded the 2.66 value necessary for significance at the .01 level. The t value, 3.30, obtained for Section

VI-SS was also highly significant at the .01 level. The mean score of student teachers in Section IV-SS was significantly different from that of their Cooperating Teachers at the .05 level, and almost achieved significance at the .02 level. The mean score of student teachers in Section VII-SS was different from that of their Cooperating Teachers, but the t value, 1.78, approached significance only at the .10 level. The hypothesis was rejected at the .05 level for Sections IV-SS, V-SS, and VI-SS, and at the .01 level for Sections V-SS and VI-SS. It was accepted for Section VII-SS.

H_{010} There are no statistically significant differences between the mean scores of elementary student teachers at the conclusion of seven weeks of student teaching (January) and those of their Cooperating Teachers.

A summarization of the statistical analysis of data for hypotheses ten and eleven is presented in Table 7. Hypothesis ten was accepted for Section I-SE ($t = .63$) and for Section II-SE ($t = 1.20$) since neither value achieved significance at the .05 level. It was rejected for Section III-SE since the t value of 4.90 greatly exceeded the 2.71 value necessary for significance at the .01 level.

H_{011} There are no statistically significant differences between the mean scores of secondary student teachers at the conclusion of seven weeks of student teaching (January) and those of their Cooperating Teachers.

TABLE 7

t TESTS OF DIFFERENCES BETWEEN MEAN EDUCATIONAL ATTITUDE SCORES OF STUDENT TEACHERS IN JANUARY AND THEIR COOPERATING TEACHERS

Group	N	<u>t</u>
I-SE & I-CE	36	.63
II-SE & II-CE	38	1.20
III-SE & III-CE	40	4.90**
IV-SS & IV-CS	58	1.85
V-SS & V-CS	60	3.01**
VI-SS & VI-CS	60	2.415**
VII-SS & VII-CS	62	2.28*

Code: SE - elementary education students.
 CE - elementary Cooperating Teachers.
 SS - secondary education students.
 CS - secondary Cooperating Teachers.

*Significant at .05 level.

**Significant at .01 level.

The t value, 1.85, for Section IV-SS, was significantly different only at the .10 level. The t value, 3.01, for Section V-SS was highly significant at the .01 level while the t value, 2.415, for Section VI-SS, was significant at the .02 level. The mean score of student teachers in Section VII-SS was significantly different from that of their Cooperating Teachers at the .05 level. The hypothesis was accepted for Section IV-SS but was rejected for VII-SS at the .05 level, for Section VI-SS at the .02 level, and for

Section V-SS at the .01 level.

Ho₁₂ Any change in the obtained mean scores for educational attitudes of elementary student teachers during the student teaching period from November to January is not in the direction of the mean scores of their respective Cooperating Teachers.

Tables 8 and 9 present a summary of the analysis of data for hypotheses twelve and thirteen. The mean score of the three sections taken as a whole shifted in the direction of the mean score of the Cooperating Teachers, but when the mean scores were considered separately only those of Sections I-SE and III-SE changed in the direction of the Cooperating Teachers. The mean score of Section II-SE shifted in the opposite direction. The hypothesis was rejected for the sections combined as a single group and for Sections I-SE and III-SE at the .05 level but was accepted for Section II-SE.

Ho₁₃ Any change in the obtained mean scores for educational attitudes of secondary student teachers during the period of student teaching from November to January is not in the direction of the mean scores of their respective Cooperating Teachers.

When the mean score of the four sections taken as a whole was compared with that of the Cooperating Teachers it was apparent that the score of the student teachers shifted in the direction of the educational attitudes held

TABLE 8

OBTAINED MEAN EDUCATIONAL ATTITUDE SCORES AND
STANDARD DEVIATIONS FOR STUDENT TEACHERS

Group	N	Sept.		Nov.		Jan.	
		$\bar{X}$	s.d.	$\bar{X}$	s.d.	$\bar{X}$	s.d.
I-SE	18	3.072	2.257	3.822	2.254	2.611	2.202
II-SE	19	3.80	1.34	2.531	1.86	3.29	1.98
III-SE	20	3.51	1.69	3.905	2.83	3.440	1.41
I-II-III (SE)	57	3.133	1.78	3.42	2.22	3.128	1.88
IV-SS	29	3.038	1.90	3.151	2.22	2.88	1.76
V-SS	30	2.68	1.82	3.46	1.08	3.31	2.08
VI-SS	30	3.063	1.57	4.03	2.02	3.506	2.01
VII-SS	31	2.287	1.44	2.671	1.71	2.96	1.78
IV-V-VI- VII (SS)	120	2.76	1.70	3.325	1.83	3.165	1.91

Code: SE - elementary education students.
SS - secondary education students.

by the Cooperating Teachers. The mean scores of Sections IV-SS, V-SS, and VI-SS shifted in the direction of the scores of their Cooperating Teachers indicating less progressivism. The mean score of Section VII-SS changed in the opposite direction of the score of the Cooperating Teachers. The hypothesis was rejected for the sections combined as a single group and for Sections IV-SS, V-SS, and VI-SS, but was accepted for Section VII-SS.

TABLE 9

OBTAINED MEAN EDUCATIONAL ATTITUDE SCORES AND STANDARD DEVIATIONS FOR COOPERATING TEACHERS

Group	N	$\bar{X}$	s.d.
I-CE	18	3.0944	2.36
II-CE	19	2.484	2.15
III-CE	20	1.105	1.59
I-II-III (CE)	57	2.1927	2.18
IV-CS	29	1.92	2.14
V-CS	30	1.840	1.68
VI-CS	30	2.12	2.41
VII-CS	31	1.69	2.53
IV-V-VI-VII (CE)	120	1.89	2.19

Code: CE - elementary Cooperating Teachers.
CS - secondary Cooperating Teachers.

H_{014} There is no statistically significant difference between the mean score of elementary Cooperating Teachers and the mean score obtained for secondary Cooperating Teachers.

Although the mean score of the total group of elementary Cooperating Teachers was more progressive than the mean score of the secondary Cooperating Teachers, the difference between their obtained mean scores was no different than could have occurred by chance. The t value of .86

fell considerably short of the value necessary for significance at the .05 level so the hypothesis was accepted.

H_{015} Any change in the obtained mean scores for educational attitudes of the students during the first seven weeks (September-November) is not in the direction of the scores of their respective General Supervisors.

Tables 8 and 10 present a summary of the analysis of data for this hypothesis. The hypothesis was rejected for each of the seven sections since in every case the mean score shifted in the direction of the score of the General Supervisor for each section.

TABLE 10
RAW SCORES OF EDUCATIONAL ATTITUDES
FOR GENERAL SUPERVISORS

Group	N	Score
I-GE	1	5.7
II-GE	1	.4
III-GE	1	8.0
IV-GS	1	5.5
V-GS	1	10.6
VI-GS	1	4.6
VII-GS	1	8.3

Code: GE - elementary General Supervisors.
GS - secondary General Supervisors.

fell considerably short of the value necessary for significance at the .05 level so the hypothesis was accepted.

Ho₁₅ Any change in the obtained mean scores for educational attitudes of the students during the first seven weeks (September-November) is not in the direction of the scores of their respective General Supervisors.

Tables 8 and 10 present a summary of the analysis of data for this hypothesis. The hypothesis was rejected for each of the seven sections since in every case the mean score shifted in the direction of the score of the General Supervisor for each section.

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IV-GS	1	5.5
V-GS	1	10.6
VI-GS	1	4.6
VII-GS	1	8.3

Code: GE - elementary General Supervisors.
GS - secondary General Supervisors.

The following observations were based on the test score analysis contained in Table 11.

TABLE 11

OBTAINED MEAN EDUCATIONAL ATTITUDE SCORES AND STANDARD DEVIATIONS FOR ELEMENTARY AND SECONDARY STUDENTS IN SEPTEMBER BY TEACHING AREAS

Teaching Areas	N	$\bar{X}$	s.d.
Elementary Total Group	57	3.133	1.78
Primary Level	39	3.2025	1.97
Intermediate Level	18	2.96666	1.71
Secondary Total Group	120	2.76	1.70
Science	4	1.325	1.21
Music	8	2.20	1.46
Mathematics	18	2.4666	2.65
Industrial Arts	12	2.6666	1.23
Home Ec	5	2.68	1.57
Business	7	2.96	1.35
Physical Ed	18	3.283	1.68
English	20	3.390	1.94
Art	7	4.014	1.54
Social Science	21	4.095	2.29

When the raw scores for the 57 elementary student teachers were grouped for all those teaching at the primary level (K-3) in comparison to all those teaching at the

intermediate level (4-6) the obtained mean score for the primary level group was more progressive than the obtained mean score for the intermediate level group.

When the raw scores for the 120 secondary student teachers were grouped according to ten subject matter areas the mean scores of the Social Science, Art, English, Physical Education, and Business areas fell above the mean score of the total group. The mean scores of the Science, Music, Mathematics, Industrial Arts, and Home Economics areas fell below the total mean score. It was noticeable that the mean score representing greater progressivism was obtained by the Social Science and Art student teachers while the mean score representing lesser progressivism was obtained by student teachers in Science, Music, and Mathematics.

CHAPTER IV

SUMMARY, FINDINGS, AND RECOMMENDATIONS

Summary

The problem of this study was the assessment and comparison of test scores for educational attitudes of a sample composed of all students enrolled in the Professional Semester at Kansas State College of Pittsburg during the fall semester of 1966-67, all those Cooperating Teachers to whom these students were assigned in the public schools, and the seven General Supervisors who instructed their course work. More specifically, the problem was the determination of differences between the test scores of the 361 subjects in the three categories and between pairings of the eighteen subgroups in each category in terms of the test scores of educational attitudes assessed by Kerlinger's Education Scale VI.

Raw scores were used for the computations. Obtained means of the raw scores and standard deviations were computed for each of the categories and for each subgroup. F ratios were computed to test for homogeneity of variance. Student's t tests for independent data and Student's t tests for correlated data were used to test the differences between

the obtained mean scores of specific pairings of the subgroups, and the .05 level of significance was selected as the rejection region.

Findings

As reported in Chapter III, significant differences occurred between the obtained mean scores of some of the subgroup pairings, and for others the differences were no greater than could have occurred by chance. The differences and/or similarities are summarized in the paragraphs which follow. Where applicable the findings of this study are compared with those reported in Chapter II.

1) Hypotheses 1, 3, and 5 were accepted. The mean scores for each of the three elementary sections were not significantly different in November from their scores in September, in January from those in November, or in January from those in September. The obtained mean scores for the three sections taken as a whole were not significantly different in November from September, in January from November, or in January from September.

2) Hypotheses 4 and 6 were accepted, and hypothesis 2 was accepted for sections IV-SS and VII-SS but rejected for sections V-SS and VI-SS. The mean scores of two of the four sections of secondary students were significantly different at the .05 level in November from their scores in September. The mean score in November for each of the two

remaining sections or for the four sections taken as a whole did not approach a significant difference even at the .10 level over their mean scores obtained in September. The t values between mean scores for each of the four groups and for the total group in November and those in January and between those in September and those in January indicated no significant differences.

3) The data revealed that the educational attitudes of the students in elementary and secondary education considered as single groups respectively did not change significantly during the semester. This finding is very similar to the one reported by Callis. Although he found significant differences in Teacher Attitude Inventory scores among three subgroups, these differences were present in approximately the same magnitude at the beginning of professional training as at the end of it.¹ Using the same test post-test procedure, Oelke investigated the attitude changes of a group of student teachers following the student teaching experience, and he also found no significant differences in their scores.² Price,³ Scott and Brinkley,⁴

¹Callis, op. cit., X, pp. 718-728.

²Oelke, op. cit., XLVII, pp. 193-198.

³Price, op. cit., XXI, p. 2615.

⁴Scott and Brinkley, op. cit., LI, pp. 76-81.

and Cross,¹ for similar studies, reported no significant differences in the change of attitudes of student teachers before and after the student teaching period.

4) Hypothesis 7 was accepted. The obtained mean scores for the elementary students as a single group did not differ significantly from the obtained mean scores of the secondary students considered as a group in September, in November, or in January.

5) Hypothesis 8 was accepted for sections I-SE and II-SE but rejected for section III-SE. Hypothesis 9 was accepted for section VII-SS but rejected for sections IV-SS, V-SS, and VI-SS. The obtained mean score of one of the three elementary sections of students in November was significantly different at the .01 level from the obtained mean score of their Cooperating Teachers. The mean scores in November for three of the four sections of secondary student teachers were significantly different at the .05 level from the mean score of the Cooperating Teachers for their respective groups. Mean scores for two of these three sections were significantly different at the .01 level.

6) Hypothesis 10 was accepted for sections I-SE and II-SE but rejected for section III-SE. Hypothesis 11 was accepted for section IV-SS but rejected for sections V-SS, VI-SS, and VII-SS. In January the mean score of one

¹Cross, op cit., pp. 47-70.

of the three elementary student teacher sections was significantly different at the .01 level from the mean score of their Cooperating Teachers. The obtained mean scores in January for three of the four sections of secondary student teachers were significantly different at the .05 level from the obtained mean scores of their Cooperating Teachers. One section continued to be significantly different at the .01 level with another one dropping to significance at the .02 level.

7) Hypothesis 12 was accepted for section II-SE but rejected for sections I-SE and III-SE. Hypothesis 13 was accepted for section VII-SS but rejected for sections IV-SS, V-SS, and VI-SS. Hypothesis 14 was accepted. The obtained mean scores in November for each of the seven sections of student teachers were more progressive than the obtained mean scores for the seven corresponding groups of Cooperating Teachers. When the three elementary sections were considered as a single group, the obtained mean score in January was less progressive than the obtained mean score in November indicating a shift toward more traditional attitudes reflected by the mean score of the elementary Cooperating Teachers. When the four secondary sections were also considered as a single group, the obtained mean score in January was less progressive than the obtained mean score in November indicating a shift toward the less progressive attitudes expressed by the secondary Cooperating Teachers.

The obtained mean score of the elementary Cooperating Teachers did not differ significantly from the obtained mean score of the secondary Cooperating Teachers even at the .10 level.

8) The more progressive educational attitudes of both the elementary and secondary groups shifted in the direction of the more traditional attitudes of the Cooperating Teachers during their student teaching experience. Although the change for the total group was not statistically significant, this finding seems to add weight to Corrigan and Griswold's¹ conclusion that Cooperating Teachers are one factor influencing the direction of attitudinal changes. It also supports the findings reported by Price² that student teachers' retest mean scores changed in the direction of the mean scores obtained for their Cooperating Teachers. Research reports by Dutton,³ Day,⁴ Campbell,⁵ McCullough,⁶ and Osmon⁷ indicated similar results in that attitude scores changed in a negative direction (child-centered to teacher-centered) during the student teaching

¹Corrigan and Griswold, op. cit., LVII, p. 93.

²Price, loc. cit.

³Dutton, op. cit., IV, pp. 380-382.

⁴Day, op. cit., X, p. 327.

⁵Campbell, op. cit., XXIII, p. 2433.

⁶McCullough, op. cit., XXII, p. 2302.

⁷Osmon, op. cit., XX, p. 1281.

experience. The mean MTAI scores of the sample used by Day were significantly lower (teacher-centered, traditional versus child-centered, progressive) immediately after the student teaching experience. Troisi,¹ however, found no significant relationship between the MTAI scores of the student teachers and scores made by their Cooperating Teachers. It is particularly interesting and significant to note that the findings of this study coincide almost exactly with those reported by McCullough. Both studies found that the student teachers' attitudes changed in a positive direction during the period of intensive or to use McCullough's terminology "accelerated" professional education courses, and then shifted in a negative direction during the student teaching period.

9) Hypothesis 15 was rejected. The obtained mean scores in November for all seven sections of elementary and secondary student teachers shifted from their obtained mean scores in September in the direction of the scores of their respective General Supervisors. It is noteworthy that the obtained mean scores for six of the seven sections moved in the direction of greater progressivism with only one moving in the direction of traditionalism.

10) The above findings indicate that the less progressive educational attitudes of elementary and secondary

¹Troisi, op. cit., XX, p. 509.

students when considered as single groups shifted in the direction of the more progressive attitudes of the General Supervisors during the seven weeks of instruction in professional education. For one-half of the secondary students the change was significant. This finding confirms those reported by Major,¹ Boldt and Stroud,² Jones,³ and Bugelski and Lester,⁴ all of whom reported attitudinal shifts from conservatism toward greater liberalism following various forms of course instruction.

11) The obtained mean score of the 39 primary level student teachers was more progressive than the obtained mean score of the 18 intermediate level students. The mean scores of the Social Science and the Art students indicated the most progressive attitudes of the secondary student teachers. Science, Mathematics and Music majors scored the least progressive. These findings closely parallel those of Sandgren and Schmidt⁵ who reported that the attitude scores of the secondary students in their sample increased the greatest amount when grouped according to the teaching fields they intended to enter. However,

¹Major, op. cit., LXIV, pp. 174-175.

²Boldt and Stroud, op. cit., XXV, pp. 611-619.

³Charles J. Jones, op. cit., XXXVIII, pp. 283-292.

⁴Bugelski and Lester, op. cit., pp. 319-332.

⁵Sandgren and Schmidt, op. cit., pp. 673-680.

they found that the elementary group had the higher initial and final scores. The findings of this study concur with those reported by Sandgren and Schmidt with one exception, the elementary group did not have the higher mean score. The difference between the two mean scores, however, was extremely slight. Boldt and Stroud¹ and Bugelski and Lester² reported that students in their sample majoring in the Social Sciences tended to be more liberal than those majoring in any of the other fields. Data from this study revealed a similar tendency among the Social Science majors. This data also revealed Science majors to be the least progressive; a finding which contradicts Jones³ who reported that the Science majors in his sample tended to be the most liberal while the Social Science majors were the most conservative.

Conclusions and Implications

Based on the results of the analyses of the data with consideration for the limitations of the study the following conclusions and implications were suggested.

A primary objective of teacher education programs, theoretically at least, is the development of progressive

¹Boldt and Stroud, loc. cit.

²Bugelski and Lester, loc. cit.

³Charles J. Jones, loc. cit.

attitudes toward educational issues. At Kansas State College of Pittsburg, the findings of this study indicate that this major goal is not being effectively achieved, and at least raises the question of how well it is being accomplished by similar teacher education programs in other institutions.

Based on the findings of this study there seem to be two major causes for this ineffective goal achievement at Kansas State College of Pittsburg. In the first place, none of the General Supervisors who taught the professional education courses, were highly progressive; one, in fact, was less progressive than the students and appeared to influence his students to modify their educational attitudes toward traditionalism since their scores changed in that direction. The other six General Supervisors were more progressive than the students whom they taught, and the students' educational attitudes became more progressive following their instruction. This shift toward progressivism, however, was very slight which is not surprising in view of the fact that the General Supervisors were only moderately progressive.

Secondly, and more importantly, the Cooperating Teachers held educational attitudes which were more traditional than those of the students, and under their supervision the students changed toward traditionalism, a change which was in direct opposition to one of the major goals of

the teacher education program. Thus, the student teaching experience in the public schools seems to have negated or cancelled out the progress made on campus during the period of instruction in professional education. The result of this shifting first in one direction and then in the opposite direction is that the educational attitudes of the students at the beginning of the semester were remarkably similar to their attitudes at the end of the semester. In fact, if only these two sets of scores were compared, one would conclude that there had been virtually no change, particularly for the elementary group.

Relative to educational attitudes, these findings suggest that the objectives of Phase I and Phase II of the Professional Semester at Kansas State College of Pittsburg should be more congruent. Possibly, this need for increased congruence between the goals of the professional education courses and the student teaching programs in teacher education exists in other colleges and universities responsible for the education of teachers. The findings also suggest that actual classroom teaching in the public schools may be a factor influencing teachers and prospective teachers to change from a progressive to a more traditional viewpoint. The implications of this are twofold. (1) The formation of progressive educational attitudes during the period of professional education course work may be unrealistic. (2) On the other hand, if the premise is accepted that progressive

educational attitudes are related to effective teaching, then the widely accepted notion that student teaching is the most valuable part of teacher education becomes highly questionable. In either case, it would seem that programs of teacher education may need to undergo some rather extensive revisions.

It is interesting to note that in every instance during the semester the educational attitudes of the students changed in the direction of the teacher who happened to be supervising them at a given time. During the period of instruction in professional education courses, the students' educational attitudes changed in the direction of those held by their General Supervisors. Then, during the period of practice teaching, the students changed in the direction of their Cooperating Teachers. This appears to have highly significant implications relative to the teacher as a factor influencing attitudinal changes. It suggests that the teacher has a definite impact upon attitude formation.

The elementary students' educational attitudes were extraordinarily similar to those of the secondary students at all times during the semester. In comparing the Cooperating Teachers, it was found that the secondary Cooperating Teachers' educational attitudes were not significantly different from those of elementary Cooperating Teachers. It appears that educational attitudes do not provide a basis

for differentiating between elementary and secondary teachers and prospective teachers.

The educational attitudes of the primary level student teachers were more progressive than those of the student teachers at the intermediate level. The data for the secondary group revealed that the educational attitudes of Social Science and Art student teachers were more progressive than the secondary student teachers in the other eight subject matter areas. The Science, Music, and Mathematics student teachers were the least progressive. The variation in obtained mean scores for students in the ten subject matter areas might indicate that the philosophy, subject matter, or practices in a particular field structures the educational attitudes of specialists in that area.

Recommendations for Further Research

On the basis of experiences gained and problems encountered while conducting the present research, the following recommendations are suggested for future research in the area of educational attitudes.

- 1) A follow-up study should be made of these students to determine whether or not their educational attitude scores shift again when they are engaged in full-time teaching.

- 2) A research study should be undertaken to determine the relationship between success and educational attitudes.

3) A similar study should be made of a sample with comparable subgroups in the subject matter areas to determine norms for educational attitudes.

4) A survey study should be carried out to determine the relationship between the philosophy of the school system and educational attitudes of the teachers in the system.

5) Measurement research should be undertaken to develop an indirect technique for the assessment of educational attitudes which would give a valid measurement of the attitudes actually held by an individual.

6) Research should be conducted to determine the relationship existing between educational innovations and the faculty's educational attitudes in a given school.

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APPENDIX A
INSTRUMENT USED IN THE STUDY

EDUCATION SCALE VI

Instructions: Given below are 46 statements on educational ideas and problems about which we all have beliefs, opinions, and attitudes. We all think differently about such matters, and this scale is an attempt to let you express your beliefs and opinions. Respond to each of the items as follows:

Agree Very Strongly:	+3
Agree Strongly:	+2
Agree:	+1
Disagree Very Strongly:	-3
Disagree Strongly:	-2
Disagree:	-1

For example, if you agree very strongly with a statement, you would write +3 on the short line preceding the statement, but if you should happen to disagree with it, you would put a -1 in front of it. Respond to each statement as best you can. Go rapidly but carefully. Do not spend too much time on any one statement; try to respond and then go on.

- _____ 1. Schools of today are neglecting the three R's.
- _____ 2. The backbone of the school curriculum is subject matter; activities are useful mainly to facilitate the learning of subject matter.
- _____ 3. Teaching should be based on the present needs of the child.
- _____ 4. The American public school should take an active part in stimulating social change.
- _____ 5. The traditional moral standards of our culture should not just be accepted; they should be examined and tested in solving the present problems of students.
- _____ 6. The curriculum should contain an orderly arrangement of subjects that represent the best of our cultural heritage.
- _____ 7. The healthy interaction of pupils one with another is just as important in school as the learning of subject matter.

- _____ 8. The mind of the child must be well-trained if it is to perform its function properly later in life.
- _____ 9. Children should be allowed more freedom than they usually get in the execution of learning activities.
- _____ 10. Right from the very first grade, teachers must teach the child at his own level and not at the level of the grade he is in.
- _____ 11. Learning is essentially a process of increasing one's store of information about the various fields of knowledge.
- _____ 12. Many schools waste time and money on fads and frills: activity programs, driver education, swimming pools, social services, and the like.
- _____ 13. Education and educational institutions must be sources of new social ideas; education must be a social program undergoing continual reconstruction.
- _____ 14. The learning of proper attitudes is often more important than the learning of subject matter.
- _____ 15. Learning experiences organized around life experiences rather than around subjects is desirable in our schools.
- _____ 16. It is essential for learning and effective work that teachers outline in detail what is to be done and how to go about it.
- _____ 17. The true view of education is so arranging learning that the child gradually builds up a storehouse of knowledge that he can use in the future.
- _____ 18. Teachers need to be guided in what they are to teach. No individual teacher can be permitted to do as he wishes, especially when it comes to teaching children.
- _____ 19. Emotional development and social development are as important in the evaluation of pupil progress as academic achievement.

- _____ 20. It is more important that the child learns how to approach and solve problems than it is for him to master the subject matter of the curriculum.
- _____ 21. Learning is experimental; the child should be taught to test alternatives before accepting any of them.
- _____ 22. The curriculum consists of subject matter to be learned and skills to be acquired.
- _____ 23. Each subject and activity should be aimed at developing a particular part of the child's makeup: physical, intellectual, social, moral, or spiritual.
- _____ 24. Teachers should encourage pupils to study and criticize our own and other economic systems and practices.
- _____ 25. Since life is essentially a struggle, education should emphasize competition and the fair competitive spirit.
- _____ 26. True discipline springs from interest, motivation, and involvement in live problems.
- _____ 27. We should fit the curriculum to the child and not the child to the curriculum.
- _____ 28. The organization of instruction and learning must be centered on universal ideas and truths if education is to be more than passing fads and fancies.
- _____ 29. Teachers should keep in mind that pupils have to be made to work.
- _____ 30. Education and educational institutions must be sources of new social ideas.
- _____ 31. Teachers should be free to teach what they think is right and proper.
- _____ 32. Schools should teach children dependence on higher moral values.
- _____ 33. What is needed in the modern classroom is a revival of the authority of the teacher.

- _____ 34. It is unrealistic to expect education to be like real life; it is more a preparation for life.
- _____ 35. One of the basic purposes of education is to conserve and transmit the values and standards of the society of which it is a part.
- _____ 36. The goals of education should be dictated by children's interests and needs, as well as by the larger demands of society.
- _____ 37. Subjects like communism and capitalism should be studied in the public schools.
- _____ 38. The modern public school is sacrificing too much of our cultural heritage in its preoccupation with life-adjustment and group living.
- _____ 39. One of the big difficulties with modern schools is that discipline is often sacrificed to the interests of children.
- _____ 40. Subjects that sharpen the mind, like mathematics and foreign languages, need greater emphasis in the public school curriculum.
- _____ 41. Children should be taught that all problems should be subjected to critical and objective scrutiny, including religious, moral, economic, and social problems.
- _____ 42. The movement to substitute "activities" for subjects in the curriculum of the modern school will operate against the best interests of American education.
- _____ 43. Standards of work should not be the same for all pupils; they should vary with the pupil.
- _____ 44. Children need and should have more supervision and discipline than they usually get.
- _____ 45. Education is not so much imparting knowledge as it is encouraging and prompting the child to use his potentialities for learning.
- _____ 46. In a democracy, teachers should help students understand not only the meaning of democracy but also the meaning of the ideologies of other political systems.

APPENDIX B
STATISTICAL DATA

TABLE 12
OBTAINED MEAN EDUCATIONAL ATTITUDE SCORES AND
STANDARD DEVIATIONS FOR EACH SECTION
OF STUDENT TEACHERS IN SEPTEMBER

Group	N	fd	fd ²	$\bar{X}$	SS	sd
I-SE	18	55.3	256.44	3.07	86.55	2.26
II-SE	19	53.1	180.95	3.80	32.55	1.34
III-SE	20	70.2	300.46	3.51	54.06	1.69
IV-SS	29	88.1	368.73	3.04	101.09	1.90
V-SS	30	80.4	311.08	2.68	95.61	1.82
VI-SS	30	91.9	353.13	3.06	71.61	1.57
VII-SS	31	70.9	224.39	2.29	62.23	1.44

TABLE 13
OBTAINED MEAN EDUCATIONAL ATTITUDE SCORES AND
STANDARD DEVIATIONS FOR EACH SECTION
OF STUDENT TEACHERS IN NOVEMBER

Group	N	fd	fd ²	$\bar{X}$	SS	sd
I-SE	18	68.8	301.30	3.82	38.33	2.25
II-SE	19	48.1	183.75	2.53	61.97	1.86
III-SE	20	78.1	458.11	3.90	153.13	2.83
IV-SS	29	91.4	414.78	3.15	126.71	2.22
V-SS	30	103.8	393.60	3.46	34.46	1.08
VI-SS	30	121.0	606.90	4.03	118.87	2.02
VII-SS	31	82.8	309.30	2.67	88.14	1.71

TABLE 14
OBTAINED MEAN EDUCATIONAL ATTITUDE SCORES AND
STANDARD DEVIATIONS FOR EACH SECTION
OF STUDENT TEACHERS IN JANUARY

Group	N	fd	fd ²	$\bar{X}$	SS	sd
I-SE	18	47.0	205.18	2.61	82.46	2.20
II-SE	19	62.5	276.19	3.29	70.60	1.98
III-SE	20	68.8	274.40	3.44	37.73	1.41
IV-SS	29	83.5	330.43	2.88	90.01	1.76
V-SS	30	99.3	454.41	3.31	125.73	2.08
VI-SS	30	105.2	486.28	3.51	117.38	2.01
VII-SS	31	91.8	366.93	2.96	95.08	1.78

TABLE 15
OBTAINED MEAN EDUCATIONAL ATTITUDE SCORES AND
STANDARD DEVIATIONS FOR EACH SECTION
OF COOPERATING-TEACHERS

Group	N	fd	fd^2	$\bar{X}$	SS	sd
I-CE	18	55.7	267.07	3.09	94.71	2.36
II-CE	19	47.2	201.06	2.48	83.81	2.15
III-CE	20	22.1	72.79	1.11	48.37	1.59
IV-CS	29	55.6	231.46	1.92	128.41	2.14
V-CS	30	55.2	183.08	1.84	81.51	1.68
VI-CS	30	63.6	304.00	2.12	169.17	2.41
VII-CS	31	52.4	281.18	1.69	192.61	2.53

TABLE 16
SUMMARY OF t-VALUES BETWEEN OBTAINED MEAN
EDUCATIONAL ATTITUDE SCORES
OF STUDENT TEACHERS

Group	Sept.-Nov.	Nov.-Jan.	Sept.-Jan.
I-SE	1.17	.335	.62
II-SE	.35	.84	.64
III-SE	.53	.66	.014
I-II-III (SE)	.76	.76	.014
IV-SS	.21	.53	.33
V-SS	2.202*	.35	1.25
VI-SS	2.07*	1.00	.94
VII-SS	.96	.65	.18
IV-V-VI-VII (SS)	.78	.209	.55

*Significant at .05 level.