CONFIDENCE, ATTITUDE, DESIRE TO TEACH, AND AN EARLY CLINICAL EXPERIENCE

Dissertation for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
EDWIN RALPH SICKMILLER
1973

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ABSTRACT

CONFIDENCE, ATTITUDE, DESIRE TO TEACH,
AND AN EARLY CLINICAL EXPERIENCE

By

Edwin Ralph Sickmiller

The purpose of this study was to explore the relationship of confidence level for teaching, attitude toward teaching, and desire to teach with an early clinical experience in an elementary classroom. Evidence was sought to demonstrate whether students showed a positive change, a negative change, or no change in terms of confidence, attitude, and desire to teach during the clinical course.

Two groups of thirty students each were randomly selected from Exploring Elementary Teaching, a clinical course taught at Michigan State University during Spring Term, 1973. These two groups were then randomly assigned to one of two conditions in the study. One group, the EET Experimental Group, was randomly assigned to receive the pretests, treatment, and posttests. The other group, the EET Posttest-only Group was randomly assigned to receive the treatment and posttests.

The treatment consisted of the entire set of activities of Exploring Elementary Teaching (EET), a course which involves weekly seminars and one day per week in an elementary classroom as a teacher aide. The pretests and posttests consisted of the Confidence Level Inventory for Teaching (CLIT), a self-measure of confidence level for teaching; the

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Minnesota Teacher Attitude Inventory (MTAI), a measure of attitude toward teaching; and the Desire to Teach Form (DT), a measure of the extent of a student's desire to teach elementary school.

The study was extended to Curriculum, Methods, and Materials (CMM), an advanced clinical course at Michigan State University, in which approximately 70% of the students have taken EET previously. The purpose of the extension was to investigate the influence of EET on CMM students, in terms of the stability of their desire to teach elementary school. Consequently, CMM students were assigned to one of two groups, those who had had EET (the CMM Experimental Group) and those who had not had EET (the CMM Control Group). Both groups were pretested and posttested with DT to determine the extent of change during CMM in their desire to teach elementary school.

Five hypotheses were constructed to set the direction of the investigation. They are listed here in question form, along with the method of testing and the results of each.

I. Are there differences between posttest results of the EET Experimental Group and the EET Posttest-only Group?
Method of testing: Multivariate one-way ANOVA.
Results: No significant differences.

II. Are there differences between pretest and posttest results in terms of confidence, attitude, and desire to teach?
Method of testing: Multivariate one-way ANOVA.
Results: Significant increase in confidence; no significant differences for attitude or desire to teach.

III. Are there differences between pretest and posttest variances in terms of desire to teach for students taking EET?
Method of testing: t-Test.
Results: No significant difference.

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IV. Are there differences between pretest and posttest variances in terms of desire to teach for students taking CMM who have had EET?
Method of testing: t-Test.
Results: No significant difference.

V. Are there differences between pretest and posttest variances in terms of desire to teach for students taking CMM who have not had EET?
Method of testing: t-Test.
Results: No significant difference.

Ten demographic characteristics and their relationship to test scores were investigated to determine whether confidence, attitude, and desire to teach varied according to certain personal and situational characteristics. The ten characteristics are:

1. age
2. marital status
3. socio-economic background
4. prior contact with children
5. sex
6. college class level
7. day of the week the student participates
8. grade level in which the student participates
9. teaching style of the classroom teacher to which the student is assigned
10. relative amount of teacher aiding in which the student engages.

The most outstanding relationships are with CLIT and MTAI scores. The changes in desire-to-teach scores are negligibly small in nearly every case. The results were interpreted in the light of two important limitations: 1. relatively small sample size (e.g. for the married classification, n = 1), and 2. the inspection-of-data technique rather than statistical significance testing. Therefore, apparent relationships are considered suggestive of the need for further research. On this basis, the characteristics deserving special attention are age, marital status, college class level, and day of the week.

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Students were asked to select ten items from a list of probable clinical experiences that they thought influenced them most in their desire to teach. The responses clearly indicate that the most influential activities are those in which the student is working directly with elementary pupils.

Since there was no significant change in attitudes or in the distribution of desire-to-teach scores, and since there was a change in confidence that is questionable in terms of a realistic self-assessment, the following recommendations are made. A clinical experience should:

1. provide ample opportunity for teacher trainees to associate with children;
2. provide teaching activities primarily, rather than aide-type duties;
3. be preceded or accompanied by a theoretical exposure to teaching and learning.

CONFIDENCE, ATTITUDE, DESIRE TO TEACH, AND AN EARLY CLINICAL EXPERIENCE

By

Edwin Ralph Sickmiller

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Dedicated to

Donna, Skip, and Mark

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TABLE OF CONTENTS

TABLE OF CONTENTS--Continued

LIST OF TABLES

Figure

LIST OF FIGURES

Need for the S

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CHAPTER I

THE PROBLEM

Need for the Study

In the recent past there has been considerable dialogue regarding efforts by teacher education institutions to provide opportunity for direct partipation in schools for teacher trainees early in their professional preparation. Increased interest is evident in the programs of several institutions which make it possible for their prospective teachers to get into the schools for two and even three sets of experiences prior to student teaching. The BSTEP program at Michigan State University is a good example.[1] The Association of Teacher Educators, at their 1973 annual meeting, planned eleven of their conference sessions with reference to field-based experiences.[2]

The emphasis of the present study will relate to the need and utility of early clinical experiences in teacher preparation programs. It is not uncommon for people at the student teaching phase of their education to discover that for one reason or another they do not wish

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[1] Behaviorial Science Elementary Teacher Education Program, Final Report, Project No. 8-9025, Contract No. OEC-0-8-089025-3314 (010), Michigan State University, East Lansing: October 1968.

[2] Association of Teacher Educators, 53rd Annual Meeting, Competency-Based Teacher Education, February 1973.

to continue their professional preparation. In his discussion of consonance and dissonance in the student teaching experience, Elwell[3] suggests that retreating from the program is one of the alternatives a student has when he faces a conflict-producing situation. The thesis of this study is that there are at least three identifiable and measurable characteristics that are often related to the persistence of a student during his training. These three are: 1. confidence for teaching, 2. attitude toward teaching, and 3. desire to teach. The definitions given below will be used throughout this study.

Confidence for teaching is defined by Smith[4] as "Belief in ones ability to teach. This would include a basic grasp of the subject area(s) taught and adequate methods for teaching the subject(s)." Confidence level for teaching, as it relates to early clinical experiences, may or may not be based on a realistic assessment of ones ability. Inadequate understanding of teaching and learning might allow a person to have an unrealistically high level of confidence for teaching.

Attitude is defined by Marino[5] as "A relatively enduring set of beliefs about an object or class of objects which predisposes a person

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[3]Albert R. Elwell, "Attitude Change as a Function of Differential Student Teaching Placement," Unpublished Doctoral Dissertation, Michigan State University, 1964, pp. 6-7.

[4]Martha L. Smith, "A Study of Elementary Student Teaching Confidence in and Attitude Toward Music and Changes That Occur in a Student Teaching Experience," Unpublished Doctoral Dissertation, Michigan State University, 1969, p. 38.

[5]Ronald J. Marino, "The Effects of a Concentrated In-Service Program Designed to Improve Elementary Teachers' Attitudes Toward Children," Unpublished Doctoral Dissertation, Michigan State University, 1971, p. 14.

to respond to that object or class of objects in a consistent manner." Applied to teaching, the "object or class of objects" represents the various aspects of classroom teaching.

Desire to teach is the extent to which a person wants to teach school. Both a positive and negative aspect of desire to teach are included, i.e. the possibility of wanting to teach or not wanting to teach. A desire to teach implies a commitment to teaching as a profession.

If it can be shown that students, during an early clinical experience, make desirable changes in any of the above-mentioned characteristics, the need for early clinical experiences will be supported. Students who approach a more realistic level of confidence for teaching, a more positive attitude toward teaching, or a greater desire to teach, during their early clinical experience would typically be inclined to continue on to the next level of training. Those who move in the opposite direction would have the opportunity to make a change in their program, if they so desired, without undue loss of time, energy, and resources.

Traditionally, students have given the highest evaluation to the field-centered student teaching phase of their professional training rather than to on-campus education courses. On this basis, it is reasonable to expect the popularity of early clinical courses to be high. Therefore, the incorporation of early clinical experiences into teacher education programs is promising both in terms of their usefulness in decision-making regarding students' continuation in teacher training and in terms of student interest.

Smith et al.[6] have raised a question regarding the appropriateness of expecting early clinical experiences to stimulate self-selection for students who have not had a theoretical framework for teaching. There are programs that provide for aide-type experiences which would not require the theoretical framework that is needed for instructional teaching. Education 101A--Exploring Elementary Teaching, hereafter referred to as EET, is an early clinical program of this type which is provided at Michigan State University. EET does not meet the requirement suggested by Smith because it has no selection criterion related to a theoretical framework. Students do have the opportunity, however, to participate in activities for which no theoretical framework is required. (See Table 4.9 and Appendix A for list of activities.)

The underlying motivation for this study is based on some of the assumptions for EET which are noted in the Report of the Committee for Recommending Student Selection Criteria and Procedures for Elementary Teacher Certification Programs,[7] and listed below. It is assumed that EET will:

1. help to identify those students who are least likely to succeed in teaching;
2. enable the student to develop an awareness of his enthusiasm and competence for classroom teaching, or lack thereof;

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[1] E. Brooks Smith, Richard E. Collier, Dorothy M. McGeoch, and Hans C. Olsen, A Guide to Professional Excellence in Clinical Experience in Teacher Education, Executive Committee--Association for Student Teaching, February, 1970, p. 5.

[2] Report of the Committee for Recommending Student Selection Criteria and Procedures for Elementary Teacher Certification Programs, Michigan State University, College of Education, Department of Elementary and Special Education, and College of Human Ecology, Department of Family and Child Science, Unpublished, March 1971, p. 1.

3. provide useful information to both the student and faculty in terms of being able to evaluate the student's performance in a variety of situations; and

4. be a good predictor of future teaching competence.

Even though it is not explicitly stated, the implication in the preceding assumptions is that EET is viewed as an advance organizer prior to the actual professional educational training of the student.[8] It should be made clear, however, that the emphasis of the present study has a career focus rather than an advance organizer orientation. In keeping with the stated purposes of EET, i.e. "informing students of their potential for teaching, and . . . selecting candidates to prepare for teaching,"[9] attention will be given to the identification of the student's confidence level for teaching, his attitude toward teaching, and the extent of his desire to teach, as these factors relate to the student's potential for continuing in teacher preparation.

Purpose of the Study

The present study focuses on EET, a pre-student teaching clinical teacher education course which has been taught at Michigan State University for the past one and one-half years. The purpose of the study is to answer the following questions.

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[8] Assessment of Clinical Teacher Education Experiences, Michigan State University, College of Education, Unpublished, February, 1973, p. 1.

[9] Report of the Committee for Recommending Student Selection Criteria and Procedures for Elementary Teacher Certification Programs, op. cit., p. 3.

1. What evidence is there to show whether students increase, decrease, or remain the same in terms of their confidence level for teaching, during the time they take EET?

2. What evidence is there to show whether students become more positive, more negative, or remain the same in terms of their attitude toward teaching, during the time they take EET?

3. What evidence is there to show whether students increase, decrease, or remain the same in terms of their desire to teach elementary school, during the time they take EET?

If evidence can be gathered to show significant and desirable changes in terms of the three characteristics listed above, it would be indicative of the value of EET in terms of its usefulness to:

1. the pre-service teacher in aiding him in his decision whether or not to continue in elementary education;

2. those at Michigan State University who staff the course and who are responsible for making judgments regarding the feasibility of any given student's continuing in elementary education; and

3. public school personnel in their decision regarding future utilization of their classrooms as sites for field experiences.

There are certain demographic characteristics that may have some relationship to the answer to these three basic questions. The number of such characteristics that could exert some influence is large. Ten have been investigated individually to see what effect, if any, they exhibit. The ten independent variables are:

1. age
2. marital status
3. socio-economic background
4. prior contact with children
5. sex
6. college class level
7. day of the week the student participates
8. grade level in which the student participates
9. teaching style of the classroom teacher to which the student is assigned
10. relative amount of teacher aiding in which the student engages.

Another aspect of EET is explored by researching the following question: Do students who take another clinical course, e.g. Education 321A--Curriculum, Methods, and Materials--Elementary Education, hereafter referred to as CMM, without first having taken EET, show a shift in the intensity of their desire to teach elementary school, during the time they take the course? An affirmative answer would support the need for some type of early experience that would enable students to recognize the degree of their desire to teach. As indicated previously, such recognition might prove advantageous to the student in terms of his early choice of a career. This question is used to obtain evidence regarding the usefulness of EET as a screening device.

Assumptions of the Study

The validity of the interpretation of results depends partially on an understanding of the foundations on which the study rests. In order to provide a perspective for interpretation of the results of this study, the following assumptions are set down. It is assumed that:

1. the nature of the measurements in the areas of confidence level for teaching, attitude toward teaching, and desire to teach is a good predictor of success in a teacher training program;

2. the relationship of the responses on the measurements of the three dependent variables, i.e. confidence level for teaching, attitude toward teaching, and desire to teach elementary school, to EET provides a sound basis for decision-making regarding the student's continuance in elementary education;

3. confidence level for teaching, attitude toward teaching, and desire to teach elementary school are adequately measured by the Confidence Level Inventory for Teaching (CLIT), the Minnesota Teacher Attitude Inventory (MTAI), and the Desire to Teach Form (DT), respectively;

4. the typical activities in which students engage during EET require no theoretical framework for teaching.

Limitations of the Study

The assumptions listed in the previous section are set in the framework of the limitations of the study. Awareness of the following limitations is necessary for proper understanding of the results.

1. Interpretation of the results of the study are subject to the previously stated assumptions.
2. The study is exploratory in nature, therefore no attempt is made to establish causative relationships.
3. The focus is on decision-making in terms of the student's continuation in elementary education.
4. There is no attempt to study EET as an advance organizer for future teacher preparation.
5. Since students must pass EET in order to be admitted to the elementary education program, an attempt to make themselves "look good" may be reflected in the test scores.

Hypotheses

The hypotheses are stated here in broad research form. Appropriate explanation follows after the completed list.

I. There is no effect of the pretest on the posttest scores in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school for students taking EET.

II. There is a difference between pre- and posttest scores in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school for students taking EET.

   a. There is a decrease from pre- to posttest in the scores of confidence level for teaching.

   b. There is an increase from pre- to posttest in the scores of attitude toward teaching.

c. There is an increase from pre- to posttest in the scores of desire to teach elementary school.

III. The posttest variance is greater than the pretest variance in terms of desire to teach elementary school for the students taking EET.

IV. There is no difference between pre- and posttest variances in terms of desire to teach elementary school for the students taking CMM who have had EET.

V. The posttest variance is greater than the pretest variance in terms of desire to teach elementary school for the students taking CMM who have not had EET.

Hypothesis I is designed to detect a testing effect that may occur between the pretest and the posttest. It is based on the question: Do students who take a pretest and a posttest respond differently on the posttest than do students who take the posttest only? If such an effect should occur, further analyses would include the posttest scores of the group which takes the posttest only rather than those of the group which takes the pretest and the posttest. Evidence of a testing effect can be interpreted to mean that the pretest serves as an advance organizer, suggesting the need for further research in the use of a pretesting program. The results may have implications for instructor methodology both in EET and in similar courses at Michigan State University and at other institutions.

The design of Hypothesis II is intended to show whether or not there is a treatment main effect during EET in terms of the students' confidence level for teaching, attitude toward teaching, and desire to teach elementary school. An overall effect would indicate that there is an individual effect shown by at least one of the three measures.

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The confidence level measure may be related to the amount of information the student has about classroom teaching. These scores may be expected to drop during the EET experience, because the student hopefully will approach a realistic perception of the act of teaching.

Changes in attitude and desire to teach would logically be consistent with each other. For example, a positive change in attitude would likely be accompanied by an increase in desire to teach.

In regard to Hypotheses III, IV, and V, if desire to teach is measured on a one to five scale, with number one being the greatest desire to teach, typical pre-course scores would tend to concentrate in the middle and upper ranges. Post-course scores, by contrast, may show a wider distribution, reflecting both positive and negative changes in the desire to teach. In such a case, the means could be equal, but the variances would be different. A pre-post change in variance would reflect a shift in the intensity of desire to teach.

Hypotheses IV and V are designed to relate EET to CMM. If EET enables students to determine the extent of their desire to teach elementary school, then those who take both courses would have a relatively strong desire to teach which would not change significantly during CMM. By contrast, those students who take CMM without first having taken EET, would be likely to experience a change in their desire to teach as they take CMM. Examining this relationship will provide some insight into the usefulness of EET as an aid in making career decisions.

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Overview

Chapter I presents the problem to be studied. The discussion is set under the following headings: the need for the study, purpose, assumptions, limitations, and the hypotheses that set the direction of the study. The final section contains an overview of the thesis.

Chapter II contains a review of the literature relating to clinical experiences in teacher education. The following headings provide the format: early clinical experiences in teacher education, confidence level for teaching, attitude toward teaching, desire to teach, and summary.

Chapter III describes the design of the study. The following headings are used: definitions, population, sample, hypotheses, design, procedure, measurements, and summary.

Chapter IV presents an analysis of the data. The format includes the following headings: analytical instruments, hypotheses, summary of data collected, and a chapter summary.

Chapter V includes a summary and the conclusions of the study. The sections include a summary of the study, conclusions drawn from the data, implications for change, and recommendations for further research.

CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature related to early clinical experiences in teacher education is presented in this chapter. The format of presentation begins with a discussion of early clinical experiences in teacher education in general, a definition, the need, and pros and cons. This is followed by a consideration of the three dependent variables of the present study: confidence level for teaching, attitude toward teaching, and desire to teach. Finally, a summary of the literature is presented.

Early Clinical Experiences in Teacher Education

In the development of teacher education in the United States, pre-student teaching clinical experiences received very little attention until the early fifties when the American Association of Colleges for Teacher Education published a comprehensive report which defines and describes "professional laboratory experiences."[1] The need for direct learning experiences at all maturity levels is emphasized.

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[1] American Association of Colleges for Teacher Education, Revised Standards and Policies for Accrediting Colleges for Teacher Education of the American Association of Colleges for Teacher Education, Oneta, New York: AACTE, 1951, pp. 20-32.

Sinclair,[2] in his review of literature related to professional laboratory experiences, demonstrates that the AACTE report provided the impetus needed for the implementation of such teacher education programs.

An important distinction is made between professional laboratory experiences and student teaching, as a subgroup of the former.

> Professional laboratory experiences include all those contacts with children, youth, and adults which make a direct contribution to an understanding of individuals and their guidance in the teaching-learning process.
>
> Student teaching is a period of guided teaching when the student takes increasing responsibility for guiding the school experiences of a given group of learners over a period of consecutive weeks.[3]

Of special interest to the present study is the lack of reference to pre-theoretical clinical experiences or to such experiences detached from education courses. Even though the need for clinical experiences is recognized for teacher trainees at all maturity levels and throughout the period of college study, the position of the AACTE report is that such experiences should be related to education courses or to professionally-treated content courses.

The Association for Student Teaching issued a publication in 1970 which supports the concept of blending theory with practice in early clinical experiences. It calls for the "establishment of realistic and simulated experimental settings and the planning of coordinated clinical

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[2]William W. Sinclair, "An Analysis of Three Pre-Student Teaching Experiences in the Preparation of Elementary School Teachers," Unpublished Doctoral Dissertation, Michigan State University, 1961, p. 14.

[3]American Association of Colleges for Teacher Education, op. cit., p. 21.

sessions that examine teaching episodes in terms of educational theory. . . ."[4] Smith et al.,the Editing Committee of the AST Guide, emphasize the need for relating the various parts of the teacher education program. He suggests the use of clinical experiences to illustrate an educational principle or to test theory. The effectiveness of the clinical experiences is dependent upon the extent to which the relationships among theory, principles, and practice are made clear.[5]

A definition of "clinical experiences" is offered by the AST in the publication just referred to. Its several elements include:

1. Continuous examination of educational possibilities under a variety of situations.
2. Experimentation, either in the school or in simulated laboratory setting.
3. College and school cooperation, to specify performance expectancies and evaluation.
4. Cooperative planning and administration of clinical sessions.
5. Theory-related experiences.
6. Pooling of curricular resources from college, school, and related organizations.[6]

A Guide to Professional Excellence in Clinical Experiences in Teacher Education, the publication from which the ideas expressed above are taken, is presented as an extension and amplification of the standards for accreditation by the National Council for Accreditation of Teacher Education. Twelve "Guidelines to Excellence" are set down for the benefit of institutions who are planning a clinical experience program or

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[4]E. Brooks Smith, Richard E. Collier, Dorothy M. McGeoch, and Hans C. Olsen, A Guide to Professional Excellence in Clinical Experiences in Teacher Education, Executive Committee--Association for Student Teaching, February 1970, pp. 1-2.

[5]Ibid., p. 15.

[6]Ibid., pp. 1-2.

who are seeking accreditation by NCATE. The Guidelines are listed below without the explanatory questions which accompany them in the original text.

1. Clinical experiences in teacher education consist of laboratory experiences and a practicum including associate, intern, and pretenure teaching.

2. Specific opportunities are provided for analytical study of teaching and for critical examination of the roles of the teacher and the functions of the schools in a variety of settings.

3. Advanced clinical experiences, cooperatively developed and maintained by schools, colleges, professional organizations, and the state education department, provide for differentiated career opportunities.

4. Clinical experiences are functionally and structurally an integral part of all aspects of the professional studies component of the teacher education program.

5. Clinical experiences include direct and simulated activities designed to provide maximum flexibility and individualization in selection and scheduling.

6. Clinical experiences in the college class, the teacher education laboratory, and the affiliated schools and community agencies are guided by carefully selected and fully qualified college, school, and/or community personnel.

7. The responsibilities of the members of the supervisory team are clearly defined with respect to (a) the individualized teaching of clinical students; (b) the time allotted to carry out those responsibilities; and (c) the compensation, benefits, and privileges which may be expected.

8. Representatives from colleges and schools and from related professional organizations, community agencies, and the state education department are involved, on a partnership basis, in planning, executing, and evaluating programs of clinical experiences.

9. Locally appropriate interinstitutional structures (school-college-community) are established for implementation of cooperatively developed programs of clinical experiences.

10. Students are involved in decision making for the clinical experience program.

11. The organization and administration of the program of clinical experiences promote the efficient implementation of all program elements.

12. Means of regular objective assessment and ongoing evaluation of the process and product of clinical experiences are developed and tested.[7]

Thirty years ago the need for work experiences early in teacher training was recognized. Stroh et al.[8] reported a teacher survey in which there was a call for classroom work experience as a means of selecting teacher candidates.

At about the time of the AACTE report (1951), the need for clinical experiences prior to student teaching was recognized in the State of Michigan. Gates and Currie[9] reported the use of pre-student teaching professional laboratory experiences, even though they were employed on a very limited basis.

Andrews[10] observed the need for broad and functional pre-service training for teachers because of the complexities of the demands on the beginning teacher. He points out, however, that passive classroom observation will do little good in the effort to adequately train teachers.

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[7] Ibid., pp. 6-8.

[8] M. Margaret Stroh, Ida A. Jewett, and Vera M. Butler, Better Selection of Better Teachers, Washington, D. C.: The Delta Kappa Gamma Society, 1943, p. 98.

[9] Mary Frances Gates and Donald M. Currie, "Survey of Supervision of Student Teaching in Michigan," Journal of Educational Research, 46: 497-511, March, 1953.

[10] Leonard O. Andrews, "Experimental Programs of Laboratory Experiences in Teacher Education," The Journal of Teacher Education, 1: 259-267, December, 1950.

Levine[11] reports an experiment in which college freshmen participated in office routines and other non-teaching activities. The evaluation by participating students and public school personnel was generally favorable. Juniors who engaged in mere teaching-type experiences showed a concern for lack of knowledge about the clerical responsibilities of teachers. Levine states, "Laboratory experience should . . . include first-hand acquaintance with as many facets of the school activities as possible, as well as with the educational needs and resources of the community."[12]

Caution must be exercised in the interpretation of Levine's results. Her first follow-up sample included only thirty of the original fifty students. There may be basis for suspecting that the 40% mortality rate reflects less positive results than those obtained from the follow-up group.

The popularity of professional laboratory experiences during the late fifties and early sixties is indicated in a report by Ingle and Robinson.[13] Their survey showed that studies regarding observation activities in teacher education were not concerned with the value of such experiences but rather with how to accomplish them better.

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[11]Madeline S. Levine, "Extending Laboratory Experiences: Part II," The Journal of Teacher Education, 12:29-35, March, 1961.

[12]Madeline S. Levine, "Extending Laboratory Experiences," The Journal of Teacher Education, 9:379-382, December, 1958.

[13]Robert B. Ingle and Edward W. Robinson, "An Examination of the Value of Classroom Observation for Prospective Teachers," The Journal of Teacher Education, 16:456-460, December, 1965.

Hunter and Amidon[14] urge experimentation and innovation in six major areas of teacher training. The first of these is a direct clinical experience program throughout the entire sequence of training. They also encourage varying approaches to full-time classroom contact with children.

Using the case study approach, Niemeyer[15] observed that among his subjects, those who had a better concept of the elementary student were those who had engaged in regular, direct observation of elementary school students. As further support for early clinical experiences, he states, ". . . an individual who repeatedly saw a child functioning in a classroom would develop a better concept of the child's reading limitations, motor skills and interest span, which would, in turn, tend to support the theory that pre-service teachers should have clinical exposure throughout their training period."[16]

Gallegos[17] suggests that the public schools are probably the most influential of institutions in terms of the determination of teacher education programs. He encourages a "shifting of locale for the major portion of training programs from the colleges and universities to the public schools."

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[14]Elizabeth Hunter and Edmund Amidon, "Direct Experiences in Teacher Education: Innovation and Experimentation," The Journal of Teacher Education, 17:282-289, Fall, 1966.

[15]Roger C. Niemeyer, "Simulation-Gaming in Pre-Service Elementary Education," Unpublished Doctoral Dissertation, Michigan State University, 1972, p. 85.

[16]Ibid., p. 129.

[17]Arnold M. Gallegos, "Teacher Training: The Realities," The Journal of Teacher Education, 23:43-46, Spring, 1972.

In 1969, Monson[18] reviewed United States Office of Education projects for improving and updating elementary education. His summary of the commonalities of the models developed, which includes "earlier experiences with children," is an indication of the recent trend toward the incorporation of clinical experiences in teacher education programs.

In a survey of forty-eight states and the District of Columbia, Medley[19] found the following important information regarding pre-student teaching laboratory experience programs.

1. Eighty percent of the responding teacher education institutions require a pre-student teaching field laboratory experience. This generally consists of observation and/or teacher aiding in an elementary classroom.

2. Cooperating teachers nearly always have a favorable opinion of pre-student teaching laboratory experience programs.

3. Ninety-five percent of the directors of the programs believe that pre-student teaching laboratory experience is essential to the development of elementary teachers.

Steenberger[20] surveyed students, public school teachers, principals, and college teachers to determine opinion regarding the Teacher Assistant Program of Lansing Community College. The reaction to the program is generally favorable. The consensus of the groups is that such

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[18]Jay A. Monson, "The New Models in Elementary Teacher Education," Phi Delta Kappan, 51:101, October, 1969.

[19]William A. Medley, "A Study of the Initiation and Current Practices of Elementary Education Pre-Student Teaching Laboratory Experience Programs and the Development of a Handbook," Dissertation Abstracts International, 33:3567A, January, 1973.

[20]Aaron L. Steenberger, "A Developmental Paraprofessional Program for the Education of Future Teachers Enrolled in the Two-Year Community Junior College," Dissertation Abstracts International, 33:5019A, March, 1973.

teaching-assistant experience will enhance the opportunity for students to gain psychological insight into children's behavior.

Based on his telephone survey of respondents in the State of Wyoming, Ellis[21] recommends early clinical experiences as a contributory factor to more effective student teaching. Diversity in the scope of student teaching activities should be encouraged also.

Zirbes[22] calls attention to the need for clinical experiences prior to student teaching, and she notes that they "should be in direct relation to phases of pre-service education. The desirability of arranging many of these experiences so they are functionally related to courses has been recognized."

In "A Study-Teach Program for the Preparation of Career Teachers" at George Peabody College for Teachers, three of the five underlying assumptions are of particular interest to the present study.

1. An extensive program of visitation should provide a wide variety of models of teaching for the student . . .
2. Theory and practice must be blended and balanced . . .
3. A professional sequence of experiences must be offered in a continuous series. . . .[23]

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[21]Arthur H. Ellis, "A Study of Some Aspects of the Student Teaching Program of the University of Wyoming," Dissertation Abstracts International, 33:2799A, December, 1972.

[22]L. Zirbes, Teachers for Today's Schools, Washington, D. C.: N.E.A., The Association for Supervision and Curriculum Development, 1951, p. 43.

[23]David Turney and Lewis W. Stoneking, "A Professional Sequence for the Development of Career Teachers," The Journal of Teacher Education, 16:281-285, September, 1965.

In his review of teacher education literature, Lange[24] presented the following three-point summary:

1. Theory and practice must be more closely related in order that the instructional program may achieve greater relevance.
2. There must be an interrelation between knowledge and experience in which there is a gradual exposure to classroom teaching.
3. A strong partnership should exist between the public school and the university in the instructional program for teachers.

Dyrli[25] takes a strong position in favor of clinical experiences in the teacher education curriculum as he describes the elementary education program at the University of Connecticut. He makes it clear though that simple observation and/or teacher-aide arrangements will not, in his opinion, result in anything of significant value.

A recent survey by Shuff and Shuff,[26] reveals that 85% of the colleges and universities that responded to their questionnaire have a pre-student teaching clinical experience in their elementary education program. Sixty-eight per cent of such experiences are part of another course.

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[24]Donald N. Lange, "Relevance and Accountability in a Teacher Education Program," The Journal of Teacher Education, 23:446-452, Winter, 1972.

[25]Odvard E. Dyrli, "Involving Prospective Teachers With Children--A Workable Model," The Journal of Teacher Education, 23:461-463, Winter, 1972.

[26]Marian Shuff and Robert V. Shuff, "Designed for Excellence: A Program for Laboratory Experiences," The Journal of Teacher Education, 23:215-219, Summer, 1972.

Sandefur[27] conducted a study of the relationship between a clinical experience and teacher behavior during student teaching. He found that his experimental group, by comparison with the control group, displayed more desirable behavior, used more indirect activity in the classroom, received higher grades for student teaching, and scored lower on the National Teacher Examinations. Among his conclusions, the following one is applicable to the present study.

> Behavior changes in prospective teachers can be more readily effected by programs of professional education that stress direct involvement of the prospective teacher in the teaching-learning process through meaningful laboratory experiences made relevant to content and theory.[28]

Stiles[29] has traced the development of teacher education through the last four decades. He recognizes the current emphasis on field experience, but places it in the perspective of its relationship with theoretical knowledge. He states, "Slowly the stockpile of knowledge about teaching and learning are growing, giving reassurance of the basic truth that the professional practice of teaching needs a sound base of professional theory and knowledge as well as accumulated practice--a point that is obscured by the current focus on firsthand experiences.[30]

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[27] J. T. Sandefur, "Kansas State Teachers College Experimental Study of Professional Education for Secondary Teachers," The Journal of Teacher Education, 21:386-395, Fall, 1970.

[28] Ibid., p. 395.

[29] Lindley J. Stiles, "State of the Art of Teacher Education," Journal of Educational Research, 64:387-393, May-June, 1971.

[30] Ibid., p. 387.

Using the questionnaire and interview methods, Marcum[31] gathered evaluative information regarding the pre-student teaching professional laboratory experiences of a southern university. Even though the recent graduates felt that the program had failed to meet their needs in some respects, the consensus of belief was that such a program should represent a variety of activities. They also suggested that clinical experiences should begin early in the teacher training sequence, should relate theory to practice, and should involve the student in direct learning situations.

Gannangelo[32] recommends that a variety of first-hand and simulated experiences be incorporated into the pre-student teaching phase of teacher education. These experiences, he believes, should be associated with methods courses and aligned to specific subject areas.

Robbins[33] emphasizes the experience-orientation of teacher education programs of the future. For support he refers to John Dewey[34] and his relationship of experience and education; James Bryant Conant[35] and

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[31]Walter Marcum, "A Study of Pre-Student Teaching Laboratory Experiences at a Southern University," Dissertation Abstracts International, 31:5253A, April, 1971.

[32]Duane M. Gannangelo, "The Effect of Pre-Student Teaching Experiences in Social Studies Classrooms Upon Performance in Student Teaching," Dissertation Abstracts International, 33:1563A, October, 1972.

[33]Glaydon D. Robbins, "New Preparation for Teachers," The Educational Forum, 36:99-102, November, 1971.

[34]John Dewey, The Aims of Education, New York: Mentor, 1929, p. 18.

[35]James Bryan Conant, The Education of American Teachers, New York: McGraw Hill, 1963, p. 140.

his proposal of the "clinical professor of education"; NCATE standards[36] with references to "appropriate laboratory experiences," "clinical experience in generic teaching situations," and "the practicum," a period during which theory is tested and teaching style is developed. He predicts the demise of the term "student teaching," to be replaced by a more comprehensive term, more accurately descriptive of the new blend of theory and experience in the classroom setting. He states, "The prospective teacher will move through a series of sequential experiential roles--teacher aide, participant observer, assisting teacher, associate teacher, intern teacher, extern teacher--en route to becoming a fully certified career teacher."[37]

Most writers are convinced of the value of pre-student teaching professional laboratory experiences. The citations on the following pages are representative of the authors who have expressed either support or criticism.

Smith et al.[38] have declared that the chief aim of clinical teacher education is to confirm personalized role conceptions and to incorporate these into an individual teaching style. The sequence for accomplishing this ideal involves exploring, playing, simulating, examining, attempting, and finally assuming the teacher's role.

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[36]National Council for Accreditation of Teacher Education, Standards for the Accreditation of Teacher Education, Washington, D. C.: NCATE, 1970.

[37]Robbins, op. cit., p. 101.

[38]Brooks E. Smith, op. cit., p. 5.

Beyerl[39] describes a program at Ball State Teachers College in the late fifties where sophomores had the opportunity to work one day or one evening per week in a Boy's Club. This was a chance, he believes, for students to find out whether or not they were headed for a profession for which they were suited.

Early clinical experiences are seen by Hearn[40] as opportunities for student self-appraisal in the effectiveness of human relations. Interaction with children and with adults who are working with children should be arranged for beginning trainees as one way in which they can determine whether or not they have chosen the proper profession.

The values of early clinical experiences are seen by Levine[41] to include: the introduction of the teacher trainee to the school, a behind-the-scenes look at the school, a realistic picture of what the school is like, and a profitable preparation for student teaching. The experiences to which she refers are primarily the clerical and office routines of the school.

According to Cooper and Sadker,[42] early clinical experiences enable the student to determine whether or not he wants to teach, and it

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[39]M. C. Beyerl, "A Boys' Club and a Teachers College Provide Laboratory Experiences for Prospective Teachers," The Journal of Teacher Education, 8:393-398, 1957.

[40]Arthur C. Hearn, "Case Studies of Successful Teachers," Educational Administration and Supervision, 38:376-379, October, 1952.

[41]Levine, op. cit., p. 379.

[42]James M. Cooper and David Sadker, "Current Trends in Teacher Education Curriculum," The Journal of Teacher Education, 23:312-317, Fall, 1972.

provides a reality perspective for him. College instructors are forced to confront the realities of the public school classroom when they teach students who are spending time in those classrooms.

Shuff and Shuff[43] point out three advantages of early in-school experiences for teacher trainees. They are: the opportunity to integrate theory and practice, exposure to the pupils in a school and community setting, and a chance to demonstrate teaching ability.

Walsh[44] emphasizes the career-decision advantage of students who spend time in the classroom of the public school. He also believes that trainees will tend to generate a sense of dedication as a result of clinical experiences.

According to Harrington,[45] the student in the early clinical experience can see and feel what is, in contrast to what ought to be. He can formulate a philosophy of education, and he can learn to make value judgments regarding the educational process.

Gallegos[46] mentions the opportunities the student in an early clinical experience has to practice skills in a real setting and to relate theory to practice. He adds that students can also receive feedback on their performance and that they can progress at their own rates.

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[43]Shuff and Shuff, op. cit., p. 215.

[44]Huber M. Walsh, "Let's Move the Methods Course Off Campus," The Journal of Teacher Education, 21:347-351, Fall, 1970.

[45]Nancy D. Harrington, "A Challenge for Teacher Education," Journal of Education, 152:51-52, December, 1969.

[46]Gallegos, op. cit., p. 43.

On the negative side, he lists the difficulty of scheduling and the lack of cooperation between teacher education institutions and the schools.

Overby[47] is one of the few authors who fails to point out any advantages of early clinical experiences. He sees the following drawbacks: arrangements to get the students to the school are difficult and, in some cases, impossible; the college must accept the evaluation of the public school personnel; and evaluation by short, drop-in visits by college personnel are subject to the influence of the Hawthorne effect.

Confidence Level for Teaching

One of the recognized characteristics of a successful teacher is self-confidence. It is generally accepted that a teacher who has developed a realistic sense of self-confidence is likely to perform better than one who has not.

The focus of this study is on confidence level for teaching rather than confidence in oneself as a person. Confidence for teaching is defined by Smith[48] as "Belief in ones ability to teach. . . ." An adequate knowledge of children, the subject, and how to teach the subject to the children is implied in ones confidence for teaching.

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[47]George R. Overby, "A New Perspective in the Evaluation of Prospective Teachers in Professional Education Courses," The Journal of Teacher Education, 23:50-52, Spring, 1972.

[48]Martha L. Smith, "A Study of Elementary Student Teacher Confidence in and Attitude Toward Music and Changes That Occur in a Student Teaching Experience," Unpublished Doctoral Dissertation, Michigan State University, 1969, p. 38.

Though many studies have been conducted in the area of self-confidence, a limited number is reported dealing specifically with confidence level for teaching. Smith[49] reports a significant increase in confidence level for teaching during student teaching as measured by the Confidence Level Inventory for Teaching (CLIT). Her sample of sixty-six subjects recorded mean CLIT scores of 168.9 and 186.3 on pre- and posttests, respectively.

Similarly, Czajkowski[50] found a significant increase in confidence level for teaching during student teaching with the CLIT. The respective pre- post- means for his 124 subjects were 139.5 and 158.6

Schrag[51] failed to find a significant increase in CLIT scores during three- and six-week orientation periods with vocational educational teachers. The mean scores for sixty-four teachers were 192.7 before orientation, 197.3 after three weeks of orientation, and 199.2 after six weeks.

Hoover, Kaiser, and Podlich[52] used the rank ordering of twenty-five teaching competencies as the basis for determining the confidence

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[49]Smith, op. cit., p. 91.

[50]Theodore J. Czajkowski, "The Relationship of Confidence for Teaching to Selected Personal Characteristics and Performance of Student Teachers," Unpublished Doctoral Dissertation, Michigan State University, 1969, p. 76.

[51]Marie Carol Schrag, "An Assessment of Selected Attitudinal Changes in Secondary Vocational Teachers," Unpublished Doctoral Dissertation, Michigan State University, 1972, pp. 41-44.

[52]K. H. Hoover, L. H. Kaiser, and W. F. Podlich, Jr., "A Comparison of Expressed Teaching Strengths Before and After Student Teaching," The Journal of Teacher Education, 16:324-328, September, 1965.

level for their 187 subjects. During student teaching there was a significant change of nine of the twenty-five competencies. A positive change was recorded on five: teacher-led discussions, establishing behavioral objectives, construction and administration of tests, managing classroom behavior problems, and directing study activities. A negative change was indicated for the remaining four: using instructional resources, leading a panel discussion, conducting a role-playing activity, and supervising extra-curricular activities.

More than forty years ago, Charters and Waples[53] reported that pre-service teachers were unable to distinguish between easy and difficult tasks. With a check list of 559 typical teaching activities, teacher-trainees, relative to experienced teachers, uniformly rated tasks as easy. Support is thereby provided for a desirable, realistic level of confidence rather than high confidence.

Richey[54] indicates that the entire college career may be necessary to enable the student to gain adequate insight and confidence for a successful teaching career. He adds the further important point that these characteristics are best learned through participation in a classroom with children rather than from textbooks.

Fogelberg[55] administered a competence-for-teaching questionnaire as a pretest and a posttest to two groups of student teachers to determine

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[53]W. W. Charters and Douglas Waples, The Commonwealth Teacher-Training Study, Chicago: The University of Chicago Press, 1929, pp. 30-34.

[54]Robert W. Richey, Planning for Teaching, Second Edition, New York: McGraw Hill Book Company, Inc., 1958, pp. 126-127.

[55]Arthur Q. Fogelberg, "The Development of Attitudes Toward Teaching and Feelings of Competence Under Two Student Teaching Plans: Team and Individual," Dissertation Abstracts International, 33:3453A, January, 1973.

their feelings of competence toward teaching. The questionnaire had been developed at Arizona State University. Both groups (one group working in pairs, the other individually in student teaching) showed a significant increase in confidence level during student teaching. The individually-oriented students showed a significantly larger increase than did the paired students. These findings must be interpreted in the light of the research design which involved non-equivalent control groups.

Shaw[56] found that confidence level for teaching changed significantly for student teachers who had had no prior field experience. A comparison group of student teachers who had had prior field experience also showed a significant change, but of less magnitude. He reports that changes occurred in both a desirable and undesirable direction at all levels of field experience.

Czajkowski's study[57] of confidence level for teaching has produced some important implications. He states that if teaching is viewed as a composite of simplified behaviors, high confidence ratings may be indicative of a superficial perception of the teaching role. More capable students probably perceive the complexities of teaching and therefore, may rate themselves more realistically. He suggests that the middle ranges on the CLIT may represent the most realistic rating for more capable students. Those who score low on the CLIT probably lack basic

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[56]Robert E. Shaw, "Changes in Self-Concept Pertaining to Selected Teacher Competencies of Prospective Teacher," Dissertation Abstracts International, 33:4226A, February, 1973.

[57]Czajkowski, op. cit., pp. 94-97.

confidence in their ability to teach, regardless of whether they have a realistic or an overly simplistic view of teaching. He states, "It is likely that prior to student teaching a minimum level of confidence for teaching is desirable. Very high self-ratings may not be desirable if they are based on uncritical or irrelevant information."[58]

Attitude Toward Teaching

Attitude toward teaching has been the subject of numerous research studies. The following citations are representative of such studies, especially those which apply to early clinical experiences.

In his study of attitude change in teacher education, Jacobs[59] says, ". . . it should be the purpose of a teacher education program to mold attitudes that will equip the prospective teacher to deal with the teaching role in a way that will bring the greatest benefit to his students. . . ." He found a significant positive change in attitudes among students at five institutions during an initial professional education course. He also discovered a significant negative change in attitudes among students at the same institutions during student teaching. To reverse the negative attitude change, Jacobs suggests that alternate programs be employed. "Exposure to social situations encountered in the teaching role needs to occur more often in the teacher education

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[58] Ibid., p. 97.

[59] Elmer B. Jacobs, "Attitude Change in Teacher Education: An Inquiry into the Role of Attitudes in Changing Teacher Behavior," The Journal of Teacher Education, 19:410-415, Winter, 1968.

program prior to the student-teaching experience."[60]

Sinclair[61] looked for pre-student teaching attitude changes among students of an observation group, an independent reading group, and a traditional course (control) group. His testing instruments detected no change among the three groups, but personal interviews with the students revealed that the observation group unanimously felt better prepared to approach student teaching than did either of the other two.

Levine[62] indicates that the freshmen students in her study population who participated in office-routine activities in schools, felt better prepared to approach student teaching than did juniors who had not had such experiences. The feelings of the students were obtained by informal responses rather than by objective measurement.

Lucina[63] recognized the acquisition of desirable attitudes toward teaching as one of the factors which would indicate readiness to profit from professional laboratory experiences. She states, "Successful professional laboratory experiences must be preceded by a readiness on the part of the future student teacher."

In a comparison study of classroom observation with on-campus study only, Ingle and Robinson[64] found that both classroom observations

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[60] Ibid., p. 414.

[61] Sinclair, op. cit., p. 77.

[62] Levine, op. cit., p. 35.

[63] Sister Mary Lucina, "Readiness for Professional Laboratory Experiences," The Journal of Teacher Education, 10:310-314, September, 1959.

[64] Ingle and Robinson, op. cit., p. 460.

and on-campus study were accompanied by a positive change in attitudes. There was no significant difference, however, between the two groups. Both groups took a professional education course during the duration of the experiment.

Andrews[65] recognized the need to improve attitudes of pre-service teachers. He stated in 1950, "When experienced teachers are enrolled in the same class with pre-service students, the contrast in attitude and interest is compelling evidence of the value of experience in the building of understanding."

Using the Minnesota Teacher Attitude Inventory (MTAI), Knoll[66] investigated changes in attitude during a pre-student teaching Exploratory Field Experience Course at the University of Iowa. With a sample of 448 students, 162 of whom were in elementary education, he found a significant difference in attitude change from pre- to posttest between sexes, college class levels, and grade levels of the field experience. There was no significant difference in MTAI pre- to post- gain scores between levels of type of activity in the field experience.

Day[67] found a negative change in attitude as measured by the MTAI for each of three groups of subjects. The groups included college

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[65]Andrews, op. cit., p. 267.

[66]Gerald C. Knoll, "A Study of Attitude Changes of Pre-Student Teachers in an Exploratory Field Experience Course at the University of Iowa," Dissertation Abstracts International, 33:3461A, January, 1973.

[67]Harry P. Day, "Attitude Changes of Beginning Teachers After Initial Teaching Experience," The Journal of Teacher Education, 10:326-328, September, 1959.

seniors before and after their internship, graduates after internship, and graduates after one year out of college. Some of the latter group had taught during that year; others had not. He concluded, ".... it would seem more appropriate to introduce some kind of initial contact with a teaching situation early in the program before the student has advanced very far with an unrealistic picture of what lies ahead in the classroom."[68]

Sinclair[69] administered the MTAI to an observation group, an independent reading group, and a traditional course group, each on three different occasions. The test was given one term before student teaching, at the beginning of student teaching, and at the end of student teaching. He found no significant differences to exist among any of the groups on any of the testing occasions. The subjects' responses in interviews indicated that those who had had an observation experience felt better prepared to enter student teaching than did those of the other two groups.

Lipscomb[70] investigated attitude changes of elementary student teachers at Indiana University. He found a significant change in attitude from pre- to posttest for forty-one of the forty-four students tested.

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[68] Ibid., p. 328.

[69] Sinclair, op. cit., p. 77.

[70] Edra E. Lipscomb, "A Study of the Attitudes of Student Teachers in Elementary Education," Journal of Educational Research, 60:159-163, December, 1966.

Claycomb[71] emphasizes the desirability of teachers' having positive attitudes toward teaching and children and the consequential positive effect this will have on pupils' learning. In his study of the attitudes of undergraduate teacher candidates, he found the most positive attitudes among those who: 1. had completed their professional training, 2. are female, 3. were reared in urban or suburban communities, 4. prefer teaching in early elementary grades, 5. prefer teaching in the inner city, and 6. prefer a class in which whites and non-whites are nearly equally distributed.

Smith[72] indicates that a review of the literature of the past twenty years reveals no consistency from one study to another in terms of attitude measures. Many studies show an attitude change, but the direction and magnitude of the changes are ambiguous.

Desire to Teach

The teaching profession has been plagued for years by the low level of commitment of some of its members. Educators generally agree that a high level of professional commitment is extremely desirable for effective classroom performance. The desire to teach is equated in this study with commitment to the profession.

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[71] Clyde M. Claycomb, "An Exploratory Study of Attitude Toward Children Expressed by Undergraduate Teacher Candidates," Unpublished Doctoral Dissertation, Michigan State University, 1970.

[72] M. L. Smith, op. cit., p. 317.

The necessity of commitment to teaching is recognized and emphasized by Gallegos.[73] He sees the unwitting harboring of uncommitted students as a serious hindrance to even the best of programs. He reports that of those trained in Washington State in 1965, 50% had dropped out of the profession after only four years of teaching. His hope is that the lessened demand for teachers will tend to correct the situation.

Cooper and Sadker[74] see a dual role for early clinical experiences. In their discussion of current trends in teacher education, they say, "Besides helping the prospective teacher discover earlier in his college career whether or not he really wants to teach, the early field experiences also enable him to approach the rest of the teacher education curriculum from a reality perspective."

Marso[75] conducted a study at Bowling Green State University with twenty-nine senior education majors in which he attempted to determine what effect, if any, a pre-student teaching clinical experience would have on the students' desire to teach. As compared with a control group, the group with the clinical experience showed a greater diversity in their desire to teach after the clinical experience.

DeLong[76] describes a sequence of teacher education experiences at

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[73]Gallegos, op. cit., p. 46.

[74]Cooper and Sadker, op. cit., p. 317.

[75]Ronald N. Marso, "Project Interaction: A Pilot Study in a Phase of Teacher Preparation," The Journal of Teacher Education, 22:194-198, Summer, 1971.

[76]Greta DeLong, "Toward More Meaningful Teacher Preparation," The Journal of Teacher Education, 22:15-17, Spring, 1971.

Grand Valley State College. She reports that the second major portion of the program, the teacher aide phase, serves to guide students to a firmer position regarding their desire to teach.

Bennett[77] conducted a review of literature related to commitment to teaching. He reports that a consensus of writers indicates that many female education students who complete the teacher training sequence are not really interested in teaching as a career. Teaching is looked upon by many as a temporary occupation. Bennett's findings indicate that completion of the sequence of teacher education courses leading to certification has a significant positive effect on commitment to teaching. He makes the following recommendations regarding career commitment:

1. That efforts be made to identify prospective teachers early in college or pre-college training so proper guidance can direct them to completion of the training sequence.
2. That education professors attempt to instill a positive attitude toward career commitment to teaching.
3. That measuring devices be obtained to determine the degree of commitment.
4. That courses required for temporarily certified teachers be geared to the immediate needs of classroom teaching.
5. That methods courses in special areas of elementary education (normally taught in elementary school by specialists) not be required.
6. That commitment to teaching be investigated in the light of different variables.

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[77]Don Bennett, "Teacher Commitment--Whose Responsibility?" The Journal of Teacher Education, 21:515-518, Winter, 1970.

Walsh's[78] description of an off-campus methods course includes a reference to career decisions in a clinical setting. He says, "The early contact with children provided in Off-Campus Methods Courses in a structured, yet genuine, classroom setting can result in the students' confronting important career questions . . . Do I really want to teach?" The value of an early opportunity for such a decision is recognized.

Moseley[79] calls attention to the dilema of a beginning education student. The student's last contact with school was as a student in public school, and it is necessary for him to make a career decision regarding teaching at a time of little contact with the school. This calls for early clinical experiences in teacher education so the student can analyze his desire to teach under realistic conditions.

Robinson[80] concurs with Moseley in his call for an early clinical experience so education students can formulate a realistic sense of commitment to the teaching profession. He states, "It is unreasonable to assume that students can or should make such a decision without the necessary knowledge base."

Beyerl[81] describes a cooperative program between Ball State Teachers College and a local Boys' Club which involved an early clinical experience

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[78]Walsh, op. cit., p. 351.

[79]Aubrey H. Moseley, "Teacher Education: The University and the Schools," Kappa Delta Pi, 8:26-27, October, 1971.

[80]Joseph Robinson, "A Field Experience Program in Teacher Educationm" Kappa Delta Pi, 8:87-88, February, 1972.

[81]Beyerl, op. cit., p. 398.

for prospective teachers. Among its other advantages, he says, "Some prospective teachers find firm support for their earlier vocational choice."

In a study of significant events in the Freshman Early Experiencing Program at the Ohio State University, Garry[82] reports that students who began the experience with a firm commitment to teach tended to maintain that level of commitment. People mentioned by this group in relation to significant events, tended to be teachers and pupils. Students who began the experience with a tentative commitment to teach, tended to change that commitment to a greater extent, and also tended to mention counselors and parents as significant people.

Workman[83] conducted a study of the relationship of desire to teach with selected student characteristics. He found that these students with a high degree of extraversion, those who had a dominant personality, and those with a broad background of education-related experience tended to be firm in their desire to teach both before and after an early clinical experience.

Perry[84] reports that prospective elementary teachers are motivated in their desire to teach by children, whereas secondary trainees are

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[82]Alice W. Garry, "A Study of Significant Incidents in a Teacher Training Early Experiencing Program," Dissertation Abstracts International, 33:4216A, February, 1973.

[83]Daniel W. Workman, "The Relationship of Selected Variables in Decision-Making Regarding Choice of A Career in Teaching," Dissertation Abstracts International, 33:4233A, February, 1973.

[84]James Z. Perry, "The Influence of Selected Factors on the Choice of Teaching as a Career," Dissertation Abstracts International, 33:5606A, April, 1973.

influenced more strongly by subject matter. Elementary trainees showed a firmer commitment to their desire to teach than did those in secondary.

Wood[85] solicited information from two groups of student teachers majoring in business from sixty teacher education schools. One group had had pre- student teaching laboratory experiences and the other had not. The important findings included a significant difference in positive attitude change in the experimental group as opposed to the control group, and the indication that the high school business teacher had been the most influential factor in the student's decision to enter teaching as a career.

Ziebarth and Jones[86] studied reasons for students' failure to complete a specially designed teacher training course. They reported that those who failed to complete the course tended to be the ones who were uncertain of their education goals.

Bender et al.[87] dealt with the acceptance or rejection of handicapped students in teacher education programs. They made the observation that the students should be selected who sincerely wish to work with young people in an educational setting.

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[85]Jerry Lee Wood, "The Influence of Professional Laboratory Experiences Upon the Career Choices of Undergraduate Business Teacher Education Majors," Dissertation Abstracts International, 32:831A, August, 1971.

[86]Raymond A. Ziebarth and Virginia C. Jones, "Secondary Education Individual Instruction Project: A Curriculum Instruction Study Project," Educational Technology, 12:66, November, 1972.

[87]Jay A. Bender, Oliver P. Kolstee, and Harold M. Kaplan, "Acceptance of Disabled College Students into Teacher Training Programs," Exceptional Children, 34:685-691, May, 1968.

Weber and Cooper[88] recognized the value of an early clinical experience in helping prospective teachers firm up their desire to teach. They said, "There is no doubt that early awareness experiences in the schools allow our students to test themselves and their commitment to teaching. We believe this testing should be done early enough in a student's college career to allow for other options if he discovers that teaching isn't for him."

Summary

The foregoing review of literature identifies the major thinking and trends in the area of profession laboratory experiences which relate to the focus of the present study. These ideas are summarized in the following statements.

1. The need for professional laboratory experiences, including pre-student teaching, is recognized by most writers in this field.

2. According to most authors who have dealt with pre-student teaching clinical experiences, their advantages far outweigh their disadvantages.

3. The consensus of opinion is that early clinical experiences should be accompanied by theoretical training in education, even though some people emphasize only the experiential component.

4. The type of activities in which students engage during early clinical experiences is generally a mixture of teaching and non-teaching, with emphasis on teaching activities.

5. Changes in confidence level for teaching, attitude toward teaching, and desire to teach generally occur during early clinical experiences, but the direction and magnitude of such changes are not consistent from one study to another.

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[88] Wilford A. Weber and James M. Cooper, Competency-Based Teacher Education: A Scenario, American Association of Colleges for Teacher Education, PBTE Series No. 5, Washington, D. C., 1972, p. 8.

CHAPTER III

DESIGN OF THE STUDY

The research design is described in Chapter III. The following headings serve as the format for the discussion: Definitions, Population, Sample, Hypotheses, Design, Procedure, Measurements, and Summary.

Definitions

The definitions listed below are intended to clarify and operationalize pertinent terms which are used throughout this study.

1. Education 101A--Exploring Elementary Teaching, which is referred to hereafter in this study as EET, is a three-hour course required of everyone seeking admission to the Michigan State University elementary certification program. The current Michigan State University Catalog gives the following description: "Emphasis on the nature of teaching in the elementary school achieved through field experiences while serving as a teacher aide in an elementary classroom. Concurrent lecture sessions focus on techniques of classroom management and operation."[1]

[1] M.S.U. Catalogue, Descriptions of Courses Section, Michigan State University Publications, 1973, p. A38.

2. Education 321A--Curriculum, Methods, and Materials--Elementary Education, is referred to as CMM in this study. This three-hour course involves "Bases, scope, and sequence of curriculum in reading, language arts, and social studies; adaptation of principles to methods and materials of teaching in the elementary and middle school."[2] In practice, elementary science and mathematics are also part of this course.
3. Elementary School, as used in this study, refers collectively to all grades from kindergarten through sixth grade.
4. EET Experimental Group is the randomly selected group from EET, Spring Term, 1973, which was given both the pretests and the posttests.
5. EET Posttest-only Group is the randomly selected group from EET, Spring Term, 1973, which was given the posttests only.
6. CMM Experimental Group is the sample selected from CMM, Spring Term, 1973 students who have had EET. The Desire to Teach Form was administered as a pretest and as a posttest to this sample.
7. CMM Control Group is the sample selected from CMM, Spring Term, 1973 students who have not had EET. The Desire to Teach Form was administered as a pretest and as a posttest to this sample.
8. O_1, O_2, O_3, O_4, O_5, O_6, and O_7 refer, respectively, to the EET Experimental Group pretest measures, EET Experimental Group posttest measures, EET Posttest-only Group posttest measures, CMM Experimental Group pretest measures, CMM Experimental Group

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[2] Ibid., p. A39.

posttest measures, CMM Control Group pretest measures, and CMM Control Group posttest measures.

9. Confidence Level Inventory for Teaching, which will hereinafter be referred to as CLIT, is a testing instrument designed to measure confidence level for teaching. (See further discussion under Measurements, pp. 63-68 and Appendix B.)
10. Minnesota Teacher Attitude Inventory (Form A), which will hereinafter be referred to as MTAI, is a testing instrument designed to measure attitudes toward teaching. (See further discussion under Measurements, pp. 63-68.)
11. Desire to Teach Form, which will hereinafter be referred to as DT, is a testing instrument designed to measure the extent of desire to teach elementary school. Form 2 of DT (DT-2), the post-course form, differs from Form 1 (DT-1) in that it includes explanatory information regarding the level of desire to teach. A distinction between the two forms is made in this study to call attention to the explanatory part of DT-2. (See further discussion under Measurements, pp. 63-68 and Appendices C and D.)

Population

The study population is the Michigan State University students who were enrolled in EET, Spring Term, 1973. A second population, related to Hypotheses IV and V, is the Michigan State University students who were enrolled in CMM during Spring Term, 1973.

Sample

The sample consists of two randomly selected groups of thirty students each from EET, Spring Term, 1973. The EET Experimental Group received pretests, treatment, and posttests; the EET Posttest-only Group received the treatment and posttests only. Both the EET Experimental Group and the EET Posttest-only Group took EET (the treatment) simultaneously.

Two additional groups of students were selected from CMM for researching Hypotheses IV and V. The first of these, the CMM Experimental Group, was drawn from that segment of the class which had had EET previously. The other group, the CMM Control Group came from among those who had not had EET. Only those students who completed DT both as a pretest and as a posttest were included in the sample.

Hypotheses

The hypotheses are stated here in the null form, with accompanying alternates.

I. There will be no difference between the mean posttest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school, as measured by CLIT, MTAI, and DT, respectively.

Symbolically: Ho: $M_2 = M_3$.

Alternate: The mean posttest score of the EET Experimental Group will not equal that of the EET Posttest-only Group.

Symbolically: H_1: $M_2 \neq M_3$.

Legend: M_2 = EET Experimental Group posttest mean, M_3 = EET Posttest-only Group posttest mean.

II. There will be no gain from pretest to posttest for the EET Experimental Group, in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school, as measured by CLIT, MTAI, and DT, respectively.

Symbolically: Ho: $M_2 - M_1 = 0$.

Alternate: There will be a gain from pretest to posttest for the EET Experimental Group.

Symbolically: H_1: $M_2 - M_1 \neq 0$.

Legend: M_2 = EET Experimental Group posttest mean, M_1 = EET Experimental Group pretest mean.

IIa. There will be no gain from pretest to posttest for the EET Experimental Group, in terms of confidence level for teaching, as measured by CLIT.

Symbolically: Ho: $M_{2c} - M_{1c} = 0$.

Alternate: There will be a gain from pretest to posttest for the EET Experimental Group.

Symbolically: H_1: $M_{2c} - M_{1c} \neq 0$.

Legend: M_{2c} = EET Experimental Group posttest mean score on CLIT, M_{1c} = EET Experimental Group pretest mean score on CLIT.

IIb. There will be no gain from pretest to posttest for the EET Experimental Group, in terms of attitude toward teaching, as measured by MTAI.

Symbolically: Ho: $M_{2a} - M_{1a} = 0$.

Alternate: There will be a gain from pretest to posttest for the EET Experimental Group.

Symbolically: H_1: $M_{2a} - M_{1a} \neq 0$.

Legend: M_{2a} = EET Experimental Group posttest mean score on MTAI, M_{1a} = EET Experimental Group pretest mean score on MTAI.

IIc. There will be no gain from pretest to posttest for the EET Experimental Group, in terms of desire to teach elementary school, as measured by DT.

Symbolically: Ho: $M_{2d} - M_{1d} = 0$.

Alternate: There will be a gain from pretest to posttest for the EET Experimental Group.

Symbolically: H_1: $M_{2d} - M_{1d} \neq 0$.

Legend: M_{2d} = EET Experimental Group posttest mean score on DT, M_{1d} = EET Experimental Group pretest mean score on DT.

Optional Hypothesis II (OII)

OII. There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school, as measured by CLIT, MTAI, and DT, respectively.

Symbolically: Ho: $M_1 = M_3$.

Alternate: There will be a difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group.

Symbolically: H_1: $M_1 \neq M_3$.

Legend: M_1 = EET Experimental Group pretest mean score, M_3 = EET Posttest-only Group posttest mean score.

OIIa. There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of confidence level for teaching, as measured by CLIT.

Symbolically: Ho: $M_{1c} = M_{3c}$.

Alternate: There will be a difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group.

Symbolically: H_1: $M_{1c} \neq M_{3c}$.

Legend: M_{1c} = EET Experimental Group pretest mean score on CLIT, M_{3c} = EET Posttest-only Group posttest mean score on CLIT.

OIIb. There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of attitude toward teaching, as measured by MTAI.

Symbolically: Ho: $M_{1a} = M_{3a}$.

Alternate: There will be a difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group.

Symbolically: H_1: $M_{1a} \neq M_{3a}$.

Legend: M_{1a} = EET Experimental Group pretest mean score on MTAI, M_{3a} = EET Posttest-only Group posttest mean score on MTAI.

OIIc. There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of desire to teach elementary school, as measured by DT.

Symbolically: Ho: $M_{1d} = M_{3d}$.

Alternate: There will be a difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group.

Symbolically: H_1: $M_{1d} \neq M_{3d}$.

Legend: M_{1d} = EET Experimental Group pretest mean score on DT, M_{3d} = EET Posttest-only Group posttest mean score on DT.

III. There will be no difference between the pretest variance and the posttest variance of the EET Experimental Group, in terms of desire to teach elementary school, as measured by DT.

Symbolically: Ho: $S_1^2 = S_2^2$.

Alternate: There will be a difference between the pretest variance and the posttest variance of the EET Experimental Group.

Symbolically: H_1: $S_1^2 \neq S_2^2$.

Legend: S_1^2 = EET Experimental Group pretest variance on DT, S_2^2 = EET Experimental Group posttest variance on DT.

Optional Hypothesis III (OIII)

OIII. There will be no difference between the pretest variance of the EET Experimental Group and the posttest variance of the EET Posttest-only Group, in terms of desire to teach elementary school, as measured by DT.

Symbolically: Ho: $S_1^2 = S_3^2$.

Alternate: There will be a difference between the pretest variance of the EET Experimental Group and the posttest variance of the EET Posttest-only Group.

Symbolically: H_1: $S_1^2 \neq S_3^2$.

Legend: S_1^2 = EET Experimental Group pretest variance on DT, S_3^2 = EET Posttest-only Group posttest variance on DT.

IV. There will be no difference between the pretest variance and the posttest variance of the CMM Experimental Group, in terms of desire to teach elementary school, as measured by DT.

Symbolically: Ho: $S_4^2 = S_5^2$.

Alternate: There will be a difference between the pretest variance and the posttest variance of the CMM Experimental Group.

Symbolically: H_1: $S_4^2 \neq S_5^2$.

Legend: S_4^2 = CMM Experimental Group pretest variance on DT, S_5^2 = CMM Experimental Group posttest variance on DT.

V. There will be no difference between the pretest variance and the posttest variance of the CMM Control Group, in terms of desire to teach elementary school, as measured by DT.

Symbolically: Ho: $S_6^2 = S_7^2$.

Alternate: There will be a difference between the pretest variance and the posttest of the CMM Control Group.

Symbolically: H_1: $S_6^2 \neq S_7^2$.

Legend: S_6^2 = CMM Control Group pretest variance on DT, S_7^2 = CMM Control Group posttest variance on DT.

Design

The basic design of this study is referred to by Campbell and Stanley[3] as the Separate Sample Pretest-Posttest Design. They have symbolized it as follows:

$$R \quad O_1 \quad X \quad O_2$$

$$R \quad\quad X \quad O_3,$$

where the R's indicate that the subjects have been randomly selected from the population and the groups have been randomly assigned to the treatment, X represents the treatment, O_1 and O_2 represent the pretest and posttest observations, respectively, for the EET Experimental Group, O_3 represents the posttest observations for the EET Posttest-only Group.

In this design, O_3 may appear to represent a control group measure, but it does not do so in the traditional sense. Since the only difference between the two groups is the absence of pretest measures for the EET Posttest-only Group, O_3 functions as a control for testing effects. The designations "EET Experimental Group" and "EET Posttest-only Group" have been selected to make this point clear.

The extension of this research into CMM, suggested by Hypotheses IV and V, is symbolized as follows:

$$\begin{array}{cccc} X_1 & O_4 & X_2 & O_5 \\ & O_6 & X_2 & O_7. \end{array}$$

O_4 and O_5 signify the pre- and posttest measures, respectively, of the

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[3]Donald T. Campbell and Julian C. Stanley, Experimental and Quasi Experimental Designs for Research, Chicago: Rand, McNally and Company, 1970, pp. 53-54.

CMM Experimental Group, O_6 and O_7 represent the pre- and posttest measures, respectively, of the CMM Control Group, X_1 stands for the treatment (EET) which the CMM Experimental Group has had, X_2 stands for the treatment (CMM) that both groups have had, and the dash line indicates that the two groups have not been randomly selected from the population nor randomly assigned to treatments.

Random selection and assignment were not practiced since the sample subjects were drawn from just that segment of CMM students who completed both the DT pretest and posttest. Approximately 65% of the total enrollment of CMM completed both forms of DT.

The inherent soundness of the Separate Sample Pretest-Posttest Design is subject to the limitations discussed below. Arguments are presented in this discussion to demonstrate how these have been avoided when possible in the present study.

The first limitation mentioned by Campbell and Stanley[4] is what they term history. This concern is raised because of the possibility that some change-producing events may occur during the treatment in addition to the treatment. The longer the time interval between pretest and posttest, the higher is the probability that such an event will occur. In order to be a plausible explanation for change, however, historical events must occur in such a way that most of the subjects in the study are affected. The researcher knows of no such events having occurred during the course of the present study.

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[4] Ibid., pp. 5-7.

The second potential drawback pointed out by Campbell and Stanley[5] is that of maturation. Questions are raised regarding the effects of changes in chronological age, emotional growth, etc. This is not a major weakness in this study, because the time period between the pre- and posttests was relatively short, i.e. nine weeks. Significant maturation was not likely to have occurred for people in the age range of these subjects.

The question of instrumentation is raised by Campbell and Stanley.[6] The dangers to be avoided in this regard are related to (1) changes in the calibration or scoring of the instruments, (2) differences among observers and/or scorers, and (3) pretest sensitization. Since the observations of the dependent variables in the present study were made by using objective tests, and since the same tests were used for pre- and posttests, neither calibration nor scoring of the tests were likely to have caused any change-producing effects. Test administration was accomplished by the cooperative efforts of staff from EET and CMM. Even though various people participated in the administration of the tests, an effort was made to standardize the procedures and conditions of testing. Pretest sensitization was controlled in the basic design (Hypotheses I, II, and III). The phase of the study which involved CMM did not have such a control, so a limitation is recognized at that point. The effect of pretest sensitization in CMM would tend to minimize a change in variance of DT scores from pretest to posttest.

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[5] Ibid., pp. 5-9.

[6] Ibid., pp. 5, 53.

The interaction of selection and maturation is mentioned by Campbell and Stanley[7] as a possible competing variable, the effects of which might be confused with treatment effects. This interaction is of concern however, only when the samples are drawn from essentially different populations. Since both the EET Experimental Group and EET Posttest-only Group were drawn from the same population, the interaction of selection and maturation was not applicable to the present study.

Further limitation is recognized because of the absence of a comparison control group. A control group was highly impractical in this design because of the difficulty in obtaining an experimental group which would receive the treatment (EET) and an equivalent control group which would not receive the treatment.

There are eight remaining factors which Campbell and Stanley[8] indicate may jeopardize either the internal or external validity of any design. They argue, however, that the Separate Sample Pretest-Posttest Design is so constructed that it adequately controls them all.

To test Hypothesis I, a multivariate one-way ANOVA was performed on the overall mean scores of the EET Experimental and EET posttest-only Groups (O_2 vs. O_3). This technique was intended to show whether or not there exists a difference between the EET Experimental Group and the EET Posttest-only Group due to testing effects. Simultaneously, a univariate one-way ANOVA was performed on the mean scores of the EET Experimental Group and EET Posttest-only Group in terms of CLIT, MTAI,

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[7] Ibid., pp. 5, 48.

[8] Ibid., pp. 5, 40.

and DT separately. In this way it was possible to determine which, if any, of the three tests was causing the effect.

The purpose of testing Hypothesis I was to see whether or not a difference existed between O_2 and O_3. Since both the EET Experimental Group and the EET Posttest-only Group were randomized, it was assumed that an O_2 vs. O_3 difference would be due to testing effects. Further analysis then would call for a comparison of group means between O_2 and O_3. In the event of no difference, further analyses could be performed on gain scores from the pretest to the posttest of the EET Experimental Group ($O_2 - O_1$). To provide for the outcome of no difference between O_2 and O_3, Hypothesis II was constructed for analysis of gain scores. Optional Hypothesis II was designed for analysis of differences between group means of the EET Experimental Group and the EET Posttest-only Group (O_1 vs. O_3). Hypothesis III and Optional Hypothesis III were similarly designed to accommodate analysis based on variance differences from pretest to posttest. Comparison of the variance of the EET Experimental Group on the pretest with their own variance on the posttest is indicated by Hypothesis III. Optional Hypothesis III suggests a comparison between the EET Experimental Group and the EET Posttest-only Group.

Hypothesis II was tested by means of a multivariate one-way ANOVA on the gain scores of the EET Experimental Group from pretest to posttest. The intention was to detect the presence of a treatment effect on the basis of all three dependent variables: CLIT, MTAI, and DT.
A simultaneous univariate one-way ANOVA was performed on gain scores of the EET Experimental Group from pretest to posttest for CLIT, MTAI, and DT, separately. Thus it was possible to determine a treatment effect on

each dependent variable individually. Results of analytical treatment reported in Chapter IV show that Hypothesis II, rather than Optional Hypothesis II, was the appropriate choice for significance testing.

To test Hypotheses III, a t-test was performed on the pretest and posttest variances of DT scores for the EET Experimental Group. The purpose was to show whether or not there was a pre-post shift toward a more or less extreme position in terms of desire to teach elementary school, during EET. As was the case with Optional Hypothesis II, analytical results reported in Chapter IV indicate that Hypothesis III, rather than Optional Hypothesis III, was the appropriate choice for significance testing.

To test Hypothesis IV, a t-test was performed on the pretest and posttest variances of DT scores for the CMM Experimental Group. This was intended to show whether or not there was evidence of a pre-post shift toward a more or less extreme position in terms of desire to teach elementary school for those students in CMM who have taken EET.

To test Hypothesis V, a t-test was performed on the pretest and posttest variances of DT scores for the CMM Control Group. The intention was to show whether or not there was a pre-post shift toward a more or less extreme position in terms of desire to teach elementary school for those students in CMM who have not taken EET.

The ten demographic characteristics listed below were selected as possible factors that may differentially influence the outcomes of the measurements of the dependent variables.

1. age
2. marital status
3. socio-economic background

4. prior contact with children
5. sex
6. college class level
7. day of the week the student participates
8. grade level in which the student participates
9. teaching style of the classroom teacher to which the student is assigned
10. relative amount of teacher aiding in which the student engages.

These characteristics can be divided into two general categories: personal and/or background characteristics (age, marital status, socio-economic background, prior contact with children, sex, and college class level) and situational factors (day of the week the student participates, grade level in which the student participates, teaching style of the classroom teacher to which the student is assigned, and type of activity in which the student engages). No attempt is made here to justify the selection of these specific variables to the exclusion of all other possibilities. The rationale for choosing these particular ten is based on the following points: (1) most of these are typically used in research of the nature of the present study;[9,10,11] (2) intuitively it can be expected that confidence level for teaching, attitude toward teaching, and desire to teach are influenced according to different levels of these independent variables; (3) various levels of each characteristic are represented in the sample; and (4) the data are easily objectified.

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[9]George R. Schneck, "An Investigation of Visitation Experience in an Education Program for Prospective Elementary Teachers," Unpublished Doctoral Dissertation, Michigan State University, 1972.

[10]Marie Carol Schrag, "An Assessment of Selected Attitudinal Changes in Secondary Vocational Teachers," Unpublished Doctoral Dissertation, Michigan State University, 1972.

[11]Theodore J. Czajkowski, "The Relationship of Confidence for Teaching to Selected Personal Characteristics and Performance of Student Teachers," Unpublished Doctoral Dissertation, Michigan State University, 1968.

For each independent variable, two or more levels were identified. Age was categorized into two levels: 18 to 20 and 21 to 23 years old. Two levels of marital status were used: single and married. Socio-economic background was determined by categorizing the occupation of the student's father under three headings: professional and/or business, technical and/or skilled labor, and unskilled labor. Four levels of prior contact with children were identified by assigning a numerical value to the length of time the student was in contact with the child and to the type of experience during the contact. The time scale was represented by 1: one month or less, 2: one to six months, 3: six months to one year, and 4: more than one year. The experience scale is represented by 1: children's clubs, church, camp, playground, 2: baby-sitting, 3: classroom, and 4: your own children and brothers or sisters. A total prior-contact number was obtained by multiplying the time-scale number by the experience-scale number for each response and then summing across all responses for a given student. For example, if a student indicated he had done babysitting (experience value = 2) for six months to one year (time value = 3), he was credited with a value of six for that particular response (2 x 3 = 6). The sum of all his responses then composed his total prior-contact number. The range of all total prior-contact numbers for all respondents was from 0 to 55. For convenience, this range was reduced to four levels, where "1" represents 0 to 13, "2" represents 14 to 27, "3" represents 28 to 41, and "4" represents 42 to 55. Each respondent was finally assigned one of the four reduced prior-contact numbers. Sex was categorized into two levels:

male and female. Five levels of college class were used: freshman, sophomore, junior, senior, and other. Day of the week was divided into five levels: Monday through Friday. Three categories of grade level were identified: kindergarten through third grade, fourth through sixth grade, and a combination of grades. Teaching style of the classroom teacher was described on a four-point continuum scale from 1: open (warm, friendly, comfortable, adaptable) to 4: closed (cool, unfriendly, uneasy, inflexible). Three levels of relative amount of teacher aiding were identified on the basis of total time spent in the elementary school. 1: 46-62%, 2: 63-67%, and 3: 68-72%.

Most of the data for the ten demographic characteristics were collected from a student personal information form. Data for the teaching style of the classroom teacher were obtained from written responses to the four-point continuum scale indicated above by 1. graduate assistant supervisors who worked with the teachers, 2. students who participated in the classroom, and 3. the researcher, because of personal visits to the classrooms of some participants. A single integer on the continuum was assigned to each teacher, that integer being the rounded average of all responses.

Analysis of the demographic data was done on an inspection-of-data basis rather than by statistical significance testing because the sample is not large enough (n = 30) to provide subjects for every cell of a crossed design. The following method was employed. The gain scores of CLIT, MTAI, and DT were grouped according to the various levels of each characteristic. The mean gain score for each test for each

level was then computed. The results are shown in Table 4.11, Chapter IV.

The data for the relative amount of teacher aiding was collected from students' responses to a checklist of suggested activities for EET.[12] (See Appendix A.) Students were requested to indicate the frequency of engaging in certain activities by checking opposite that activity in column 1: "1 time," column 2: "2 or more times," or column 3: "weekly." The researcher grouped each suggested activity into two categories: aide-type activities, and non-aide-type activities. The three columns listed above were assigned values of one, two, and three, respectively. The percent of the total school time spent in aide-type activities for any given student equals the sum of all his "aide" checks compared with the sum of all checks.

From a list of probable activities in EET and CMM, students were requested to select the ten that they felt were most influential in determining their desire to teach elementary school. The analysis of the results involved identification of those items which were selected most often as first, second, or third choices. These figures are summarized in Table 4.10, Chapter IV for the EET Experimental Group and for random samples of the CMM Experimental and Control Groups.

Procedure

The procedure describes the steps that were taken to obtain the subjects and the data for the study.

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[12] Checklist of Exploring Teaching Activities, Michigan State University, College of Education, Department of Elementary and Special Education.

1. Eighty students were randomly selected from the initial enrollment lists of EET, Spring Term, 1973. Forty of this group were randomly assigned to the EET Experimental Group, the remaining forty being assigned to the EET Posttest-only Group. After the test data had been collected, the size of both the EET Experimental Group and the EET Posttest-only Group was reduced to thirty each. Those to be eliminated from the original sample of forty were randomly selected after elimination of those who (1) submitted incomplete pretest or posttests, (2) showed evidence of a misunderstanding of test directions, or (3) were found to be three or more standard deviations from the mean of the sample group on any one demographic characteristic.
2. During the period from April 3 to 10, 1973, all students in EET were asked to complete a battery of tests according to an announced schedule. The CLIT, MTAI, and DT were administered to the previously selected EET Experimental Group. The remainder of the students in the study population were given tests related to the EET experience but essentially different in both content and format from the CLIT, MTAI, and DT.
3. During the Spring Term, 1973, all enrollees in EET received the treatment which consisted of participation in EET. Placement of students in the schools and in grade levels was done according to the needs of the schools, the number of openings, and student choice rather than on a random assignment basis.
4. On Tuesday, June 5, 1973, all students in EET were again tested.

Both the EET Experimental Group and the EET Posttest-only Group received the CLIT, MTAI, and DT. The other class members received tests which were different in content and format from those of the two sample groups, but of approximately the same length.

5. On Friday, March 30, 1973, Dr. Shirley Brehm, Director of EET, assembled her graduate assistants for purposes of orientation to the course. The researcher attended the meeting and was introduced as a proctor with primary responsibility in the area of testing. Three students were assigned to the researcher for supervision, in order to minimize the probability of the graduate assistants', and hence the students', knowledge that a research study was to be conducted and any effects that might accompany this knowledge.
6. On Monday, April 2, 1973, the entire EET class was assembled by their regular instructors for orientation to the activities of the course. At this meeting the students were asked to complete several forms, including a personal data form which provided information pertinent to this study. In order to minimize effects due to test administration by a special person, the researcher was introduced as a regular member of the EET team, with primary responsibility in data collection.
7. Each Monday during Spring Term, 1973, EET students were required to meet in regular session. The researcher met with the students and graduate assistants during these sessions in order to

gain credibility as a testing proctor and to gather evidence that the meetings were held and regularly attended.

8. Periodic visits were made to the participating schools by the researcher in order to:
   a. collect pertinent data by observation of students, schools, and teachers.
   b. provide credibility for the investigator's presence in testing session, and
   c. supervise assigned students.
9. During the week of April 2 to 6, 1973, DT was administered as a pretest to all the students in CMM who were present in their section meetings.
10. During the period from May 21 to 31, 1973, DT was administered as a posttest to all the students present in the CMM section meetings.
11. In order to obtain as large a sample as possible of completed DT pretests and posttests from CMM, telephone calls were made by the researcher to those CMM students for whom there was a pretest but no posttest response. As a result, some of the eighty CMM Experimental Group and thirty-five CMM Control Group responses were obtained by special arrangements at the convenience of the students.

Measurements

The Confidence Level Inventory for Teaching (CLIT), the Minnesota Teacher Attitude Inventory (MTAI), and the Desire to Teach Form (DT) were chosen as measures of the dependent variables: confidence level

for teaching, attitude toward teaching, and desire to teach elementary school, respectively.

The basis of the Confidence Level Inventory for Teaching was an eighty-one item student teacher evaluation form used at Michigan State University in the early sixties and revised in a 1964 study by LePere and Cox.[13] Subsequently, Dr. Shirley Brehm and Dr. Jean LePere administered the instrument to students in Michigan State University Methods Blocks, using item analysis to determine discrimination values for each item. Administration of Form I to eighty students in early 1966 resulted in a reduction of the items from eighty-one to forty-four. Later the same year all but twenty-four of the remaining items were discarded on the basis of item analysis after administration to 179 students. Czajkowski[14] used Form III of the instrument (twenty-four items) with 124 students and showed correlation coefficients for each item to be consistent with those of Brehm and LePere. On a test-retest basis, with a ten-week period of student teaching intervening, Brehm and LePere computed a Pearson product-moment correlation coefficient of .47. Czajkowski, by a similar procedure, obtained .61.[15] The value obtained in the present study with the EET Experimental Group is .711 as shown in Table 3.1.

The present form of the test consists of twenty-four behaviorally stated aspects of teaching. The subject is requested to rate himself

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[13]Jean M. LePere and Richard C. Cox, Training Elementary Teachers: Comparison of Separate and Block Methods Courses, Michigan State University, Bureau of Educational Research Services, East Lansing, 1964.

[14]Czajkowski, op. cit., pp. 39-43.

[15]Ibid., pp. 41-42.

Table 3.1. Pearson Product-Moment Correlation Coefficients

Pooled within (EET Exp. Gp. and EET Post-only Gp. - Posttests)

	r
CLIT-MTAI	.238
CLIT-DT	-.190
MTAI-DT	-.229

Gain Scores (EET Exp. Gp - Pretests and Posttests)

	r
CLIT-MTAI	-.181
CLIT-DT	-.020
MTAI-DT	.079

EET Exp. Gp.

Pretest		Posttest	r
CLIT-MTAI			.178
CLIT-DT			-.214
MTAI-DT			-.396
		CLIT-MTAI	-.052
		CLIT-DT	-.210
		MTAI-DT	-.218
CLIT	-	MTAI	.109
CLIT	-	DT	-.366
MTAI	-	DT	-.319
CLIT	-	CLIT	.711
MTAI	-	MTAI	.770
DT	-	DT	.772
MTAI	-	CLIT	.095
DT	-	CLIT	-.057
DT	-	MTAI	-.323

on a one to ten scale for each item, ranging from "extreme concern about abilities" to "extreme confidence in abilities." The total score is obtained by summing across all items, a high score indicating high confidence for teaching and a low score representing low confidence.

The CLIT is designed to measure self concept as it relates to teaching. The items are based on the assumptions that, (1) the described behaviors are representative of the major aspects of teaching, and (2) that the student's feeling of confidence in regard to these areas reflects his general confidence for teaching.

The Minnesota Teacher Attitude Inventory (MTAI) has been widely used as a measurement of teacher attitudes. Cook, Leeds, and Callis, the authors of the test, characterize it as an instrument designed to ". . . measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships, and indirectly how well satisfied he will be with teaching as a vocation. The most direct use to which the MTAI can be put is in the selection of teachers for teaching positions. A parallel use is in counseling students about a vocational choice."[16] The usefulness of the MTAI as a predictor of satisfaction in teaching and as a counseling tool in relation to vocational choice provides the basis for its selection in the present study.

Validation and development of the MTAI was begun by administering 756 items to 200 teachers. Principals' ratings indicated that, in terms

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[16]W. W. Cook, C. H. Leeds, and Robert Callis, The Minnesota Teacher Attitude Inventory: Manual, New York: Psychological Corporation, 1951, p. 3.

of maintaining good relationships with students, 100 of these teachers were superior and 100 were inferior. On the basis on item analysis, 164 of the items were retained because of their apparent ability to differentiate between superior and inferior teachers. These items were then cross-validated by administration to 100 teachers for whom no prior information was available regarding their relationships with pupils. Comparison of these scores was made with ratings of principals, pupils, and observers. Correlations between teacher MTAI scores and rating scores were used to compute validity coefficients. The results showed correlations of .45, .46, .49 and .60 for MTAI and principals' ratings, MTAI and pupils' ratings, MTAI and observers' ratings, and MTAI and combined ratings, respectively. Finally, 150 items were selected for publication, with a split-half reliability of .909 being reported.[17] The Pearson product-moment correlation coefficient obtained in the present study with the EET Experimental Group is .770 as shown in Table 3.1.

Responses for each item range from "strongly agree" to "strongly disagree" on a five-point scale. The range of total scores is from -150 to +150, with the higher scores indicating the more positive attitudes.

The Desire to Teach Form consists of a pretest and a posttest version. Their construction, by the researcher, was based on three forms

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[17] Ibid., pp. 3-4.

used in EET.[18,19,20] The purpose of DT-1, the pretest version, is to determine the extent of the student's desire to teach elementary school prior to a clinical teacher education course experience. The student is requested to respond to a one to five scale ranging from "I am certain that I want to teach in elementary" to "I am certain that I do not want to teach in elementary school." The posttest version, DT-2, asks for a response to the same scale, this time based on experiences in the school assignment of the current term. In addition, DT-2 attempts to determine the kinds of experiences in the clinical course which influenced the students most in their desire regarding teaching in elementary school. Consequently, a list of twenty-seven probable experiences is presented with instructions to select the ten most influential and rank them from one to ten with number one having the greatest influence in determining a student's desire to teach. The twenty-seven-item list does not stand as an exhaustive set of experiences in a clinical course. It is representative of the seven major categories of activities recommended for EET students.[21] As indicated in Table 3.1 the Pearson Product-moment correlation coefficient for this one-item test is .772.

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[18] Education 101A--Final Student Assessment, Michigan State University Form, R-2, Spring, 1972.

[19] Exploring Teaching, Michigan State University, College of Education, September, 1971.

[20] Checklist of Exploring Teaching Activities, op. cit.

[21] Ibid.

Summary

The essence of Chapter III is a description of the research samples and the populations from which they were drawn, the procedure by which data were obtained, and a listing of the hypotheses to be researched. Also included is a list of pertinent terms with their definitions, a discussion of the strengths and weaknesses of the research design, and background information regarding the testing instruments.

CHAPTER IV

ANALYSIS OF THE RESULTS

Five hypotheses were tested in the present study. The analysis of each is presented in the first section of this chapter. Following this is a summary of data collected, after which is the chapter summary.

Analytical Instruments

The instruments used to measure the three dependent variables were the Confidence Level Inventory for Teaching (CLIT), a self-measure of confidence level for teaching; the Minnesota Teacher Attitude Inventory (MTAI), a measure of attitude toward teaching; and the Desire to Teach Form (DT), a measure of the extent of a student's desire to teach elementary school. The EET Experimental Group was tested both prior to and following EET. The EET Posttest-only Group was tested only after they had completed EET. Both the CMM Experimental Group and the CMM Control Group were tested prior to and following CMM.

Hypotheses

The hypotheses which have set the direction for this study are presented below. Each is accompanied by a short description of the type of significance testing that was done, a tabular presentation of the results, and a significance statement.

Hypothesis I

There will be no difference between the mean posttest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school, as measured by CLIT, MTAI, and DT, respectively.

A multivariate one-way ANOVA was performed to test the significance of Hypothesis I. Simultaneously a univariate one-way ANOVA was performed to determine the contribution of each dependent variable to the outcome of the multivariate analysis. The results of these analyses are given in Table 4.1.

Table 4.1. ANOVA for Testing Effects of the Pretest.

Multivariate ANOVA

df	F	P ≤
3, 56	.4565	.7138

Univariate ANOVA

Test	Source of Variation	df	Mean Square	F	P ≤
CLIT	Group	1	1353.75	1.30	.2579
	Error	58	1036.68		
MTAI	Group	1	18.15	.0256	.8734
	Error	58	707.69		
DT	Group	1	.0667	.2489	.6198
	Error	58	.268		

The null hypothesis of no testing effect of the pretest on the posttest was not rejected at the .05 level of confidence. This is

equivalent to saying that the pretests failed to act as an advance organizer for the posttests. This result leads to Hypothesis II rather than to Optional Hypothesis II.

Hypothesis II

> There will be no gain from pretest to posttest for the EET Experimental Group in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school, as measured by CLIT, MTAI, and DT, respectively.

A multivariate one-way ANOVA was performed to test the significance of Hypothesis II. The results of the ANOVA are given in Table 4.2.

Table 4.2. ANOVA for Gain Scores from Pretest to Posttest.

Multivariate ANOVA		
df	F	P ≤
3, 27	4.574	.0103*

*Significant at the .05 level of confidence.

The null hypothesis of no gain from pretest to posttest for the EET Experimental Group was rejected at the .05 level of confidence. The indication is that at least one of the variables will show a significant change from pretest to posttest.

Hypothesis IIa

There will be no gain from pretest to posttest for the EET Experimental Group in terms of confidence level for teaching, as measured by CLIT.

A univariate one-way ANOVA was performed to test the significance of Hypothesis IIa. The results of the ANOVA are given in Table 4.3.

Table 4.3. ANOVA for Gain Scores of Confidence Level from Pretest to Posttest.

Univariate ANOVA

Test	Source of Variation	df	Mean Square	F	P ≤
CLIT	Group	1	3740.83	9.03	.0055*
	Error	29	414.35		

*Significant at the .05 level of confidence.

The null hypothesis of no gain from pretest to posttest in terms of confidence level for teaching was rejected at the .05 level of confidence. Confidence level for teaching underwent a significant change from pretest to posttest.

Hypothesis IIb

There will be no gain from pretest to posttest for the EET Experimental Group in terms of attitude toward teaching, as measured by MTAI.

A univariate one-way ANOVA was performed to test the significance of Hypothesis IIb. The results of the ANOVA are given in Table 4.4.

Table 4.4. ANOVA for Gain Scores of Attitude from Pretest to Posttest.

Univariate ANOVA

Test	Source of Variation	df	Mean Square	F	P <
MTAI	Group	1	790.53	2.91	.0990
	Error	29	271.98		

The null hypothesis of no gain from pretest to posttest in terms of attitude toward teaching was not rejected at the .05 level of confidence. Attitude toward teaching did not change significantly from pretest to posttest.

Hypothesis IIc

There will be no gain from pretest to posttest for the EET Experimental Group in terms of desire to teach elementary school, as measured by DT.

A univariate one-way ANOVA was performed to test the significance of Hypothesis IIc. The results of the ANOVA are given in Table 4.5.

Table 4.5. ANOVA for Gain Scores of Desire to Teach from Pretest to Posttest.

Univariate ANOVA

Test	Source of Variation	df	Mean Square	F	P ≤
DT	Group	1	.0333	.3258	.5726
	Error	29	.102		

The null hypothesis of no gain from pretest to posttest in terms of desire to teach elementary school was not rejected at the .05 level of confidence. Desire to teach elementary school did not change significantly from pretest to posttest.

Optional Hypothesis II (including IIa, IIb, and IIc) were constructed to test the difference between group means in the event of a testing effect of the pretests on the posttests. A testing effect is indicative of the occurrence of a change-producing factor in addition to the treatment.

Hypothesis OII

There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school, as measured by CLIT, MTAI, and DT, respectively.

Hypothesis OIIa

There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of confidence level for teaching, as measured by CLIT.

Hypothesis OIIb

There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of attitude toward teaching, as measured by MTAI.

Hypothesis OIIc

There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of desire to teach elementary school, as measured by DT.

Optional Hypotheses II, IIa, IIb, and IIc were not tested because of the outcome of Hypothesis I. This is consistent with the discussion in Chapter III relative to Hypothesis II and Optional Hypothesis II. Evidence of a testing effect would have required the comparison of EET Experimental Group pretest means with EET Posttest-only Group posttest means in order to cancel the influence of the pretests on the posttests.

Hypothesis III

> There will be no difference between the pretest variance and the posttest variance of the EET Experimental Group, in terms of desire to teach elementary school, as measured by DT.

A t-test was performed to test the significance of Hypothesis III. The results of the t-test are given in Table 4.6.

Table 4.6. t-Test for Variance Differences of Desire to Teach for the EET Experimental Group from Pretest to Posttest.

Test	p	df	r	t
DT	30	28	.717	.670

Mean score (pretest) = 1.23

Mean Score (posttest) = 1.17

Variance (pretest) = .254

Variance (posttest) = .213

The null hypothesis of no difference between pretest and posttest variances of the EET Experimental Group, in terms of desire to teach

elementary school, was not rejected at the .05 level of confidence. The variance of the DT scores did not change significantly from pretest to posttest.

Optional Hypothesis III was constructed to test the difference between variances in the event of a testing effect of the pretests on the posttests. A testing effect is indicative of the occurrence of a change-producing factor in addition to the treatment.

Hypothesis OIII

> There will be no difference between the pretest variance of the EET Experimental Group and the posttest variance of the EET Posttest-only Group, in terms of desire to teach elementary school, as measured by DT.

Optional Hypothesis III was not tested because of the outcome of Hypothesis I. This is consistent with the discussion in Chapter III relative to Hypothesis III and Optional Hypothesis III. Evidence of a testing effect would have required the comparison of the EET Experimental Group pretest variance with the EET Posttest-only Group posttest variance in order to cancel the influence of the pretest on the posttest.

Hypothesis IV

> There will be no difference between the pretest variance and the posttest variance of the CMM Experimental Group, in terms of desire to teach elementary school, as measured by DT.

A t-test was performed to test the significance of Hypothesis IV. The results of the t-test are given in Table 4.7.

Table 4.7. t-Test for Variance Differences of Desire to Teach for the CMM Experimental Group from Pretest to Posttest.

Test	n	df	r	t
DT	80	78	.591	.220

Mean score (pretest) = 1.19

Mean score (posttest) = 1.18

Variance (pretest) = .205

Variance (posttest) = .197

The null hypothesis of no difference between pretest and posttest variances of the CMM Experimental Group, in terms of desire to teach elementary school, was not rejected at the .05 level of confidence. The variance of DT scores did not change significantly from pretest to posttest.

Hypothesis V

> There will be no difference between the pretest variance and the posttest variance of the CMM Control Group, in terms of desire to teach elementary school, as measured by DT.

A t-test was performed to test the significance of Hypothesis V. The results of the t-test are given in Table 4.8.

Table 4.8. t-Test for Variance Differences of Desire to Teach for the CMM Control Group from Pretest to Posttest.

Test	n	df	r	t
DT	35	33	.839	.780

Mean score (pretest) = 1.37

Mean score (posttest) = 1.29

Variance (pretest) = .652

Variance (posttest) = .562

The null hypothesis of no difference between pretest and posttest variances of the CMM Control Group, in terms of desire to teach elementary school, was not rejected at the .05 level of confidence. The variance of DT scores did not change significantly from pretest to posttest.

Summary of Data Collected

The data collected in this study are summarized in the figures and tables that follow. The intention is an empirical presentation of the data, without any interpretative comments.

Figure 4.1 is a graphical comparison of mean scores on CLIT, MTAI, and DT for the EET Experimental Group and the EET Posttest-only Group. Gain scores from pretest to posttest for the EET Experimental Group are included. The CLIT mean scores range from 183.6 to 194.8 on a scale which has a minimum of 10 and a maximum of 240. The mean MTAI scores range from 52.13 to 57.27. The MTAI scale ranges from -150 to +150.

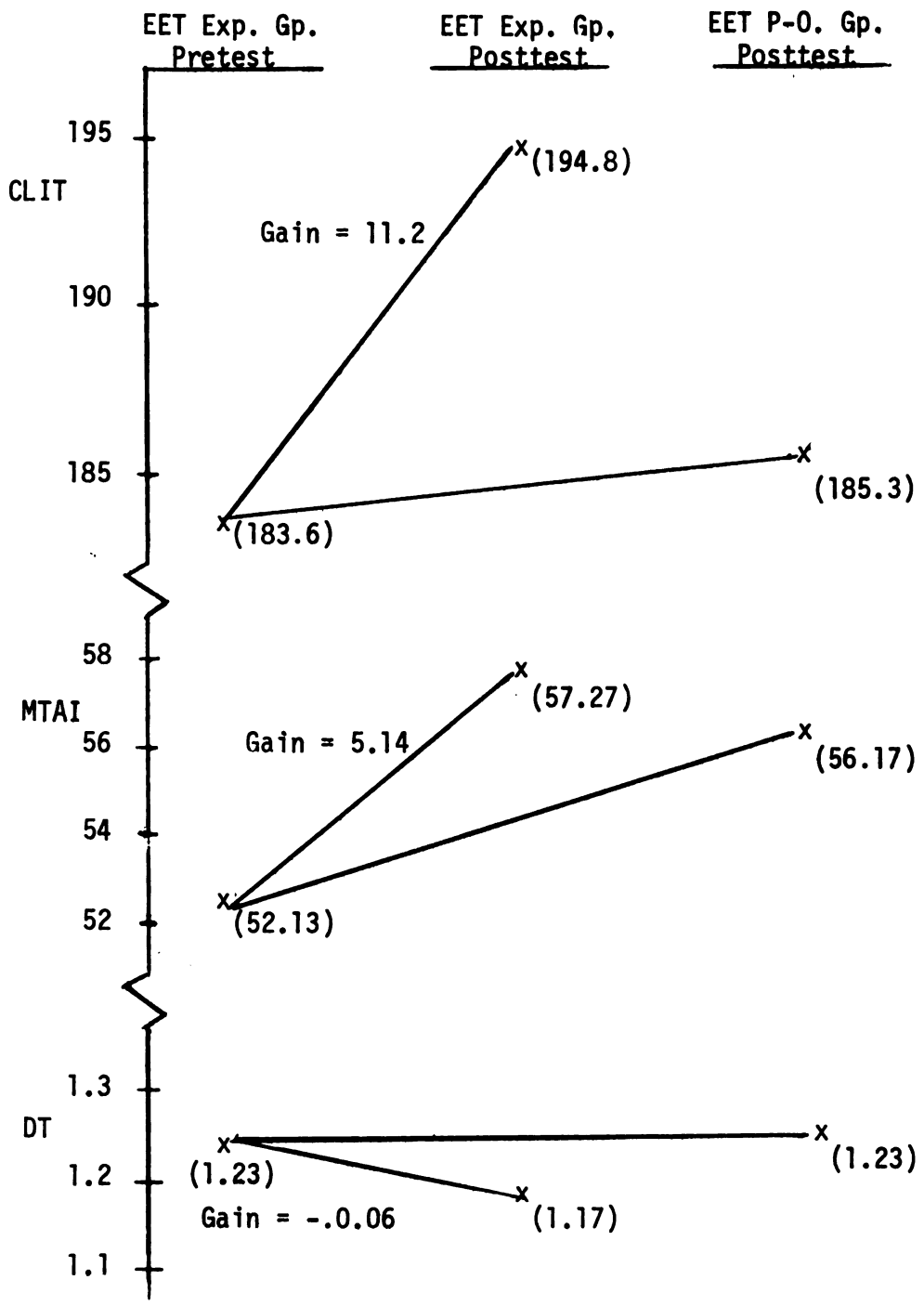

Figure 4.1. Comparison Scores on CLIT, MTAI, and DT.

DT mean scores cover a range 1.17 to 1.23 on a 1 to 5 maximum range.

The focus of Figure 4.2 is on DT. Both pretest and posttest means are given along with gain scores of the three groups which were pre- and posttested. Figure 4.2 is associated with Hypotheses III, IV, and V. Since the emphasis of these hypotheses is on variances, a variance score accompanies the mean of each group.

Figure 4.3 contains a set of frequency distribution graphs. The graphs show pre- and posttest results for the EET Experimental Group, the CMM Experimental Group, and the CMM Control Group.

Tables 4.9 and 4.10 are coordinated with each other. Table 4.9 is a list of activities or situations in which students might have participated during EET or CMM. In the first column, "Item #," of Table 4.10, the number of certain of these activities or situations is listed. Those items are shown which were selected as first, second, or third choice by students in response to the second part of DT-2. The numbers in Table 4.10 indicate the frequency with which any given item was selected as first, second, or third choice in terms of its influence on a student's desire to teach elementary school.

In Table 4.11, the means of the gain scores on the three dependent variables, confidence level of teaching, attitude toward teaching, and desire to teach elementary school, are presented. The mean gain score for each test is listed according to the various level of the ten demographic characteristics which were investigated in this study.

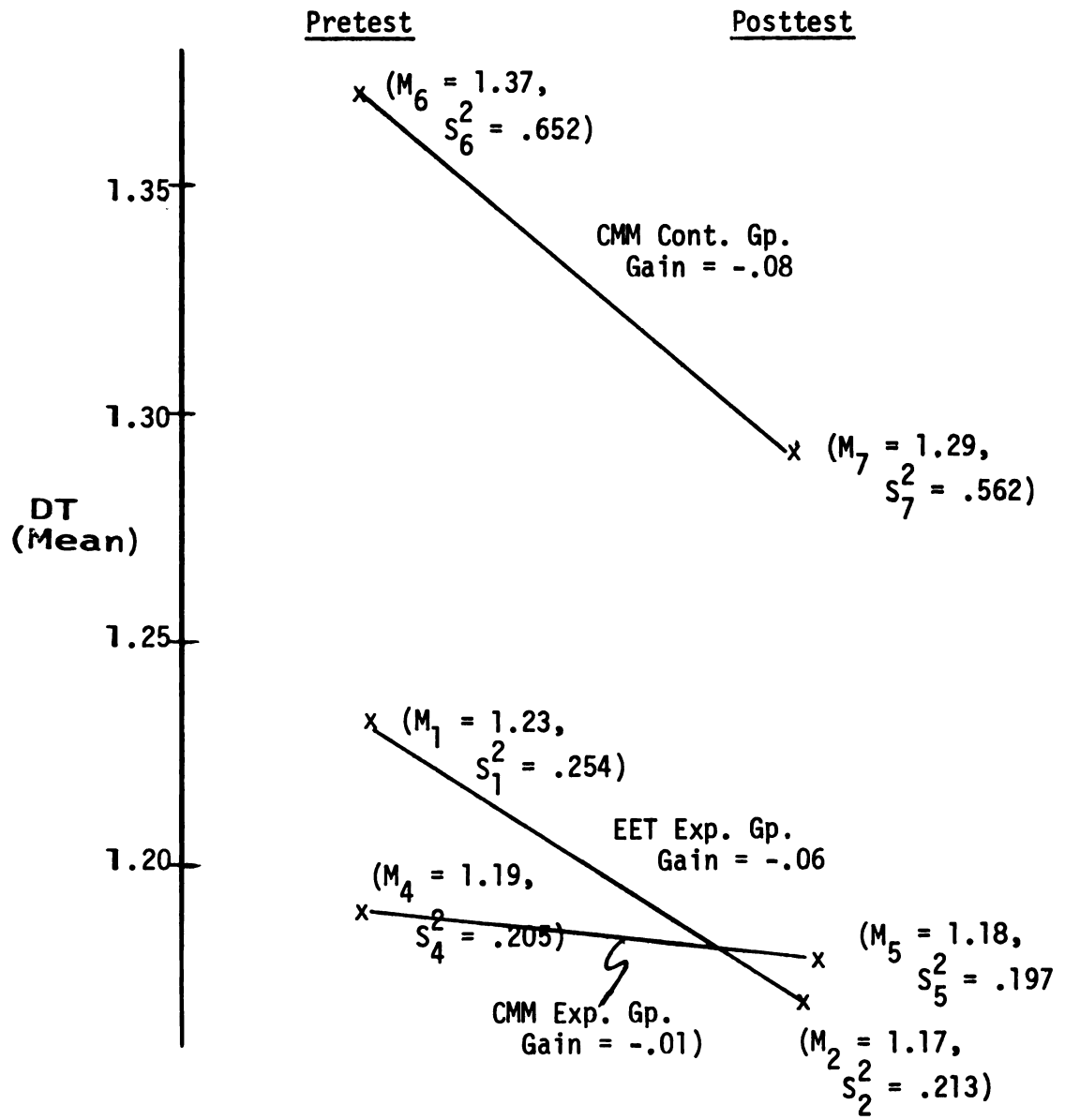

Figure 4.2. Comparison Scores on DT.

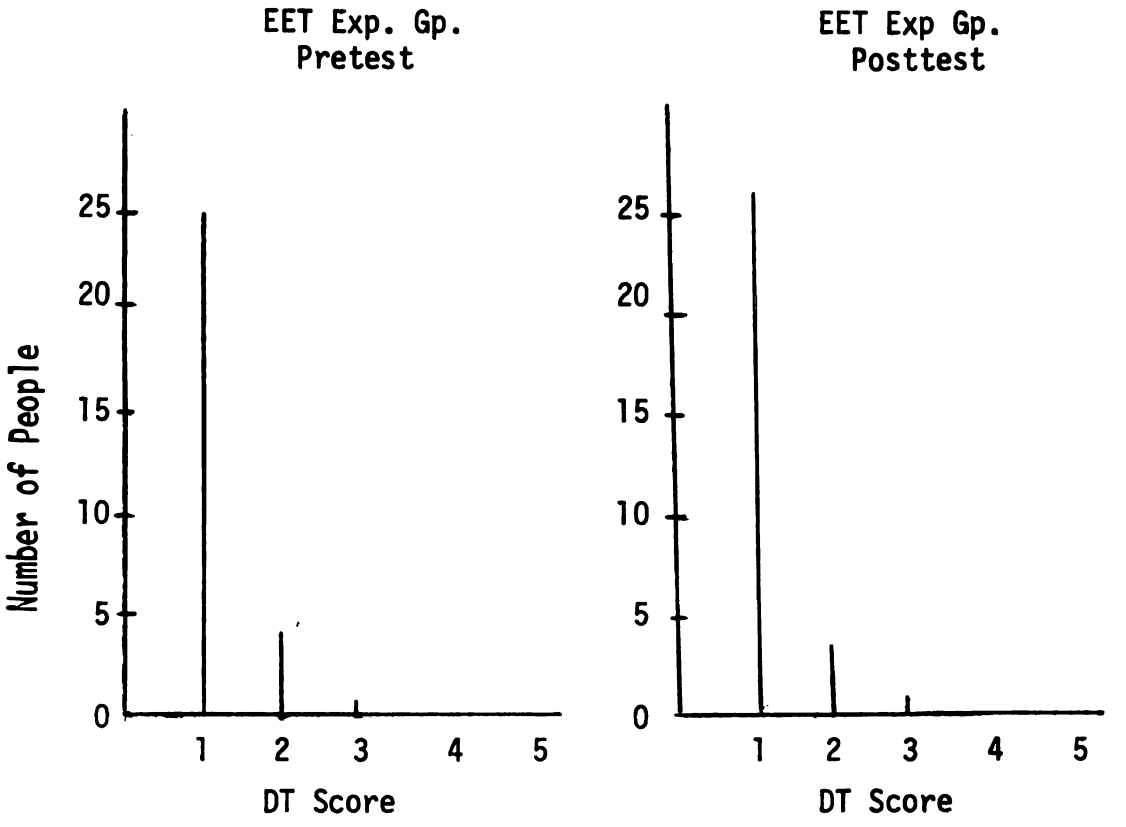

Figure 4.3. Frequency Distribution of DT Scores.

continued

Figure 4.3 (cont'd)

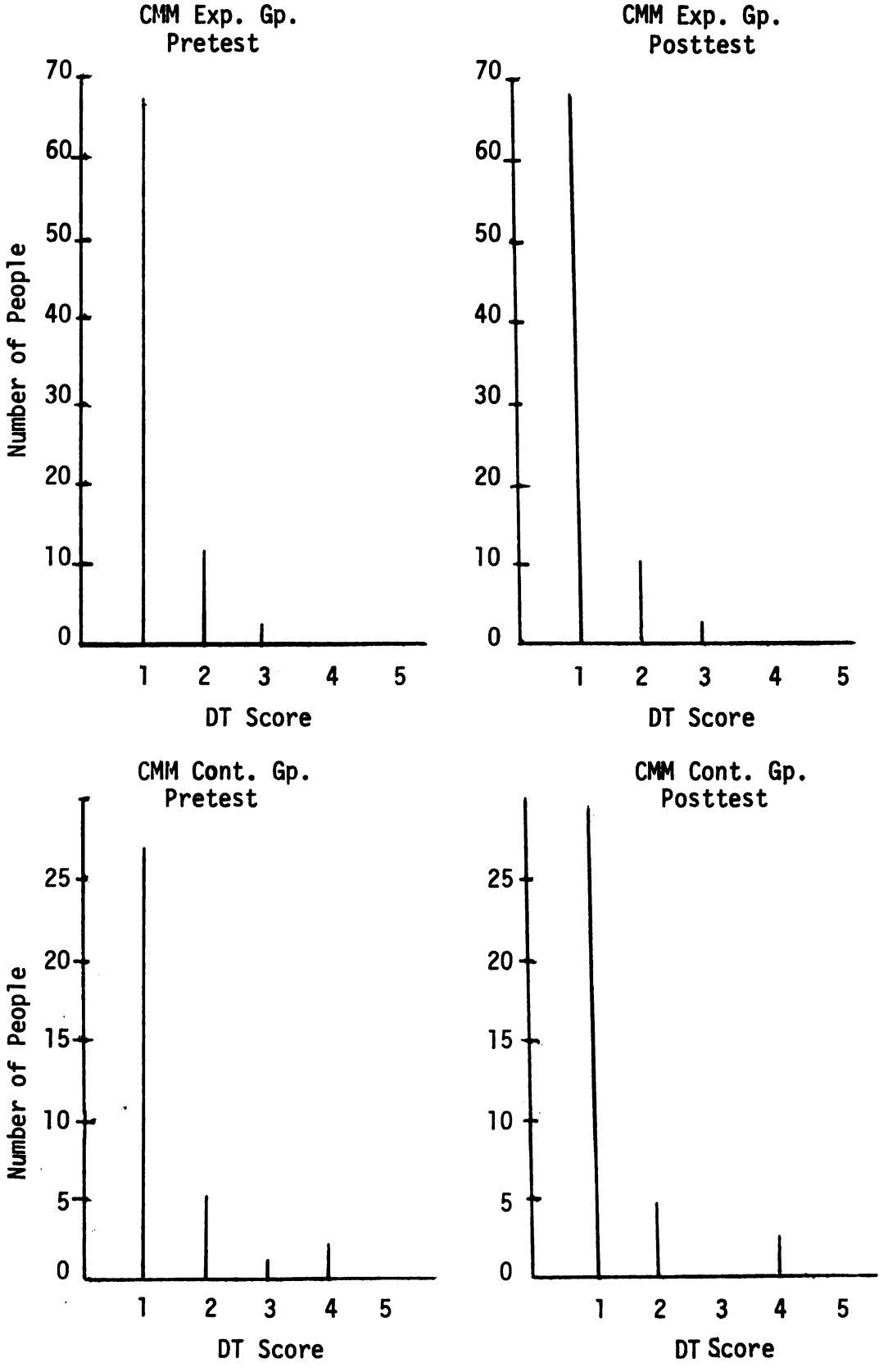

Table 4.9. Types of Activities of EET and CMM.

1. Bulletin boards
2. Playground and/or hall supervision
3. Classroom social control (discipline)
4. Conducting group discussion
5. Working with small groups
6. Planning lessons
7. Contacting parents
8. Resolving child--child difficulties
9. Listening to children
10. Maintain records (grades, attendance, etc.)
11. Correcting papers
12. Observing children's behavior
13. Correcting pupils' errors
14. Constructing tests
15. Attending meetings (faculty, PTA, etc.)
16. Association with teachers
17. Outside professional reading
18. Committee work
19. Working with slow learners
20. Administering tests
21. Housekeeping chores in the classroom
22. Extra-curricular activities
23. Obtaining and/or preparing materials
24. Working with subject matter
25. Working with special subjects (art, P.E., etc.)
26. Working with supervising teacher
27. Working with administrators

Table 4.10. Factors Influencing Students' Desire to Teach

Item #	EET Exp. Gp.	CMM Exp. Gp.	CMM Cont. Gp.
		Number of First Choices	
3	1	1	0
4	1	1	2
5	0	3	4
6	0	1	0
8	1	1	0
9	8	8	11
12	5	4	3
16	0	0	1
17	0	0	1
19	4	3	1
24	1	1	1
25	2	0	1
26	3	2	0
		Number of Second Choices	
2	2	1	0
3	0	0	1
4	1	1	2
5	6	3	4
6	0	2	0
9	4	4	4
12	7	6	3
16	0	0	1
19	3	3	4
20	0	0	1
22	1	0	0
23	0	1	1
24	0	2	0
26	1	2	2
		Number of Third Choices	
1	0	0	1
3	0	0	1
4	0	1	2
5	4	4	6
6	0	1	1
8	0	2	1
9	7	4	4
12	2	6	2
13	1	0	0
16	0	1	1
19	4	3	3
23	0	1	1
24	0	1	0
25	0	1	0
26	2	0	2

Table 4.11. Mean Gain Scores According to Demographic Characteristics

Characteristic	Mean Gain Score		
	CLIT	MTAI	DT
1. Age			
18-20 yr. (n = 27)	14.0	4.52	-.037
21-23 yr. (n = 3)	-14.7	10.7	.000
2. Marital Status			
Single (n = 29)	11.7	5.14	-.035
Married (n = 1)	- 4.00	5.00	.000
3. Socio-Economic Background			
Professional and/or Business (n = 15)	8.40	2.87	-.067
Technical and/or Skilled Labor(n = 12)	12.4	8.42	.083
Unskilled Labor (n = 3)	20.0	3.33	-.333
4. Prior Contact with Children			
1 (n = 5)	13.4	5.40	.000
2 (n = 9)	16.0	3.67	.000
3 (n = 14)	8.21	6.50	-.071
4 (n = 2)	4.50	1.50	.000
5. Sex			
Male (n = 5)	7.40	13.6	.000
Female (n = 25)	11.9	3.44	-.040
6. College Class			
Freshman (n = 9)	10.1	-1.78	.000
Sophomore (n = 14)	14.3	7.43	.000
Junior (n = 6)	8.00	10.2	-.167
Senior (n = 0)			
Other (n = 1)	- 4.00	5.00	.000
7. Day of the Week			
Monday (n = 7)	5.43	1.29	.000
Tuesday (n = 6)	15.2	-4.67	.000
Wednesday (n = 6)	10.0	7.33	.000
Thursday (n = 5)	- 4.80	24.0	.000
Friday (n = 6)	28.3	1.50	-.167
8. Grade Level			
K-3 (n = 9)	6.56	6.67	.000
4-6 (n = 7)	15.6	2.14	-.286
Combination (n = 14)	11.9	5.64	.071
9. Type of Teacher			
1 Open (n = 10)	8.80	7.40	-.100
2 (n = 20)	12.4	4.00	.000
3 (n = 0)			
4 Closed (n = 0)			
10. Amount of Teacher Aiding			
46-62% (n = 10)	17.3	9.60	-.100
63-67% (n = 10)	8.20	4.90	.000
68-72% (n = 10)	8.00	.900	.000

Summary

The five hypotheses in this study are listed in the first column below. A statement of the outcome of significance testing for each is given in the second column.

Hypotheses	Results
I. There will be no difference between the mean posttest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school, as measured by CLIT, MTAI, and DT, respectively.	The null hypothesis was not rejected at the .05 level of confidence.
II. There will be no gain from pretest to posttest for the EET Experimental Group, in terms of confidence level for for teaching, attitude toward teaching, and desire to teach elementary school as measured by CLIT, MTAI, and DT, respectively.	The null hypothesis was rejected at the .05 level of confidence.
IIa. There will be no gain from pretest to posttest for the EET Experimental Group, in terms of confidence level for teaching, as measured by CLIT.	The null hypothesis was rejected at the .05 level of confidence.
IIb. There will be no gain from pretest to posttest for the EET Experimental Group, in terms of attitude toward teaching, as measured by MTAI.	The null hypothesis was not rejected at the .05 level of confidence.
IIc. There will be no gain from pretest to posttest for the EET Experimental Group, in terms of desire to teach elementary school, as measured by DT.	The null hypothesis was not rejected at the .05 level of Confidence.
OII. There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of confidence level for teaching, attitude toward teaching, and desire to teach elementary school, as measured by CLIT, MTAI, and DT, respectively.	The null hypothesis was not tested.

Hypotheses	Results
OIIa. There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of confidence level for teaching, as measured by CLIT.	The null hypothesis was not tested.
OIIb. There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of attitude toward teaching, as measured by MTAI.	The null hypothesis was not tested.
OIIc. There will be no difference between the mean pretest score of the EET Experimental Group and the mean posttest score of the EET Posttest-only Group, in terms of desire to teach elementary school, as measured by DT.	The null hypothesis was not tested.
III. There will be no difference between the pretest variance and the posttest variance of the EET Experimental Group, in terms of desire to teach elementary school, as measured by DT.	The null hypothesis was not rejected at the .05 level of confidence.
OIII. There will be no difference between the pretest variance of the EET Experimental Group and the posttest variance of the EET Posttest-only Group, in terms of desire to teach elementary school, as measured by DT.	The null hypothesis was not tested.
IV. There will be no difference between the pretest variance and the posttest variance of the CMM Experimental Group, in terms of desire to teach elementary school, as measured by DT.	The null hypothesis was not rejected at the .05 level of confidence.
V. There will be no difference between the pretest variance and the posttest variance of the CMM Control Group, in terms of desire to teach elementary school, as measured by DT.	The null hypothesis was not rejected at the .05 level of confidence.

The analysis of the results of this study indicates that:

1. There is no difference between the posttest results of the EET Experimental Group and the EE^{T} Posttest-only Group.

2. There is a significant change from pretest to posttest for the EET Experimental Group in terms of confidence level for teaching, but not in terms of attitude toward teaching nor desire to teach elementary school.

3. There is no significant change from pretest to posttest in terms of the variance of desire to teach elementary school for any of the groups tested.

CHAPTER V

SUMMARY AND CONCLUSIONS

Chapter V includes a summary of the study, conclusions drawn from the data, implications for change, and recommendations for further research.

Summary of the Study

In the present study, an attempt has been made to provide answers to the following questions:

1. What evidence is there to show whether students increase, decrease, or remain the same in terms of their confidence level for teaching, during the time they take EET?

2. What evidence is there to show whether students become more positive, more negative, or remain the same in terms of their attitude toward teaching, during the time they take EET?

3. What evidence is there to show whether students increase, decrease, or remain the same in terms of their desire to teach elementary school, during the time they take EET?

Two groups of thirty students each were randomly selected from the initial enrollment list of EET, Spring Term, 1973, at Michigan State University. These two groups were then randomly assigned to one of two conditions in the study. One group, the EET Experimental Group, was randomly assigned to receive the pretests, treatment, and posttests. The other group, the EET Posttest-only Group, was randomly assigned to receive the treatment and posttests.

The treatment consisted of all the activities of EET, a course which involves weekly seminars and one day per week in an elementary classroom as a teacher aide. The pretests and posttests consisted of the Confidence Level Inventory for Teaching (CLIT), a self-measure of confidence level for teaching; the Minnesota Teacher Attitude Inventory (MTAI), a measure of attitude toward teaching; and the Desire to Teach Form (DT), a measure of the extent of a student's desire to teach elementary school.

The study was extended to CMM, an advanced education course at Michigan State University, in which approximately 70% of the students have taken EET previously. The purpose of the extension was to investigate the influence of EET on CMM students, in terms of the stability of their desire to teach elementary school. Consequently, CMM students were assigned to one of two groups, those who had had EET (the CMM Experimental Group) and those who had not had EET (the CMM Control Group). Both groups were pre- and posttested with DT to determine the extent of change during CMM in their desire to teach elementary school.

Five hypotheses were constructed to answer the three research questions listed above and to examine the influence of EET on CMM students in terms of the stability of their desire to teach. The five hypotheses are listed below, in question form, along with statistical methods of significance testing and the results.

I. Are there differences between posttest results of the EET Experimental Group and the EET Posttest-only Group?
Method of testing: Multivariate one-way ANOVA.
Results: No significant differences.

II. Are there differences between pretest and posttest results in terms of confidence, attitude, and desire to teach?
Method of testing: Multivariate one-way ANOVA.
Results: Significant increase in confidence; no significant differences for attitude or desire to teach.

III. Are there differences between pretest and posttest variances in terms of desire to teach for students taking EET?
Method of testing: t-Test.
Results: No significant difference.

IV. Are there differences between pretest and posttest variances in terms of desire to teach for students taking CMM who have had EET?
Method of testing: t-Test
Results: No significant difference.

V. Are there differences between pretest and posttest variances in terms of desire to teach for students taking CMM who have not had EET?
Method of testing: t-Test.
Results: No significant difference.

Ten demographic characteristics and their relationship to test scores were investigated to determine whether or not confidence level for teaching, attitude toward teaching, and desire to teach elementary school varied according to certain personal and situational characteristics. This determination was made on the basis of inspection of data rather than statistical significance testing. The ten characteristics are listed below.

1. age
2. marital status
3. socio-economic background
4. prior contact with children
5. sex
6. college class level
7. day of the week the student participates
8. grade level in which the student participates
9. teaching style of the classroom teacher to which the student is assigned
10. relative amount of teacher aiding in which the student engages,

The most outstanding differences in CLIT, MTAI, and DT scores were found in:

1. Age, where the 18 to 20 year-old students showed a substantial gain in confidence level while the 21 to 23 year-olds experienced a substantial loss.

2. Marital status, where the single students showed a moderate gain in confidence and the married student showed a small loss.

3. Socio-economic background, where the gain in confidence level is from moderate to large going from higher to lower socio-economic standing.

4. Prior contact with children, where the largest gain in confidence level is among those students who have had the most contact with children.

5. Sex, where the males showed a substantial increase in attitude score and the females showed a small increase in attitude.

6. College class, where juniors showed a moderate gain in both confidence level and attitude, while freshmen were experiencing a moderate gain in confidence level but a negative change in attitude score.

7. Day of the week, where Thursday students recorded a drop in confidence scores while all others were experiencing a gain, especially Friday with a substantial gain. Likewise, Thursday students showed a large gain in attitude score while others showed only a small increase, except Tuesday students who showed a negative change in attitude.

8. Grade level, where the upper grade and combination class participants recorded the largest gains in confidence level.

9. Teacher type, where the moderately open classroom teachers were associated with students who showed a substantial gain in confidence level.

10. Amount of teacher aiding, where those who spent approximately half of their time aiding showed a substantial gain in confidence level. Students who aided about two-thirds of the time recorded a gain in attitude of less than one point.

The greatest gain in confidence level was among the students who were in their school assignment on Friday. The greatest drop in confidence level was in the 21 to 23 year age range. The largest increase in

attitude toward teaching was in the Thursday group, and the largest loss in attitude score was among Tuesday students. The change in desire-to-teach scores was negligibly small in all groups.

The posttest form of DT (DT-2) includes a list of activities or situations in which students in EET or CMM are likely to participate. Students were asked to select the ten items from this list that were the most influential in determining the extent of their desire to teach. Analysis of the responses makes it clear that the most influential experiences in EET and CMM are those in which the student is working with elementary pupils. The items which were selected most often as first choices are shown in Table 4.10 and are listed below.

1. Listening to children (Item #9)
2. Observing children's behavior (Item #12)
3. Working with slow learners (Item #19)
4. Working with small groups (Item #5)

Conclusions Drawn from the Data

The purpose of Hypothesis I is to detect the effects of the pretests on the posttest results. If the posttest results of the EET Posttest-only Group had been significantly different from the posttest results of the EET Experimental Group, this would have been an indication of a testing effect. The implication of such an effect calls attention to the advance organizer role of the pretests. Since there is insufficient evidence to support finding a significant difference between the EET Experimental Group and the EET Posttest-only Group on the posttests, it must be concluded that the pretests exert no significant influence as an advance organizer for the posttests. This conclusion suggests that those who

staff EET or other similar courses at Michigan State University or at other institutions need not be concerned with either positive or negative effects of a pretesting program on the posttest results. A more immediate consequence of this conclusion is the enabling of the researcher in the present study to perform further analyses on gain scores from pretest to posttest. Had a significant difference been evident in the analysis of Hypothesis I, it would have been necessary to do further analyses between the EET Experimental Group and the EET Posttest-only Group on the basis of group means rather than gain scores, as suggested by Optional Hypotheses II and III.

For the reasons just stated, Hypotheses II and III were selected for analysis rather than their optional counterparts. Hypothesis II has as its purpose the detection of a gain which is significantly different from zero for the EET Experimental Group on CLIT, MTAI, and DT. There is sufficient evidence to reject the null hypothesis of no gain, indicating that a gain which is significantly different from zero did occur with some combination of CLIT, MTAI and DT scores. Further analysis of Hypotheses IIa, IIb, and IIc provides evidence to support a gain which is significantly different from zero on CLIT but not on MTAI or DT. The gain in confidence level is in a positive direction. A comparison of similar studies in which CLIT and/or MTAI were used shows a general consistency between their results and the results of the present study. Czajkowski[1] reports that post-student teaching ratings were significantly

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[1]Theodore J. Czajkowski, "The Relationship of Confidence for Teaching to Selected Personal Characteristics and Performance of Student Teachers," Unpublished Doctoral Dissertation, Michigan State University, 1968, p. 85.

higher than pre-student teaching CLIT ratings. Smith[2] likewise found a significant positive increase in confidence level for teaching to occur during student teaching among the students in her study population. She reports significant negative changes in attitude toward teaching as measured by MTAI. Schrag[3] reports no significant difference occurring on CLIT scores for vocational educational teachers during three- and six-week time periods.

It must be borne in mind that the results just cited extend from an early clinical teacher education course, EET (the present study), through student teaching (Czajkowski and Smith) to on-the-job teaching (Schrag). Differences in results from one study to another could possibly be explained on the basis of these differences in amount of training and/or experience of the subjects.

The results of Hypothesis II support the following conclusions:

1. That students can be expected to experience a positive change in their confidence level for teaching during an early clinical course like EET.

2. That an early clinical course is not likely to be accompanied by a change of students' attitudes toward teaching, and

3. That students entering an early clinical course generally have decided whether or not they want to teach, and they are not likely to change the extent of their desire to teach during the experience.

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[2]Martha L. Smith, "A Study of Elementary Student Teaching Confidence in and Attitude Toward Music and Changes That Occur in a Student Teaching Experience," Unpublished Doctoral Dissertation, Michigan State University, 1969, p. 155.

[3]Marie Carol Schrag, "An Assessment of Selected Attitudinal Changes in Secondary Vocational Teachers," Unpublished Doctoral Dissertation, Michigan State University, 1972, pp. 59-60.

Czajkowski[4] holds that the most realistic scores of CLIT are probably in the middle ranges rather than toward one extreme or the other. In view of this concept, it appears that EET does not provide an especially good opportunity for beginning elementary education students to get an effective and realistic look at the teaching process. Probably the experiences in EET give the student a chance to observe a teacher in action without an adequate opportunity to try some teaching himself, thereby resulting in an inflated sense of confidence for teaching. The question of the appropriateness of a pre-theoretical clinical course has been raised by Smith et al.[5] Assuming that a high CLIT score for pre-service teachers is indicative of an unrealistic sense of confidence for teaching, the results of this study would tend to support Smith's skepticism about the value of a pre-theoretical clinical course.

As an alternate explanation of the increase in confidence during an early clinical course, the possible uniqueness of today's students may be considered. Even though the notion of a unique set of characteristics is not supported by data, it can be argued intuitively that some elements in today's society have decreased the motivation for students to enter the teaching profession. Two supporting examples can be cited: 1. the apparent oversupply of teachers, and 2. the lack of necessity of maintaining draft-exempt status. If the proportion of students seeking

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[4]Czajkowski, op. cit., p. 95.

[5]E. Brooks Smith, Richard E. Collier, Dorothy M. McGeoch, and Hans C. Olsen, A Guide to Professional Excellence in Clinical Experience in Teacher Education, Executive Committee--Association for Student Teaching, February, 1970, p. 5.

to enter teaching because of a commitment to the profession is higher currently than in the past, it may very well be expected that they will exhibit a higher level of confidence. This argument is only speculative.

The results of the other two measures obtained in this study, i.e. attitude toward teaching and desire to teach elementary school, do not provide support for an early clinical course such as EET. Attitude scores were, with one exception, in the positive range on the pretest. This is an indication that students entering EET have a rather positive attitude toward teaching initially. Considering the result of no significant change in attitude during EET, it can be concluded that a positive change in attitude toward teaching during EET is not a likely accomplishment.

A similar line of reasoning leads to the same conclusion regarding the desire to teach. Students enter EET with a relatively firm desire to teach elementary school, and they do not change significantly in that respect during the course.

Examination of Table 4.11 reveals some apparent relationships of interest. Students in the 21 to 23 year age range experienced a change in confidence level toward a more realistic position, assuming the middle range of CLIT scores are more realistic than the extreme scores. At the same time, they showed a positive change in attitude toward teaching. Likewise, the one married student moved toward a more realistic position in terms of confidence level from pre- to posttest. Students from a relatively low socio-economic background showed a substantial gain in confidence level score but almost no change in attitude toward teaching. Among the various levels of prior contact with elementary-age

children, there is little change in attitude during EET. Those students with more prior contact with children, however, did show more than the average gain in CLIT scores. Females gained more confidence for teaching than did males, but males showed a substantially larger positive change in attitude than did females. Students in the early college years experienced a gain on CLIT scores and either a small positive change or a negative change in attitude. The one special student moved toward a more realistic position on the CLIT scale from pre- to posttest. Students who participated in the elementary classroom on Thursday showed a small negative change in confidence level for teaching and a large gain in attitude toward teaching. The Friday group made a large gain in confidence level and a very small gain in attitude. Tuesday's students showed a negative change in attitude. There were rather large positive changes in confidence level for teaching among students who participated in either an upper grade or a combination classroom. The gain in attitude score was small across all grade levels. Those students who worked with moderately open classroom teachers showed a fairly large gain in confidence level. Students who spent a major portion of their time acting as a teacher-aide gained less than an average of one point on the attitude scale, whereas their counterparts who engaged in teaching activities nearly half of their time showed an increase of nearly ten points.

Hypotheses III, IV, and V are all related to the influence of EET on the stability of students' desire to teach elementary school. The results of Hypothesis III support the conclusion that students who approach EET, do so with a rather firm desire to teach, and that they do

not significantly change this commitment during EET. Only three out of thirty students recorded any change from pre- to posttest on DT, two of them in a negative direction, and all three changed only one point each. (It should be remembered that a smaller score on DT is indicative of a greater desire to teach.) Apparently, EET does not have any significant influence on the extent of students' desire to teach while they are taking the course.

The analysis of Hypotheses IV and V add further support to the conclusion of Hypothesis III, that students are not encouraged to change their position in terms of their desire to teach during a pre-student teaching clinical experience. There was no significant change in the variance of DT scores from pretest to posttest for either the CMM Experimental Group or the CMM Control Group. The data for Hypothesis IV show that out of eighty students, five recorded a total positive change of five points while five others showed a negative change of six points. Of the thirty-five students in the CMM Control Group, two recorded a total positive change of two points and five showed a change of five points total in a negative direction. Remembering that the subjects studied in Hypothesis V had not had EET prior to CMM, the conclusion of no influence of EET on the stability of DT scores in CMM can be supported.

The similarity of the distribution of DT scores from one group and time to another is worth noting (Figure 4.3). The highest score recorded (lowest desire to teach) was "four," and this was for two people out of a total of 145 who were pretested and posttested. Five people scored "three" on at least one of the tests. This leaves 138 students (95.2%) who were either "certain" or "fairly certain" both before and after their

clinical course that they wanted to teach elementary school.

Some interesting trends developed from responses to the second part of DT-2, a list of activities or situations in which EET and CMM students might have participated. The students were asked to rank order the ten items from this list (Table 4.9) that they thought were the most influential in determining the extent of their desire to teach. Since more than 95% of all students who were tested recorded a "one" or "two", the activities selected can be interpreted as being positively influential. The analysis of these data focuses on the items which were selected as first, second, and third choices. Some items were never selected as a first, second, or third choice, and so were omitted from Table 4.10. The choices are quite consistent from one group to another, as Table 4.10 reveals. The items selected most often as first choices are, in order: 1. Listening to children, Item #9, 2. Observing children's behavior, Item #12, 3. Working with slow learners, Item #19, and 4. Working with small groups, Item #5. Second choices are the same four items in the following order: 1. Observing children's behavior, 2. Working with small groups, 3. Listening to children, and 4. Working with slow learners. The same four were the leading third choices in this order: 1. Listening to children, 2. Working with small groups, 3. Working with slow learners, and 4. Observing children's behavior. Examination of the items listed in Table 4.10 reveals that some items are oriented toward working with pupils, others are oriented toward adults (teachers, administrators, parents), and still others relate to things (bulletin boards, subject matter, etc.). Without exception, the activities selected most often as first, second, or third choices are pupil-oriented. It is very clear that students who

want to teach after having taken a clinical course in education consider pupil-oriented activities the most positively influential factors of their experience.

On the basis of correlation data in Table 3.1, it can be concluded that the instruments selected are reasonably reliable tests of the variables that they measure (CLIT-pre to CLIT-post, r = .711; MTAI-pre to MTAI-post, r = .770; DT-pre to DT-post, r = .772). Correlation coefficients between the tests (e.g. CLIT-MTAI) indicate that the instruments are probably measuring different variables. All values are either negative or relatively low in the positive range (highest = .238 for CLIT-post-EET Experimental Group to MTAI-post-EET Posttest-only Group). This indicates that the three dependent variables: confidence level for teaching, attitude toward teaching, and desire to teach elementary school, are quite independent from each other, i.e. the tests are probably not measuring the same variable. Support is thereby provided for the conclusion that confidence level for teaching, attitude toward teaching, and desire to teach elementary school are appropriate choices as variables to be measured in a design of this nature.

In Chapter I of this dissertation, the suggestion is offered that EET may have some usefulness to

1. the pre-service teacher in aiding him in his decision whether or not to continue in elementary education,
2. those at Michigan State University who staff the course and who are responsible for making judgments regarding the feasibility of any given student's continuing in elementary education, and
3. public school personnel in their decision regarding future utilization of their classrooms as sites for field experience.

The conclusions of this study fail to give support to that suggestion. EET has not been accompanied by a change in confidence level toward a more nearly optimum position, a positive change in attitude, or an increase in the spread of scores of desire to teach. Therefore, use of the course for advising and decision-making regarding career teaching should be made with a great deal of caution.

The conclusions and implications discussed above must be considered in the perspective of the strengths and limitations of the design of the study. The following limitations seem especially important.

1. Since there is no control group for Hypotheses I, II, and III, EET cannot be considered a causative factor in the changes that occurred in the dependent variables. It is true that whatever changes occurred from pretest to posttest, did so during EET, and it seems probable that EET functioned as a causative factor, but evidence does not exist to conclude definitely that any given changes were a direct result of the course experiences.

2. The conclusions discussed in regard to the ten demographic characteristics and their relation to scores on CLIT, MTAI, and DT must be interpreted in the light of the limitation of relatively small samples (e.g. one married student), the inspection-of-data technique rather than statistical significance testing, and the non-randomness of the situational factors (day of the week the student participates, grade level in which the student participates, the teaching style of the classroom teacher to whom the student is assigned, and the relative amount of teacher aiding in which the student engages). These four factors were assigned on the basis of student choice, availability of classrooms and teachers, and convenience. In regard to teaching style of the classroom teacher, it should be noted that there were few, if any, authoritarian or closed teacher-types available. As a generalization, authoritarian-type teachers tend to prefer teaching without an aide, whereas those who accept an aide tend to be more open.

3. The students in the CMM Experimental Group and CMM Control Group do not compose a random sample of CMM students. Only those students were included who completed both the pretest and the posttest (DT) either in seminar session or individually after a telephone request.

4. Comparison of the results of Hypotheses III, IV, and V cannot be made on an equivalent basis because the EET students (Hypothesis III) had had no theoretical exposure to teacher education, whereas at least a part of the CMM students (Hypotheses IV and V) had.

5. Students were asked to place their name on each answer sheet. Even though they were assured that their test responses would not affect their course grade, there is a strong possibility that some students may have tended to score the way they thought they would look best, especially on a single-item test like DT. This effect may be emphasized because of the necessity of gaining entrance to elementary education by way of EET.

6. Apparently, choices "one" and "two" on DT did not discriminate finely enough among degrees of certainty in desire to teach. The researcher suspects that an anonymously administered test with more levels of certainty would have resulted in a greater spread of DT scores on both the pre- and posttests.

Implications for Change

When a research study such as the present one is conducted, hopefully there will be certain specific changes implied in the outcomes. Such is the case with this study. Some changes can be recommended with greater emphasis than others because of better support from the research findings. It is the hope of this researcher that the following implications for change will be considered in that perspective.

1. If students are to take an early clinical course in their teacher education program, a consistent and conscious effort should be directed toward the development of a realistic level of confidence for teaching. Exactly how this is to be done is not clear from this study, but a practical suggestion would be to provide more teaching activities and less teacher aiding. This suggestion is consistent with the current move toward differentiated staffing. Attitude scores and desire-to-teach data indicate that teacher education students of college age are ready for teacher preparation rather than for paraprofessional training.

2. The foregoing discussion leads to the second implication, that a clinical experience should in reality be a blend of theory and practice. Support for this implication is found in the

concept of training for teaching rather than for teacher aiding. Either before, or concurrently with, the opportunity to engage in teaching children in a formal classroom setting, students should acquire some theoretical knowledge of teaching and learning. Learning theory supports a piece-by-piece look at teaching before being exposed to the whole real world of the elementary classroom.

3. A clinical teacher education course should be provided for students who fit the various categories in which the most nearly optimum changes on CLIT, MTAI, and DT scores were recorded. These categories, though only weakly supported in some cases, include students who are older than the average, are upperclassmen, and have had little previous contact with elementary age children. The best day for the experience appears to be Thursday, with Tuesday and Friday to be avoided. Admittedly, this implication is highly idealistic. Its importance lies in the recognition of student characteristics and situations in which the optimum changes are likely to occur. The effort should then be directed toward a program that will include those students under those conditions.

4. In order to make a clinical course a positive influence on the students' desire to teach, the activities in which the students engage should be child-oriented. This implication is supported by the responses of students on the second part of DT-2. Further support is found in the consistency of this implication with the recommendation to provide teaching rather than aiding activities. A list of appropriate experiences should include, "listening to children," "observing children's behavior," "working with small groups," and "working with slow learners."

5. Caution should be exercised when using EET as a basis for advising and decision-making regarding career teaching. This is because aide-type activities apparently do not provide the student with the kinds of experiences that enable him to attain a realistic confidence level for teaching, to improve his attitude toward teaching, or to analyze his desire to teach elementary school.

Recommendations for Further Research

Two guiding questions provide the basis for making recommendations for further research: 1. What changes should be recommended if this study were to be replicated? and 2. How can this study be extended to

effectively add to our knowledge in this field? The recommendations listed below represent answers to these questions.

1. The area of desire to teach should be explored more thoroughly. With the present apparent oversupply of teachers, and the accompanying competition for teaching positions, it is imperative that teacher education students have a clear feeling for whether and why they want to teach. The need is for the construction and validation of a more extensive instrument that will enable students and faculty to determine the extent to which a student desires to teach and to use this information as a factor in advising and in decision-making.

2. The concept of confidence level for teaching needs to be researched repeatedly and at various levels of training to see if a relationship exists between confidence level and effectiveness in teaching.

3. Even though attitude toward teaching has been the subject of many research studies, there is need for further research to investigate the role of attitude change in pre-student teaching clinical experiences.

4. A need exists for further research into the relationship of confidence level for teaching, attitude toward teaching, and desire to teach elementary school to clinical courses that are child- and teaching-oriented as opposed to a teacher-aide orientation.

5. Further research is needed in the area of pretests as advance organizers for a clinical education course. Even though evidence from the present study does not support the idea that a pretest acts as an advance organizer, the results need to be confirmed or repudiated.

6. The present study should be replicated with provision for anonymity of respondents. This may provide more reliable information especially in the area of desire to teach.

7. The relationship of confidence level, attitude, and desire to teach with various demographic characteristics should be explored further, with special emphasis on the day of the week. The results of the present study do not provide a clear pattern of relationships in terms of these characteristics, but there are outstanding differences that should be isolated and investigated further.

8. A research project with longitudinal and lateral dimensions should be conducted. Such a project should extend over a period

of at least five years in order to follow one generation of students through pre-service teacher training and the first year of teaching. It should encompass all the field-based courses in the teacher education curriculum. The effort should be directed toward relating measurable variables like confidence level for teaching, attitude toward teaching, and desire to teach to effectiveness in classroom teaching.

In the continuing search for effectiveness in teaching, a variety of personal and situational characteristics must be investigated. The present study stands as evidence to support the inclusion of confidence level for teaching, attitude toward teaching, and desire to teach among those variables.

APPENDICES

APPENDIX A

CHECKLIST OF EXPLORING TEACHING ACTIVITIES

APPENDIX A

CHECKLIST OF EXPLORING TEACHING ACTIVITIES

College of Education
Michigan State University
September, 1971

Name_____

Student Number_____

TO STUDENT: Please complete this form and return it to Dr. Shirley Brehm, 358 Erickson Hall. It will become a part of your application for admission to an elementary teacher certification program.

Check most appropriate column(s).

	Daily	Weekly	1 Time	2 or more times
Worked in principal's office				
Worked in library				
Visited with custodian				
Assisted in keeping room neat and orderly				
Assisted in lunch room supervision				
Assisted in playground supervision, supervision in auditorium				
Assisted with field trips				
Assisted with medical exams, innoculations				
Procured and ran A-V equipment				
Distributed books, supplies to students				
Took children to library, playground, office, nurse, etc.				
Passed out routine notices, information, bulletins				
Arranged bulletin board				
Collected, mounted, filed pictures				
Made name tags for children				
Arranged science corner, reading corner, etc.				
Prepared transparencies, as directed				
Prepared charts, as directed				
Prepared seatwork, as directed				
Prepared teaching aids: flip charts covered boxes for storage, etc.				
Ran duplicating equipment				
Collected money				
Helped arrange room for special activity				
Filled paste, paint jars				
Helped with clerical duties in school				

	Daily	Weekly	1 Time	2 or more times
Checked attendance, lunch counts, etc.				
Marked attendance on report cards				
Helped supervising children on/off bus				
Accompanied children on school bus ride				
Assisted with art, music, dramatic presentation				
Read story				
Arranged and supervised games/rainy day activities				
Did various housekeeping chores--cleaning closets, sorting materials, etc.				
Assisted in the collection and filing of pictures				
Put lessons for the next day on the chalk board				
Filed instructional materials for the teacher				
Ran errands for the teacher, such as taking money or record books to office, books to library, etc.				
Helped with children's clothing--zipper, shoes, etc., especially in kindergarten				
Made seating charts				
Cared for room pets				
Gave directions for an activity				
Conversed with children				
Listened to children				
Tutored child, children				
Worked with groups of 3-5 children				
Corrected papers				
Listened to oral reading of individual children				
Assisted individuals in correcting written work				
Contributed a special skill (_____) to the work of the classroom				
Called parents for teacher				
Attended parent-teacher conference				
Attended PTA meetings				
Attended teachers' meeting				
Maintained observational log of behavior of 1 or 2 children				
Maintained professional readings about teaching				
Attended professional meeting				
Scored and profiled achievement and diagnostic tests				
Acted as a proctor to the classroom teacher in test situations				

	Daily	Weekly	1 Time	2 or more times
Recorded data on cumulative folder, reading cards, etc.				
Assisted school secretaries in student registration and withdrawals, typing dittos, answering the telephone and other types of office work				
Distributed reading materials according to the results of tests				
Typing masters of reading forms, questionnaires, and testing profile forms				
Other--please list				

APPENDIX B

CONFIDENCE LEVEL INVENTORY FOR TEACHING

APPENDIX B

CONFIDENCE LEVEL INVENTORY FOR TEACHING

Jean M. LePere, Ph.D.
Shirley A. Brehm, Ph.D.

1st Revision, April, 1966
2nd Revision, April, 1967

Michigan State University College of Education

Student Name _____
(Last) (First) (Middle)

Student Number _____ Sex _____ Age _____

Previous Teaching Experience? _____

The following scale is designed to help us discover some of your feelings about a number of teaching areas. The instrument also introduces the beginning student to many facets of classroom teaching. This questionnaire is moderately long. We earnestly request your cooperation in answering all items carefully.

Check each item below on the numerical scale. 1 is the low and 10 is the high end.

1-2 I feel extreme concern about my abilities in this area.
3-4 I feel greater than average concern about my abilities in this area.
5-6 I feel average concern about and have average confidence in my abilities in this area.
7-8 I feel relatively confident about my abilities in this area.
9-10 I feel extremely confident about my abilities in this area.

I. WORKING WITH PEOPLE	1	2	3	4	5	6	7	8	9	10
1. Maintaining reasonable levels of expectations from pupils										
2. Gaining confidence and respect of pupils										
3. Communicating effectively with parents										

II. ESTABLISHING CLASSROOM CLIMATE	1	2	3	4	5	6	7	8	9	10
1. Adjusting appropriately between a permissive and authoritative manner in classroom situations										
2. Demonstrating judiciousness and fairness with all pupils										
3. Involving pupils in appropriate decision-making situations										
4. Working in such a manner that individual pupils seek help with personal problems										
5. Moving to specific learning activities as group shows readiness										
III. PLANNING FOR INSTRUCTION										
1. Consistently reading, studying, and gathering information for teaching plans										
2. Selecting appropriate teaching materials and having them immediately available for use when needed										
3. Planning thoroughly for short-term (daily) and long-term (unit or project) work										
4. Considering sequence and continuity of pupil experiences as key factors in learning										
5. Recognizing individual differences in evaluating pupil performance										
IV. MANAGING INSTRUCTION										
1. Directing and managing daily instruction so that pupils are interested, motivated, and shown a desire to learn										
2. Developing a questioning attitude and intellectual curiosity in pupils										
3. Developing effective processes of problem solving and critical thinking on the part of pupils										
4. Working effectively with pupils of small groups										
5. Recognizing the need for re-teaching at appropriate intervals										

	1	2	3	4	5	6	7	8	9	10
6. Dealing appropriately with unexpected situations as they develop										
7. Adapting instruction to changing needs of pupils and class										

V. COMMAND OF SUBJECT AND TEACHING MATERIALS

1. Showing persistence in seeking added information and knowledge from many sources in teaching subjects										
2. Seeking help and suggestions from specialists and consultants in subject areas where needed										

VI. PROFESSIONAL QUALITIES

1. Seeking opportunity to assume responsibility										
2. Having a sincere enthusiasm for the job										

APPENDIX C

DESIRE TO TEACH FORM 1

APPENDIX C

DESIRE TO TEACH FORM 1

Name_____

Student #_____

Please complete the following item. Your response is important as an expression of you. There is no one correct answer.

As a result of my experience up to this point in my life:

_____ 1. I am certain that I want to teach in elementary school (nursery, middle school/junior high, special education).

_____ 2. I am fairly certain that I want to teach in elementary school.

_____ 3. I am undecided.

_____ 4. I am fairly certain that I do not want to teach in elementary school.

_____ 5. I am certain that I do not want to teach in elementary school.

APPENDIX D

DESIRE TO TEACH FORM 2

APPENDIX D

DESIRE TO TEACH FORM 2

Name_____

Please complete the following items. Your responses are important as an expression of you. There is no one correct answer.

As a result of my experiences in my school assignment this term:

_____ 1. I am certain that I want to teach in elementary school (nursery, middle school, junior high, special education).

_____ 2. I am fairly certain that I want to teach in elementary school.

_____ 3. I am undecided.

_____ 4. I am fairly certain that I do not want to teach in elementary school.

_____ 5. I am certain that I do not want to teach in elementary school.

Following is a list of activities or situations in which you may have participated in your particular school assignment this term. It is undoubtedly true that there is a number of factors not included in this list that have influenced you in your desire to teach in elementary school. However, using this list, would you please identify the ten items that you believe influenced you most in your present feeling of either wanting to or not wanting to continue in elementary teaching.

Please number the ten items you choose from 1 to 10, with number 1 being the most influential.

_____ 1. Bulletin boards

_____ 2. Playground and/or hall supervision

_____ 3. Classroom social control (discipline)

_____ 4. Conducting group discussion

_____ 5. Working with small groups

_____ 6. Planning lessons

_____ 7. Contacting parents

_____ 8. Resolving child-child difficulties

_____ 9. Listening to children

_____10. Maintaining records (grades, attendance, etc.)

_____11. Correcting papers

_____12. Observing children's behavior

_____13. Correcting pupils' errors

_____14. Constructing tests

_____15. Attending meetings (faculty, PTA, etc.)

_____16. Associating with teachers

_____17. Outside professional reading

_____18. Committee work

_____19. Working with slow learners

_____20. Administering tests

_____21. Housekeeping chores in the classroom

_____22. Extra-curricular activities

_____23. Obtaining and/or preparing materials

_____24. Working with subject matter

_____25. Working with special subjects (art, P.E., etc.)

_____26. Working with supervising teacher

_____27. Working with administrators

APPENDIX E

EDUCATION 101A
FINAL STUDENT ASSESSMENT

APPENDIX E

EDUCATION 101A
FINAL STUDENT ASSESSMENT

R-2 Spring 1972

Name_____

Student #_____

Please complete all items. Your responses are important as an expression of you. There is no one correct answer.

A. SELF DETERMINATION IN CAREER PREFERENCE.

Please indicate one of the following:

"As a result of my experience in Exploring Teaching this term

_____ 1. Am absolutely certain I want to be an elementary (nursery, junior high, special education) teacher."
_____ 2. I am fairly certain I want to be an elementary teacher."
_____ 3. I am undecided."
_____ 4. I am certain I do not want to be an elementary teacher and I have decided to change my major to _____ (fill in).

Please explain your response above.

_____

_____

_____

B. SELF ASSESSMENT GENERALLY.

1. List 10 adjectives which describe you as a person.

a. _____ f. _____

b. _____ g. _____

c. _____ h. _____

d. _____ i. _____

e. _____ j. _____

2. List 10 adjectives which describe how others view you.

a. _____ f. _____

b. _____ g. _____

c. _____ h. _____

d. _____ i. _____

e. _____ j. _____

3. Please comment on any differences which might occur between the two lists above.

_____

_____

_____

_____

_____

4. List below situations where you were in positions of leadership in previous years. Be as specific and as complete as possible.

5. List below kinds of leadership roles you have now.

6. List below attributes you possess which will contribute to teaching.

7. List below some things in which you have been successful in your life.

8. What risks do you think were involved with attaining some or all of these successes?

9. On what did you base your decision for attempting things which later proved to be successful?

10. What is one example of something in which you failed?

11. How did you feel in that (#10) situation? Why did you feel that way?

12. What is the role of the school principal as you perceive it?

13. Please react to the following situation:

    You are a classroom teacher. You have planned to take the children to the museum for a trip related to what the children are studying in your room. Everything is ready, but two days prior to the time you were to go the principal informed you that you could not. What do you do? Why?

14. List three or four reasons why you might want children to be quiet.

15. Describe how you could go about getting children quiet.

16. If you get a low grade in a college course which you did not anticipate, what do you think you would do?

17. What made you think you wanted to be an elementary teacher? Do you still feel this way? Explain.

18. How much of a teacher's week is spent in teaching-related activities?

19. Do you plan to do other work during student teaching or while teaching? Circle one: Yes No If yes, explain.

20. What is it that children do with that which they learn in school? (Why do children go to school--beyond the fact the laws say they have to?)

21. If you had a choice in working with children all of one ability level (homogeneously grouped) or children with various ability levels (heterogeneously grouped) which would you choose and why?

22. Would you prefer to work with high, median, or low achieving children? Why?

23. List below things you feel that need to be changed in the schooling of children.

24. If you become a teacher what are you willing to do about these needed changes?

25. How do you feel about the kind of job you did this term as a teacher aide?

APPENDIX F

EXPLORING TEACHING

APPENDIX F

EXPLORING TEACHING

College of Education
Michigan State University
September, 1971

Beginning Fall Term 1971, all persons seeking admission to elementary teacher certification programs will enroll in a course "Exploring Teaching."

Since teaching involves so many different dimensions, several have been identified and suggested activities have been listed which might provide students with experience and insight into the work of the teacher so that he can better determine his own suitability for a career in teaching. These dimensions include:

Administration and Organization
Instruction under supervision
Counseling
Observing Growth and Development of Children
Evaluation
Public Relations with Staff, Parents
Professional Growth

The student should spend the equivalent of two days per week in a school setting or about 60 hours during term. Following are some types of experiences which seem to be desirable for this person to have. It is hoped that these persons may explore in each of the major areas. At the end of this list are some experiences which we think are not desirable because of the inexperience and lack of training of the persons involved in Exploring Teaching.

I. ADMINISTRATION AND ORGANIZATION

Highly Desirable That the Student Participate In

arranging classroom for varied instructional purposes
arranging procedures for in-out of room, building, restroom
maintaining social control
arranging bulletin board, display materials
procuring instructional materials and supplies
arranging playground time, gym
observing principal, custodian, librarian, nurse in working

He May or Might Assist in

arranging field trips
planning whole school day
keeping a log of what teacher does during school day

II. INSTRUCTION UNDER SUPERVISION

Highly Desirable That The Student Should Experience Work with Children In

showing how
providing directions
asking children questions
listening to children
answering questions
tutoring one or two children
working with a small group
supervising the whole class for relatively short periods of time (5-10 minutes)

He May or Might Assist In

establishing intellectual freedom - control
planning and pacing total day activities
presenting materials: A-V, reading, paper-pencil activities, learning lab activities, recitation feedback

---

III. COUNSELING

Highly Desirable that the Student Experience

listening to students
relating to students on an adult-child basis
empathizing with students

He May or Might Assist in or Observe at, Under Supervision

role playing to resolve difficulties
conference with teacher, parent, child to resolve difficulties
assisting in resolving difficulties

IV. OBSERVING GROWTH AND DEVELOPMENT OF CHILDREN

Highly Desirable for Student To:

listening to students
reading papers

proofing errors
observing behavior of children

He May or Might

maintain observational logs of some students' academic achievement over several weeks
prepare a paper-pencil test
assist in administering and for scoring a standardized test
prepare and administer an individual behavioral competency measure

---

VI. PUBLIC RELATIONS WITH STAFF, PARENTS

Highly Desirable to

maintain professionally agreeable rapport with school colleagues, teacher, and supervisors

He May or Might

observe a parent-teacher conference
attend a PTA meeting

VII. PROFESSIONAL GROWTH

Highly Desirable That The Student

do reading in the field
attend professional meetings
observe curriculum development

Things which seem undesirable for students to do because of the lack of training and experience are listed below:

1. To be left entirely in charge of the group for extended periods of time.

2. To teach individuals or small groups without careful supervision or directions from teacher.

3. To engage in pupil counseling and/or a discipline sessions without the teacher present.

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