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A STUDY OF THE NEW SODIA PROGRAM IN
ELEMENTARY TEACHER EDUCATION
AT UTAH STATE UNIVERSITY

by
Larry D. Klein

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF EDUCATION

in

Curriculum Development and Supervision
with a Special Emphasis in Elementary Education

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1974

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Larry D. Klein

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ABSTRACT

A Study of the New SODIA Program in
Elementary Teacher Education
at Utah State University

by

Larry D. Klein, Doctor of Education
Utah State University, 1974

Major Professor: Dr. Jay A. Monson
Department: Elementary Education

This study was designed to compare elementary teacher preparation programs at Utah State University as a basis for evaluation of the SODIA program. SODIA is the acronym for a new elementary teacher preparation program initiated in the Fall of 1972 which was designed to be field centered and competency based.

The population of the study consisted of 104 elementary student teachers enrolled in student teaching during Fall and Winter Quarters of the 1973-74 academic year. There were four groups identified by the type of preparation program they had experienced. The groups were SODIA (the new program for preparing elementary teachers), Former (the program for preparing elementary teachers prior to the inception of SODIA), Sophomore Bloc Only (the program that was the former program except that the student had Sophomore Bloc of the SODIA program), and Junior Bloc Only (the program that was the former program except that the student had Junior Bloc of the SODIA program).

There were five instruments used to collect data. They were the School Personnel Research and Evaluation Services tests (a form of the

National Teacher Exam), Rokeach Dogmatism Scale, Minnesota Teacher Attitude Inventory, Purdue Student-Teacher Opinionnaire, and Teaching Skills Self Rating Scale.

A one-way analysis of variance was used to test for significant differences between groups. There were no significant differences found with the exception of the Sophomore Bloc Only group scoring significantly lower on the Science-Mathematics, Common Weighted Examination, and Education in the Elementary School sub-sections of the School Personnel Research and Evaluation Services test.

The recommendations of the study were:

1. It is suggested that further analysis of performance of student teachers be made to provide a basis for continuing evaluation of the SODIA elementary teacher preparation program.

2. It is suggested that an additional study be undertaken considering the limitations of the present study as described in the Discussion section (Chapter V).

3. It is suggested that an analysis of success of first year teachers, who were trained in the SODIA program, be made to provide a basis for continuing evaluation of the SODIA program.

4. It is suggested that a five year longitudinal study be made to assess long term effects of the SODIA program.

CHAPTER I
INTRODUCTION

Background of study

The American educational system has undergone vast changes. One part of the system, teacher education, has recently been a focal point of concentrated efforts for change. Considerable increases in financial support for new programs in teacher education have been a driving force for attempted innovation. This interest in reform in teacher education was recognition of the fact that the teacher still stands as the single most important factor in the educative process.

Much has been gained in the past few years in teacher education but it has been stated by many authorities that the profession is still a considerable distance from reaching a final objective. Much study and research has been called for to continue enlarging the base of knowledge from which the decision making process operates in determining the total teacher education process. This study was designed to make a contribution to the base of knowledge in teacher education.

Previous to fall quarter 1972, the elementary teacher education professional sequence at Utah State University consisted of an introductory foundations course, several methods courses, and one quarter student teaching experience in public schools. This program included some observation and participation in public schools on a limited basis depending on each individual instructor's course goals and objectives. Beginning with fall quarter 1972, a new program for preparing elementary school teachers was introduced. The new program was given the acronym SODIA representing the five levels of the program which were Self, Others, Disciplines,

Implementation, and Associate (see definition of terms). Students who had begun in the previous or former program were given the option of continuing on in the former program or enrolling in the SODIA program.

The major differences between the former program and the SODIA program were that students in SODIA had early field experiences in portal schools (public schools with a commitment to teacher education wherein professional education courses were taught in conjunction with field experiences). The SODIA program had a university coordinator employed by the university and assigned to a portal school. This individual supervised college students' field experiences, conducted seminars and provided in-service experiences for portal school staff. Students in SODIA program also completed most of their professional courses in a "bloc" type program. During the period of transition from the former program to the SODIA program, there were students who completed their elementary teacher education program by taking parts of each program.

In the development of the SODIA program, there were many questions regarding its impact upon university students and the elementary teacher education program at Utah State University. Since the program's inception in the fall of 1972, there was a series of informal evaluations with cooperating teachers, principals, and students in training at the end of each quarter. In addition, the department held a conference in April, 1973, with representatives of various cooperating schools, principals, and participating students to obtain feedback on the general operation and direction of the program. The aforementioned type of evaluation, though informative, would not be considered objective in the strict sense.

In April, the Head of the Department of Elementary Education made a presentation to the Utah State University Council on Teacher Education as to the progress of the program (a follow-up of previous approval of the pilot program) during which he explained the informal evaluation procedures and current development of the program. During that council meeting, it was suggested by representatives of the State Department of Public Instruction, Council on Teacher Education, Dean of the College of Education, and others that an evaluation of the program be initiated utilizing objective data.

Due to the identified need for research and evaluation of SODIA this study was undertaken. It was determined that objective data would be collected over a broad base to support a change that was thought to bring improvement in elementary teacher education at Utah State University.

Purpose of study

The purpose of this study was to compare SODIA and former elementary education programs at Utah State University (USU) located in Logan, Utah. The comparison was made as to what extent the programs might affect students' cognitive learning, open-mindedness, attitude towards teaching and children, self-perceptions of teaching ability, and opinions about student teaching as measured near the end of their student teaching experience.

Hypotheses tested

The study compared the differences in five general areas between elementary teacher education students completing their preservice education in one of four possible defined programs at Utah State University as shown by their scores on five instruments. The stated hypotheses to be tested were as follows:

Hypothesis 1. There will be no significant difference in attitude toward children and school between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Minnesota Teacher Attitude Inventory.

Hypothesis 2. There will be no significant difference in open or closed-mindedness between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Rokeach D Scale.

Hypothesis 3. There will be no significant difference in self-perceptions of teaching skill between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Teaching Skills Self Rating Scale.

Hypothesis 4. There will be no significant difference in achievement between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the School Personnel Research and Evaluation Service tests from the following six test areas:

- a. Professional Information
- b. Written English Expression
- c. Social Studies
- d. Science and Math
- e. Weighted Common Examination Total
- f. Education in the Elementary School

Hypothesis 5. There will be no significant difference in opinions concerning student teaching between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Purdue Student Teacher Opinionnaire in the following 13 areas:

- a. Student Teacher Rapport with the Supervising Teacher
- b. Student Teacher Rapport with the Principal

- c. Teaching as a Profession
- d. Student Teacher Rapport with the University Supervisor
- e. Community Support of Education
- f. Student Teacher Load
- g. Student Teacher Rapport with the Students
- h. Student Teacher Rapport with the Other Teachers
- i. Satisfaction with Housing
- j. Professional Preparation
- k. School Facilities and Services
- l. Curriculum Issues
- m. Factor Total

Definition of terms

The following terms are defined in relation to the purposes of this study:

Affective domain. Affective domain was defined as that domain which emphasizes a feeling tone, an emotion or a degree of acceptance or rejection. The literature in the affective domain referred to such variables as interests, attitudes, appreciations, values, emotional sets, feelings, dispositions, motives, intrinsic concerns, the capacity for feeling, sympathy, empathy, prizing, regarding, and caring.

Cognitive domain. Cognitive domain was described as that domain which emphasizes remembering or reproducing something which has presumably been learned, or involves the solving of some intellectual task. Cognitive learning varies from simple recall of learned material to highly creative ways of combining and synthesizing new ideas and principles.

Cooperating teacher. Cooperating teacher was the faculty member in a cooperating portal school who was the responsible teacher for a class

of students in fulltime employment for the school district. The cooperating teacher worked with the university supervisor in providing the leadership and experience necessary to give the practical background for the teacher education candidate.

Dogmatism. The term dogmatism referred to the manner in which people organize their systems of belief. The extremes of dogmatism range from high dogmatism, or closed mindedness, to low dogmatism, or open mindedness. Rokeach, author of the Dogmatism Scale, defined dogmatism as:

... (a) relatively closed cognitive organization of beliefs and disbeliefs about reality, (b) organized around a central set of beliefs about absolute authority which, in turn, (c) provided a framework for patterns of tolerance and qualified tolerance toward others. (Rokeach, 1954, p. 195)

Field experience. This was an activity in which prospective teachers were afforded an opportunity to participate, to varying degrees, in the teaching function. This would include both pre-student teaching experiences in schools, student teaching, and post-student teaching.

Junior bloc only program. This was the program identified where students completed the initial phase of their professional sequence in the former program but then completed the sequence in SODIA program.

Portal school. This was a public school committed to innovation and change in education as well as a commitment to teacher education as part of its on-going role. A portal school was differentiated from a regular school in that there were students from the "others" (sophomore bloc), "implementation" (student teaching), and "associate" (associate teaching) levels of the SODIA program. The teachers in a portal school would also have received additional training from university elementary education staff on how to effectively utilize sophomores, student

teachers, and associate teachers in the regular classroom.

SODIA. SODIA was the acronym given to the new model for elementary teacher education at Utah State University. The following diagram was used to describe the general objectives of each phase and the appropriate time sequence.

	Objectives	Credit & Time Schedule
S-Self (labeled freshman orientation)	Students learn about self with introduction to elementary teaching through readings, discussions, and observations.	Three quarter credit course taken usually during freshman year.
O-Others (labeled sophomore bloc)	Students learn about others with the following general topics: variability in children, community services, "world of work", legal aspects of education. Students have a half day of experience in a portal school. Each day students will have many associations with peers, elementary teachers, administrators, and parents. From this total experience a student should be able to decide whether to continue in elementary education or to transfer to another major.	Fifteen quarter credits taken exclusively during one quarter usually in the sophomore year with the following course credit. El.Ed. 301 Seminar 5 qt. hrs. El.Ed. 286 Practicum 4 qt. hrs. Psy. 110 Human Growth & Development 3 qt. hrs. Psy. 366 Ed. Psych. 3 qt. hrs. The psychology instructors relate course work directly to student's experience with children Alternate course numbers are used for early childhood education majors.
D-Disciplines (labeled junior bloc)	Development of methods of teaching in science, math, language arts, social studies & reading through seminar instruction & practical application in elem. school classrooms.	Eighteen quarter hours with quarter hours in each subject area and practicum credit usually taken during one quarter in the junior year.
I-Implementation (labeled student teaching)	Students have total day assignment in a portal school--all previous experiences synthesized to develop total teacher --also a weekly seminar with the university coordinator.	Fifteen quarter hours full time during one quarter usually during senior year. (Up to 19-21 hours for fall quarter.)
A-Associate (labeled associate teaching)	A post student teaching experience defined by students to strengthen a weak area or to develop a specialty.	Three to twelve quarter hours, elective.

Sophomore bloc only program. This was the program identified where students completed sophomore bloc of SODIA program but then completed their professional sequence in the former program.

Student teaching. This referred to that field experience where full time university students in teacher education were assigned to work on a full time basis in a portal school classroom under the supervision of a portal school cooperating teacher and a university supervisor.

University supervisor. The university supervisor was employed by the University, but was assigned to a portal school to work with students in the SODIA program along with the staff of the portal school. Classes and practical experiences were held under the supervision of the university supervisor at the portal school or other agreed upon locations. Students met the university supervisor in seminar groups and on an individual basis.

Organization of the remainder of the study

Chapter II contains a review of literature pertaining to the various aspects of SODIA program study and elementary teacher education.

Chapter III is the basic plan of the study along with descriptions of the instruments used in the collection of data and procedures used in administering the instruments.

Chapter IV includes the presentation and analysis of data. Data is presented and analyzed in relation to the hypotheses stated in Chapter I.

Chapter V includes a discussion of the results of the study.

Chapter VI contains the summary, conclusions, and recommendations of the study.

CHAPTER II
RELATED LITERATURE

The literature relating to elementary teacher education was found to be extensive. Thus, the review of literature was limited to material that was significant and germane to the proposed study. The review was organized by the following subtitles as they related specifically to elementary teacher preparation.

Evaluation and Research

Attitudes Related to Children and School

Attitudes Related to Openness

Attitudes Related to Self Concept

General and Professional Knowledge

Perceptions of Student Teachers

Criticism and Reform

New Programs

Evaluation and research

Literature reviewed in this section is representative of findings that pertained to problems, criteria, and methodology of research and evaluation. Also included is a review of selected evaluation and research projects. This section is concluded with statements related to emerging themes and future directions in evaluation and research of teacher education.

A number of writers have discussed the problems inherent in evaluating programs for teacher preparation.

Dickson (1967) mentioned that change in teacher education, as in other fields, had three main components--innovation, evaluation, and dissemination. He stated that much had been made of the first and last components in various discussions of teacher education, but little had been done concerning evaluation. The past concern for innovation, change, and experimentation in education had generally lessened the desire for serious evaluation of what existed or had been innovated.

Smith (1971) wrote that the great problem facing those who were concerned with teacher education involved a quest for more dependable knowledge gained through practical experiences of teachers, professional opinion, psychological principles, and studies in philosophy and social sciences, rather than from an adequate empirical data base. Wiles (1966) stated further that there was no body of research evidence on the kinds of competencies teachers needed or the type of preparation required to develop teachers with those competencies. He stated that anyone attempting to define what was needed in teacher education, could only advance hypotheses based primarily on his own experience and point of view.

In relation to this problem Peck and Tucker (1973) found through reports of funded teacher education projects that grants were given mainly for program development. They also reported findings that what was most needed were large resources committed to theory based, complex programs of research and development in teacher education.

Turner (1971) asserted that research in teacher education was difficult because of intervening variables. Turner further stated that in studies concerning the outcomes of teacher education, the cycle was

best entered with some attention to theoretical considerations; for unless the researcher starts with ideas of the criterion variables, there may be no basis for predicting such variables.

Stone (1968) stated in his discussion of evaluation in teacher education that an investigator must be modest in his claims because what might seem to be causal patterns were often only parallel trends.

Some instructional program evaluations have used data related to one or two parts of a total program and then made generalizations about the total program's effectiveness. According to Stake, in a paper presented at an annual meeting of the Educational Research Association:

Any study that emphasizes a particular issue or a particular goal at the great diminution of all others might be a most appropriate research or evaluation effort--but it should not be passed on as an evaluation of the program.
(Stake, 1972, p. 2)

Several authors described a need to base evaluation and research of elementary teacher preparation programs on stated criteria and methodology. For purposes of evaluating an entire teacher education program, Woodruff (1963) saw a need to: (1) identify a basic set of segments or elements common to all teacher education programs; (2) design tests which are appropriate for the various segments and which could be administered in any combination; and (3) assist teacher education institutions in preparing profiles of their own programs so that they could select the tests appropriate to their particular programs.

Stadt and Kenneke stated that teacher educators must begin to evaluate teacher education against the following kinds of cost related criteria:

- 1) Does the department offer a minimum as opposed to a maximum number of courses to assure optimum utilization of courses elsewhere on the campus, maximum class size, ease of scheduling, ease of staffing, etc.?
- 2) Does the department offer courses as infrequently as

possible--considering that students must be afforded the opportunity to take necessary courses during the limited time they are on the campus?

- 3) Does the department conduct only significant research to assure minimum expense and maximum short and long range knowledge additions in its field(s)?
- 4) Does the department utilize the technology of instruction to maximize learning and reduce costs?
- 5) Does the department conduct courses with a minimum rather than a maximum of classroom and laboratory space, equipment, and maintenance and utility expense?
- 6) Does the department utilize paraprofessional personnel such as graduate assistants, laboratory technicians, and classroom aides, and non-academic personnel such as administrative secretaries, secretaries, stenographers, and file clerks effectively to reduce costs while increasing learning and services?
- 7) Does the department graduate adequate numbers of suitably qualified people (at whatever levels) at costs which are in keeping with the cost of preparing other professionals? (Stadt and Kenneke, 1972, p. 126)

Stadt and Kenneke also stated that 10 percent of the teacher education staff produce 80 percent of the results and members of the staff should be made fully aware of this fact and should be evaluated in terms of individual contributions.

Ebel claimed that evaluation of entire teacher education programs or even segments of programs was spotty and inadequate. He stated that tests could be used to collect data and went on to list four ways in which tests might be used in teacher education programs:

- (A) selection of students
 - (B) in advising and counseling students
 - (C) in evaluating their achievement in courses, and
 - (D) in helping to certify their competence to teach
- (Ebel, 1966, p. 15)

In none of these areas did he find that sufficient, meaningful research had been done.

Gage (1972) stated there were three stages of knowledge derived from psychological theory and empirical research. They were: (1) knowledge that was already being used in programs of teacher education;

(2) knowledge that was already available, but not being used; and (3) desirable knowledge that was not yet available.

Davies (1969) stated that research in teacher education has increased sharply over any previous period because of greater attention given by authorities in the field to the need for more emphasis on systematic studies that reflect sophisticated design and availability of funds to support research.

In relation to the early evaluation and research efforts, Ebel stated:

Early studies of programs of teacher education were status surveys. A classical example, and one of the earliest, was supported by the Commonwealth Fund. It was completed in 1929 under the auspices of the University of Chicago. An even more extensive nationwide survey, the first and only comprehensive study of teacher education that has been financed by the federal government of the United States, was completed four years later. A third early overview type of study had the support of the Julius Rosenwald Fund. The historical development of teacher education programs was summarized a year later in a commemorative volume sponsored by the National Education Association. These pioneer investigations were historically important not only for the information they provided on the status of teacher education but also for the trends and problems identified. In retrospect it is clear that they mark the beginning of a nationwide concern for the quality of programs to prepare teachers for elementary and secondary schools. (Ebel, 1969, p. 1414)

Much of the early evaluation of teacher education resulted from criticism of professional aspects by the public and by faculties of higher education institutions. One study, rather typical of this kind of evaluation, involved a reappraisal of the existing program of teacher education and the organization and administration of the program in Texas Technological College, reported by Giesecke and Wallace (1956).

The Texas study dealt with teacher education in a multipurpose public institution and was conducted by an all-institution committee,

with focus upon two broad areas: (a) to determine what was actually going on in teacher education at the college, and (b) to recommend what the college should do about the teacher education program in the future. In addition, the committee was seeking ways of stilling the bitter, continuing strife over teacher education among the faculties. The conclusions were as follows:

The goal of the teacher-education program must be cooperatively defined; the program must be organized to fix responsibility properly and clearly; the program should include only those curriculums which can survive a realistic appraisal of need and institutional resources; the program should assure that the student teacher's entire experience is worked out and supervised jointly by the subject-matter and education departments. (Giesecke and Wallace, 1956, p. 337)

Although there was relatively little current research representing evaluation of entire programs of teacher education, the literature included many descriptive discussions and some efforts at comparison of one course with another course or with one teaching method with another teaching method. Representative of this type of study was the effort of Cooper and Elsbree (1958), to test the hypothesis that professional courses were more effective when taken in a sequence spread over the entire undergraduate career. Students in such a program appeared somewhat less self-confident than students who concentrated education courses into the last two years. The two groups were not significantly different in terms of any measure of effectiveness.

Nash (1955) reported a comparison of the effectiveness of a discrete series of separate professional courses with an integrated block of professional learning. He found, as did Cooper and Elsbree (1958) that there was no significant difference between the later teacher effectiveness of groups prepared in two different kinds of programs at Central Michigan College of Education.

Carver and Lerch (1970) described a study to evaluate undergraduate professional education programs which were directed by the Council on Teacher Education at the University of Illinois.

A college-wide committee was appointed to examine the problem, collect relevant data, and make recommendations for improvement. Respondents in this study were instructors, students, supervising teachers, and recent graduates. Three major questions were answered by the data:

- (1) What are the expected outcomes (objectives) of the common professional education courses?
 - (2) To what extent are the objectives accomplished?
 - (3) To what extent are the objectives appropriate?
- (Carver and Lerch, 1970, p. 374)

The conclusions were that respondents felt the design was reasonable and viable, students felt the objectives of professional education courses were appropriate, and students felt the objectives were generally achieved.

Recent studies were reported that related to elementary teacher preparation. One major study resulted from the deliberations of committees working as a task force for the National Education Association's National Commission of Teacher Education and Professional Standards.

Commenting on this report, Hermanowicz stated:

The recommendations were designed with sufficient flexibility to permit and encourage considerable autonomy and experimentation within institutions preparing teachers.

Regardless of one's point of view, however, an inherent dilemma of the New Horizons report was the insistence upon careful evaluation according to standards and the concurrent recognition of the need for a comprehensive definition of teacher competence. (Hermanowicz, 1967, p. 3)

Another national study on teacher education, reflecting the opinion of an American educator, was conducted by Conant (1963).

Writing on this subject, Hermanowicz stated:

The Conant study on teacher education represents a sharp disagreement with the New Horizons report and its proposals for professional autonomy with leadership exerted by the National Education Association. While his suggested programs for the preparation of elementary and secondary school teachers include certain education courses as desirable, Conant's recommendations are deliberately designed to promote freedom of experimentation in teacher education. Only student teaching should serve as a stipulated certification requirement for future teachers in each state, according to Conant. (Hermanowicz, 1967, p. 4)

Conant continued by stating:

... that all education courses for elementary teachers (with the possible exception of courses in philosophy or sociology or history) be accompanied by "laboratory experiences" providing for the observation and teaching of children. (Conant, 1963, p. 217)

Kise (1964) reported on a study which compared the effects upon teacher candidates of a professional education program with alternated methods courses which preceded the student teaching experience.

One hundred pairs of freshman elementary education majors enrolled at the College at Cortland State University of New York, matched on the basis of sex, intelligence, quality point average, home location, and attitudes toward pupils were assigned to either an "Experimental" or "Traditional" curriculum for the two-year study. The "traditional" program was designed so that all methods courses preceded the two student teaching experiences that came during the last semester of the Junior year. For the "Experimental I" program, student teaching preceded methods courses so that in each semester of the junior year student teaching was followed by a quarter of methods work. In the "Experimental II" program methods courses preceded the quarter of

student teaching each semester of the junior year.

Findings:

(1) Differences in change of academic knowledge were not statistically significant. "Experimental" members evidenced gain whereas "Traditional" members evidenced loss in quality point average.

(2) Differences in teaching effectiveness were not statistically significant. "Experimental I" members were most and "Experimental II" members least effective in teaching.

(3) Differences in the change of attitude towards pupils as measured by M.T.A.I. were found to be significant. "Experimental I" members showed significant, $p < .05$, positive change in attitudes toward pupils when compared with either "Experimental II" or "Traditional" members. In matched pairs comparison "Experimental I" members showed significant, $p < .01$, positive change over "Experimental II" members. Favorable changes in attitudes toward pupils, although not significant, were found when "Experimental" members were compared with their "Traditional" matched members.

(4) Differences in attitudes toward the professional preparation were not statistically significant. In analysis of open-end statements "Experimental" members consistently rated the professional preparation as contributing more to professional understanding and competence than did "Traditional" program members. "Experimental I" members tended to perceive themselves as teachers and their preparation as contributing to their professional development whereas "Traditional" members tended to perceive themselves as students and did not identify as strongly with the teaching profession. "Experimental II" members did not evidence any consistent viewpoint. (Kise, 1964, p. 3421)

Studies have been conducted to evaluate the effectiveness of teacher education programs with questionnaires requesting information about the perceptions of students concerning their training program in relation to teaching experience. Such studies were somewhat useful as measures to evaluate the impact of programs. One study conducted by Ballantine (1966) and others attempted to determine what present value to teaching did elementary education graduates of San Diego State College perceive in the various aspects of their college preparation. The investigators arrived at four conclusions based on the data:

(1) Elementary school teachers trained at San Diego State College perceived their professional preparation to have been of greater value to their teaching than their academic preparation.

(2) They perceived all aspects of their training program to have been of value to their teaching.

(3) They recommended more extensive preparation but not at the expense of any present program.

(4) Even those teachers who could be expected to entertain some antipathy toward professional education (i.e., the more academically oriented, those most concerned with teaching content subjects, those receiving poor evaluation from principals) were in general accord that professional preparation is of great importance. (Ballantine, 1966, p. 223)

Sandefur and Adams (1973) described a recent attempt at a rather comprehensive evaluation of a teacher education program. A sample of students was measured with several instruments and techniques. All evaluative instruments and procedures were administered during the student teaching experience, and at the end of the first, third, and fifth years of teaching. Results of the evaluation were furnished to all faculty members of the college of education so as to aid in program improvement.

Generalized findings of recent research and evaluation were reported by several authors. Cypher did an extensive analysis of research in teacher education. After stating there was no readily available current comprehensive, objective in-depth analysis of research in teacher education, he made these major generalizations:

1. Research in teacher education has had a very limited impact on the education of teachers.
2. A deceptively simple anomaly exists in teacher education that explains in part why so little productive interaction has occurred between practicing teacher educators and active teacher education researchers.
3. A consideration in assessing the impact of research in teacher education is whether or not the problems and status of such research are similar or dissimilar to the impact achieved by research in other professional training, e.g., medical, legal, and engineering education.

4. Most of the research in teacher education reported prior to 1964 was of the survey type.
5. In the 1964 study, nearly 30 percent of the research located investigated questions related to student personnel in teacher education; in 1970, however, fewer than 10 percent of the research is concerned with teachers as people. The 1964 study also showed that approximately 30 percent of the research of the preceding 10 years had been concerned with student teaching. Recent research maintains this same relative proportion, with studies now concerned with clinical experience, including simulation, which represents a much broader delineation of the arena.
6. In 1964, it was possible to state that education faculty members had conducted and published more research relevant to teacher education in the past five years than in all previous years combined.
7. There is considerable evidence that faculty research design strategy has been a significant deterrent to the production of quantities of valid knowledge in teacher education.
8. Teacher education research reveals a frequent inability to differentiate between the generalizable effect of treatment and the effectiveness of a given application of the treatment.
9. There is little doubt that both the results and the processes of research have had some impact on teacher education, but whether research findings or processes are more important remains an unresolved issue.
10. In 1964, research in mass media as it relates to teacher education was receiving increased attention.
11. It is widely suggested that new and better instruments would stimulate research.
12. The federal government is now wrapping in large packages its funding efforts to improve teacher education, as the Elementary Teacher Education Models Project illustrates, and is directing most of this effort through its regional educational laboratories. (Cypher, 1972, p. 146)

Peck and Tucker reported that:

Nonetheless, since 1964 there has been a great deal more empirical research performed on one or another operation in the education of teachers than in all the decades before that date.

Moreover, it is our strong impression that a quantum leap occurred, somewhere between 1963 and 1965, in the quality of both the design and the reporting of research in this field. One can only speculate about

possible causes, but the most likely one would appear to be the influx of substantial federal monetary support for graduate training and research in education, for the first time in American history, starting in the early 1960s. (Peck and Tucker, 1973, p. 941)

Stiles (1969) also indicated a change in approach in research in teacher education toward more scientific inquiry. Stiles reported that the most striking developments in teacher education have been the fifth year program, the Master of Arts in Teaching (MAT), diversity of programs, interdisciplinary involvement and responsibility, use of educational technology, preparation for inner-city schools, federal government assistance of programs to prepare teachers for educationally disadvantaged youth, and development of internship and clinical programs.

Several writers commented on their perceptions of emerging themes and future directions. A look at what lies ahead was described by Stiles:

What is readily apparent to any alert observer is that the revolution that has been fomenting in the field of teacher education over the past 25 years is now gaining momentum. Conflict characterizes the times and will continue to do so, in my opinion. My assessment grows out of an awareness that our efforts to research teaching and learning are still embryonic. Thus, teacher education continues to be more art than science, more political than professional, and more socially relevant than academic. We desperately need more good research to point the way, but social and political forces predictably will continue to shape whatever teacher education is at a given point in time. Then, too, orthodoxy, whatever temporary comforts it may bring, is almost always the enemy of progress. (Stiles, 1973, p. 123)

Peck and Tucker listed the themes they thought were emerging from research. The themes listed were:

1. A "systems" approach to teacher education, often called "instructional design," substantially improves its effectiveness.

2. Teacher educators should practice what they preach.
3. Direct involvement in the role to be learned, or such close approximations as sensitivity-training laboratories or classroom simulation laboratories produce the desired teaching behavior more effectively than remote or abstract experiences such as lectures on instructional theory.
4. It is possible to induce a more self-initiated, self-directed, effective pattern of learning, not only in teachers but, through them, in their pupils.
5. Traditional ways of educating teachers have some of the intended effects, but they also have some quite undesired effects.
6. The training of teachers is a current concern at numerous places in the United States.
7. One long-needed methodological advance is beginning to appear in the research: the use of pupil-gain measures as the ultimate criteria of the effectiveness of any given process of teacher education. (Peck and Tucker, 1973, p. 943)

Evaluation and research in teacher education has had considerable attention, especially in recent years, but still seems to be in an embryonic stage. A commitment of funds and manpower will be necessary to approach the many unanswered questions in teacher education. With well planned research and evaluation, continued progress will be made and teacher education will reflect the new knowledge gained with improved programs.

Attitudes related to children and school

In the process of developing and modifying any program in the field of education, one is constantly faced with the influence of attitudes. The point of view, that attitude is an extremely important consideration when dealing with behavior, was supported by Osgood, Suci, and Tannenbaum. They said:

Most authorities are agreed that attitudes are learned and implicit--they are inferred states of the organism that are presumably acquired in much the same manner that other

such internal learned activity is acquired. Further, they are predispositions to respond, but are distinguished from other such states of readiness that they predispose toward an evaluative response. (Osgood, Suci and Tannenbaum, 1967, p. 189)

In its First Annual Report, Stanford Center for Research and Development in Teaching (1967) made the following statement:

Attitudes, values, and more complex combinations of attitudes and values such as one's conception of himself or his philosophy of life, are usually recognized as orientations which significantly influence an individual's life. Historically, changes in these orientations have usually been regarded as one of the most important outcomes of an education. These outcomes influence how a person thinks and feels for many years after he has forgotten the details of specific disciplines. (Stanford Center for Research and Development in Teaching, 1967, p. 56)

It was found that the Minnesota Teacher Attitude Inventory (MTAI) was utilized by many evaluation or research efforts that were related to teacher education. The instrument was designed to measure attitudes which predict how well one will get along with pupils in interpersonal relationships. Several validity studies have been completed on the Minnesota Teacher Attitude Inventory (MTAI). Cook, Hoyt, and Eikaas (1956) found a positive correlation of .60 between ratings given to teachers by principals, experts, and pupils and MTAI scores of the teachers.

Leeds (1952), in his second validity study of the MTAI, stated that the Spearman Brown reliability coefficient was .93 as compared with the first published report of .91. All of the comparisons were significant at the .01 level of confidence.

Some implications of the MTAI score have been discussed by Evans.

The assumption is made that the teacher's attitudes determine the type of classroom atmosphere he will maintain and that a liberal attitude toward his pupils is likely to characterize a good teacher. The test MTAI therefore seeks to pinpoint teachers' attitudes on a liberal-conservative continuum. (Evans, 1966, p. 135)

Munro (1964) found that traits measured by the MTAI were associated with those qualities possessed by successful student teachers. Dounie and Bell (1953, p. 704) wrote that "Students who scored high on the MTAI ... were rated as good prospects by their instructors." Standlee and Popham (1959), suggested that the MTAI could be cautiously used, not only as an index of the type of social atmosphere a teacher might maintain, but as an index of a teacher's overall performance. Kearney and Rocchio (1955, p. 444) found that, "... the MTAI is a useful instrument in predicting the feeling tone on the part of the teacher for the pupil." Della-Piana and Gage defined essentially the same viewpoint further:

Teachers scoring high on the MTAI will probably be better liked by pupils who have strong affective values concerning teachers. If pupils have strong cognitive values, the teacher's MTAI will make less difference. (Della-Piana and Gage, 1955, p. 178)

Another important implication of the value of the MTAI attitude score was found by Ofchus and Gnagey (1963). They reported that students with low final MTAI scores plan less often to make a career of teaching than those with high MTAI scores.

Callis' (1950) study sought to determine the stability of the attitudes being measured by comparing test-retest scores from the MTAI of four groups of subjects. Changes that occurred during teacher training and early teaching experience were investigated. The resulting conclusion was that "... the attitudes measured by the MTAI were sufficiently stable to warrant further investigation regarding their efficiency in predicting teacher-pupil relations and in pre-training selection of teachers." (Callis, 1950, p. 725) Upon further examination, Callis found significant mean score differences among three major curricular

groups: (1) early childhood education majors--nursery to elementary; (2) academic field majors; and (3) special field majors--art, music, physical education. Early childhood education majors scored highest, while special field majors scored lowest at the beginning and at the end of professional training.

Johnson (1971), using the MTAI, pre and post tested students during the student teaching experience. During the time of student teaching, students attended two seminars a week dealing with methodology, materials, and problems and one seminar a week with their cooperating teacher. She reported that the MTAI failed to discriminate a significant change in the participants.

An investigation by Fuller (1951) found no systematic relationship between MTAI scores and supervisors' ratings of senior student teachers in a nursery-kindergarten-primary teaching training curriculum. In a later study, Oelke (1956) examined the relationship between the MTAI scores of senior student teachers and the ratings given them by their supervisor, and similarly found no significant relationship. These investigators concluded that while the MTAI "does not identify the ablest or weakest student teacher within the experimental group" the MTAI may serve a highly useful purpose in selecting students from the general population for training in early childhood education, or even for refinement of selection policies within subdivisions of the College of Education.

A different finding was reported by Cross (1959). He found a positive correlation between student teachers' attitudes and the cooperating teachers' ratings by university supervisors and school administrators. The teachers who received poor ratings appeared to influence student teachers negatively.

Osman (1959) found that a negative attitude of cooperating teachers and negative attitude shifts of their student teachers correlated positively. He cited this as the most important associative factor in the development of student teacher attitudes during the student teaching experience.

Cooperating teachers who perceived teaching in a positive way influenced student teachers' attitude change in a positive direction. Soares (1968) found this to be the most significant factor in his study.

Yee concluded the following from his research:

... the attitudes of student teachers toward young people generally reflect the predominant influence of their cooperating teachers. Teacher educators should continue their efforts to improve the conditions under which student teachers are influenced by their cooperating teachers. (Yee, 1969, p. 331)

Kearney and Rocchio (1956) examined the relationship of MTAI scores to the type of teacher-training institution attended by elementary school teachers. Their purpose was to determine whether the types of teacher education institutions attended by elementary teachers are significantly related to their ability to maintain a harmonious relationship with children. The subjects were teachers from a mid-western city who had earned their degrees from one of three types of institutions: liberal arts college, teachers college, and university. Significant differences in MTAI scores were found for the three groups, the respective means being 36, 51, and 57. The investigators concluded:

It seems reasonable to expect that a teacher who is educated in an institution endorsing the viewpoint that a thorough background in liberal arts is essential for effective teaching will differ from one educated in an institution which emphasizes that knowledge alone does not guarantee that the teacher will manifest a desirable pattern of behavior in the classroom. (Kearney and Rocchio, 1956, p. 705)

The MTAI is the only known instrument that discriminates between teachers educated in various types of institutions--liberal arts colleges, teachers' colleges, and universities. It will be to the advantage of both prospective teachers and their pupils if these institutions find it possible to build curriculums in reference to improvement on MTAI scores. (Kearney and Rocchio, 1956, p. 706)

A number of researchers reported on the relationships of attitudes and attitude development to field experiences. Brim (1966) found that the greatest improvement of undergraduate students' success in relating to children occurred at an early point in the teacher education program. Actual laboratory experiences, which consisted of observing and assisting in public school classrooms, were most effective in changing attitudes. In addition, students indicated in response to the investigator that they felt the methods of college instruction were almost as effective in producing change in attitudes as were the laboratory experiences.

Dorow (1959) and Inglewood and Robinson (1965) tested the hypothesis that early participation in education and association with children would improve attitudes toward education. They found no significant differences between those who had participated and those who did not have an early experience. However, many students that participated indicated they felt their attitudes toward education had improved as a result of their experience in classrooms.

Jacobs (1968) found that at five educational institutions significant change in attitudes occurred both during the initial professional education course and during student teaching. His findings suggest that students in the initial courses in professional education tended to move from rigid and formalized attitudes toward more liberal and democratic points of view. Attitudes of students after their student teaching experience showed change from the more liberal and democratic points of view toward

more rigid and formalized attitudes. Jacobs concluded that most teacher education programs are oriented to direct the attitudes of students toward a more democratic point of view; however, he suggests that this is not sustained during the student teaching semester. In fact, his evidence revealed that trends toward more democratic responses were reversed by the student teaching experience.

Kozlowski stated that:

Existent teacher training programs appear to have trained would be teachers, through formal education courses, to feel warmly toward children and to advocate and use permissive teaching practices. Upon completion of the student teaching contact experience, the teacher trainees have abandoned the previous course-acquired attitudes replacing these with more authoritarian restrictive attitudes. (Kozlowski, 1972, p. 29)

Peck and Tucker summarized a related study by Hoy pertaining to attitudes. They stated:

Hoy (1967), in studying 282 student teachers, found that they changed significantly from a "humanistic" approach to a "custodial" approach which stressed the virtues of bureaucratic order and control. (Peck and Tucker, 1973, p. 969)

The work of Corrigan and Griswold (1963) was not in complete agreement with the findings of Jacobs, Kozlowski and Hoy. These investigators reported that when the students were given freedom to formulate and participate in implementing specific principles of education they developed increased positive attitudes toward teaching as a profession. This suggested that change in attitude depended on the quality of the experience afforded the student teacher. These writers further found that when the student teachers perceived agreement among college supervisors, cooperating school, administrators and cooperating teachers the value of their experiences was increased. A similar study was reviewed by Peck and Tucker. They stated:

Perrodin (1961) found that student teachers made significant improvements in professional attitudes when they were placed with cooperating teachers who had received a special preparation program in supervising student teachers. Apparently when cooperating teachers are trained to supervise beginners, the beginners finish their student teaching with much more learner-centered values than do most beginners at the end of their student teaching. (Peck and Tucker, 1973, p. 969)

Another study was conducted by Swick (1970), who investigated an urban teacher preparation program. The research findings indicated that the program he studied had the effect of improving the student teachers' attitudes and perspectives toward teaching in a disadvantaged urban school situation. Test results indicated the student teachers became more responsive to the problems of disadvantaged children, more assertive in dealing with urban school community problems, gained improved opinions of their teachers' self-image, and gained a more rational, compassionate understanding of the problem of the disadvantaged child and his urban school community environment.

Supporting the findings by Swick was a study conducted which varied instructional techniques in a reading methods course involving inner-city elementary schools. LaFlamme (1971) in quoting Wylie (1970) reported that university students involved in the experience-oriented curriculum in the public school setting developed a greater improvement in attitude toward children, school, and teaching as compared with students in the university lecture-type environment.

The literature dealing with attitudes related to children and school was found to be quite extensive, but often conflicting. In general, it was found that attitudes do play a significant role in preparation of elementary teachers but further research is needed to define "ideal attitudes" and how best to develop those attitudes.

Attitudes related to openness

An area of concern for teacher education programs has been the attitude of open or closed mindedness of the students who completed programs to become teachers. Authors quite often used open mindedness as being synonymous with low dogmatism and closed mindedness as being synonymous with high dogmatism.

Rokeach, in a study of dogmatism, defined dogmatism as:

... a closed way of thinking which could be associated with any ideology regardless of content, an authoritarian outlook on beliefs, an intolerance toward those with opposing beliefs, and a sufferance of those with similar beliefs. (Rokeach, 1960, p. 8)

In relating open and closed belief system theory to dogmatism by way of definition Knight said:

Harvey writes that a belief system represents a set of predispositions to perceive, feel toward, and respond to ego-involving stimuli and events in a consistent manner. The belief system operates as a psychological filter that renders the individual selective in his discriminations, in what he admits into and keeps out of his system, in what generates a positive or negative reaction, and in what cues and guideposts he used in making decisions. Individuals with a more concrete or closed belief system acquire basic beliefs through a process of conditioning while individuals with a more abstract or open belief system acquire basic beliefs through inductive reasoning and insight. Concrete-ness is noted by a tight stimulus-response system while abstractness is based on a system which has less stimulus-response and greater freedom of thought and action. (Knight, 1972, p. 33)

Rokeach (1968) asserted that by the time a person reached adulthood, he had formed tens of thousands of beliefs organized into architectural systems having describable and measurable structural properties which had observable behavioral consequences. The total belief system included beliefs which range from inconsequential beliefs to pre-ideological primitive beliefs about the nature of the physical world, society, and self.

In relationship to the importance of belief systems, several authors have concluded that it is a critical factor.

Knight stated:

Harvey wrote that the most crucial determinant of the classroom environment, with its corresponding learning conditions, is the behavior of the teacher and the atmosphere he produces. The teacher's behavior, the resulting classroom atmosphere, and the influence the teacher has on his students are all influenced heavily by the nature of the teacher's belief-system. Harvey emphasizes that to produce open, flexible, adaptive, and creative students, it is necessary to produce more abstract teachers. (Knight, 1972, p. 34)

Taylor reported that:

Of all the research accumulated to date, those studies involving prospective teachers seem to have the most implication for education inasmuch as the dogmatism of teachers has such potential influence upon students in their classrooms. (Taylor, 1973, p. 33)

Several writers have described a number of characteristics which related to open and closed minded people in general.

Rokeach (1960) stated that research in the areas of belief-disbelief systems had shown that the closed-minded individual, associated with any ideology, displayed an authoritarian outlook on life, an intolerance toward those with opposing viewpoints, and a sufferance for those with similar beliefs. Persons who were highly dogmatic were more rigid in problem-solving behavior, more concrete in thinking, more prone to close their perceptual processes prematurely, and display an intolerance toward ambiguity. The more open the belief system, the more the individual was governed by internal self-actualizing forces, was able to evaluate and act in accord with his own wishes, and was able to accept those with opposing viewpoints.

Zagona and Zurcher (1964) reported that highly dogmatic people showed a greater preference for clearly structured topics and structured

situations, and they were disturbed if the instructor's behavior did not conform to role expectations. The highly dogmatic people preferred uncreative, routine, and conventional classes. The low dogmatic people displayed a tendency to have difficulty reaching consensus, but upon reaching consensus defended it and became more unified.

MacKinnon (1969, p. 103) characterized the open-minded person as being "keenly perceptive" and the closed-minded individual as "strongly judgmental."

Mouw (1969) investigated the effects of dogmatism on five levels of cognitive processes. He found that those who tended to be more open-minded, as measured by the dogmatism scale, tended to increase in performance as the task became more complex and autonomous. This study supported the Rokeach notion that closed-minded students tended to rely on authority for direction and support more than do open-minded students. The ability to perform analysis and synthesis was affected by the degree of dogmatism. Learning was affected to the degree that objectives and behaviors involve high level cognitive processes. Mouw concluded that the degree of dogmatism should be a consideration in the educational process, especially when emphasizing self-directed learning or problem solving skills.

Many studies of dogmatism in relationship to teachers, student teachers, and cooperating teachers have been conducted. These studies have considered a wide variety of related topics.

Harvey, White, Prather, Alter, and Hoffmeister (1968) found that the more abstract teachers differed from the more concrete teachers in their teaching approaches and in the classroom atmospheres they generated. The more abstract teachers of this study were classified as clearly superior to the more concrete teachers in the extent to which they

produced what the researchers presumed to be educationally desirable atmospheres in their classroom.

Mechling (1969) found that teachers with high dogmatism scored low on a measure of adoption of new programs and concluded from his findings that there was an inverse relationship between dogmatism and the adoption of innovation.

Huspeth (1966) studied the relationship between dogmatism and teacher attitudes toward the acceptance of new media and graphics, and again found it to be significant. In each case, a high dogmatism score reflected a negative acceptance of new media.

The relationship between the dogmatism of the cooperating master teacher and the student teacher was studied by Freeze (1963). He found that if, at any point in the process of teacher preparation, students were placed with a cooperating teacher or supervisor who was less open-minded than the student, the consequences for the student constituted a significant loss in open-mindedness.

Knight stated:

Given the importance of the cooperating teachers' belief system to the development of student teacher attitudes, the selection of cooperating teachers should be of utmost concern for teacher education. (Knight, 1972, p. 40)

The dogmatism of school teachers has been researched by Sodderbergh (1964). He concluded that some veteran teachers are excessively dogmatic. They tend to be resistant to change and rigidly to compartmentalize their ideas and attitudes.

Contrary to this study, Rabkin (1966) found that experienced teachers are not necessarily more closed-minded than university students. Cappelluzzo and Brine (1969) also studied the relationship between

experienced teachers and prospective teachers with respect to dogmatism. They tested 254 teacher education students in undergraduate classes. They compared this group with comparable undergraduate students and a group of experienced teachers. The prospective teachers scored higher than the experienced teachers showing a more dogmatic response from undergraduate groups.

Taylor also supported Rabkin's findings. He stated:

Studies involving college-age students have given support to the following generalizations: Students tend to decrease in dogmatism as they move up through grade levels; students are no more, nor less, dogmatic than experienced teachers. (Taylor, 1973, p. 33)

In relation to student teaching, Ager (1970) found that open-minded student teachers praised students in an extended way more than did closed-minded. He found that the D scale does not relate to verbal behavior significantly although open-minded students used indirect teaching procedures to a greater extent. Open-minded students encouraged and received pupil talk more than did closed-minded. Open-minded responded to verbal creativity in a more encouraging way than did closed-minded.

Johnson (1969) reported clear evidence that the change in the degree of open- and closed-mindedness of the student teachers was possibly a function of the dogmatism of their supervising teacher. The findings of the research showed a significant change in the dogmatism scores of the student teachers during the student teaching experience. Johnson's study implied that great care should be exercised when placing a student teacher with a cooperating teacher.

Bills, Macagnoni, and Elliot (1964) tested students for openness to experience at the beginning and the end of the student teaching period. They found that significant negative changes occurred in the openness of

student teachers during their student teaching experience. The changes were significantly related to the openness or closedness of the cooperating teachers but not to the openness or closedness of their college supervisor. The study found that although the student teachers as a group showed significant negative changes in openness, the negative change was greater for those who were more open at the beginning of student teaching.

Relating dogmatism to self-concept Taylor (1973, p. 24) stated, "Several studies have shown a high positive relationship between high dogmatism and poor self-concept reported by students."

Musella (1969) found certain other relationships between dogmatism and student characteristics. His thesis was that rating one's own teaching and the teaching of others may be a manifestation of self-evaluation. From a study of 128 student teachers, he found that the closed students rated themselves higher on teaching effectiveness than open students. The closed student rated supervisors lower than the open-minded students. The closed-minded described themselves in more positive terms than did open students. The closed displayed less variety in descriptions of themselves than the open-minded. No difference was shown between the selection of five characteristics most essential to effective teaching.

Conway (1969) found certain relationships between rewards and dogmatism. He found that students perceived as outstanding by their professors actually tended to be more closed-minded. Generally, the more closed-minded professors ranked their closed-minded students higher than the open-minded, but the open-minded faculty did not differ in their ranking of open and closed students. He also found that closed students protected threatened belief systems by warding off threats through refusal to contribute to the situation. The closed-minded also tended to be more argumentative when there was low agreement with

the goals of the professor. Open situations were generally exploited by the closed-minded students. The open student, on the other hand, may have either internalized the new beliefs and integrated them into his open system, or he may have asked for clarification and then acted on the new beliefs.

Holden stated that:

In a report of open-mindedness in classroom interactions, MacDonald and Zaret found that the "open" person exhibited minimal distortion of reality resulting from the individual's need to defend himself against anticipated threat in the reality situation. (Holden, 1970, p. 21)

Low and Shaver (1971) reported on research done at Utah State University and Weber State College, Utah. Their study investigated open-closed mindedness of several classifications of university students. Elementary education majors at Utah State University had a mean score of 152.79. Taylor duplicated much of Low and Shaver's study and found a mean of 146.16 for elementary education majors at Utah State University. Elementary education majors of both institutions tested with a higher level of dogmatism than did secondary education majors.

Taylor also reported on research relating dogmatism scores to MTAI scores. He stated:

A commonly used instrument to measure attitudes toward teaching has been the Minnesota Teacher Attitude Inventory. Rosen worked with groups of counselor trainees and found that a negative attitude toward teaching correlated with a high dogmatism score.

Also using the MTAI Johnston made a study of female teachers and dogmatism. His study revealed a significant relationship between high dogmatism and negative attitudes toward teaching for female subjects. Using the same instrument in a study involving teacher interns, Vacchiano found similar results. (Taylor, 1973, p. 26)

The degree of dogmatism within a teacher is important as he relates to the student in the cognitive as well as the affective domains in

educational objectives. The rigidity of his own belief systems then, will have a significant affect on his approach to teaching. The Rokeach studies have helped considerably in identifying in some measurable ways the status of belief systems; not as to what they are, but as to the dynamics of them in the teacher. More research on belief systems may well have considerable impact on future teacher preparation programs.

Attitudes related to self concept

In recent years much attention has been given to the self concept of teachers and students training to be teachers. When the literature was reviewed it seemed that actual research in this area had only scratched the surface even though a number of studies were located.

Combs stated:

Of all the perceptions existing for an individual, none are so important as those he has about himself. Each of us has a thousands ways in which we see ourselves and each of these has more or less importance in a given personal economy. These thousands of ways make up the peculiar organization which seems to each to be his "very self." It is this organization of ways of seeing one's self that the modern psychologist calls the self-concept. It represents the most important single influence affecting an individual's behavior. (Combs, 1965, p. 14)

He added that self-concept is not something with which we were born. We learned it as a consequence of experience with those around us in the process of growing up. Once established, the concepts we have of ourselves continue to affect our behavior, perhaps even for life. Combs said that the behavior of a teacher, like that of everyone else, is a function of his concept of self. This suggested that teacher education must be deeply concerned about the kinds of self-concepts teachers in training are developing.

If the self-concept of the individual or prospective teacher is the mainspring of his relationship to others and his work, the question

is whether a training or educational program, such as teacher education, can significantly change self-concept. Combs said this was not possible by directly telling a person how he must behave. He arrived at his self-perception as a consequence of experience. To produce a change in a person's self required some new experience which helped him to perceive himself in a different way.

Combs listed three ways this may be done in the teacher education program: (1) the first way was through some direct provision of experience, such as learning a skill or developing an ability, or when the student teacher finally came to believe he could teach as the result of a series of successful experiences; (2) a second way was through seeing an event in a new perspective so that the blocks to new experiences and approaches were removed; and (3) the third way was through interaction following changed perception of others. If the attitudes of others changed toward a person, his self-perception changed. Combs felt the self was learned from the looking-glass held up for a person by others.

The implication for teacher education was that certain things might be done which increase the possibility of healthy self-concept. Combs listed three ways:

1. Creating an atmosphere in the college and within its classrooms and activities which encourages and facilitates the student's discovery of himself as a more adequate person and teacher;
2. Providing experiences designed to help students see themselves as adequate effective people;
3. Assisting actively the student's personal search for meaning and the discovery of himself as a person and as a teacher. (Combs, 1965, p. 77)

Lantz (1964) studied change in self-concept among student teachers. He found that changes quantitatively and qualitatively had occurred

in self-concept during student teaching. Through the Interpersonal Check List, he found significant changes in three scales indicating more trust and acceptance with less intensity of depreciation of others.

One study revealed how self perceived teaching ability could be lowered by a field experience. A comparison of expressed teaching strengths before and after student teaching was conducted by Hoover (1965). The purpose of the study was to determine what influence, if any, the student teaching experience might have upon the felt competence expressed by student teachers. From 25 aspects of teaching, four were ranked substantially lower after student teaching. The four areas that student teachers felt less competent in after student teaching were: (1) utilization of instructional resources, (2) panel discussions, (3) role-played activities, and (4) supervision of extra-class activities.

Greenberg and Frank (1967) explored the inclination for changing self-attitudes among inner-directed and other-directed persons. Findings of the research indicated that other-directed and inner-directed people increased in their self-evaluation after success, and other-directed people exhibited greater variability than did inner-directed people in the degree of positiveness with which they evaluated themselves on all areas measured.

In a study of self-concept by Piers (1964), it was found that self attitudes are relatively stable, although probably less so in childhood than in adolescence. This means that studies which attempt to measure change after a single laboratory event or a short period of time may not find significant differences. She recommended a longer period for attempts to check for changes in self concept.

Supporting the need for longer periods of time to teach for improvement of self-concept, Soffen (1968) conducted a semester-long

course dealing with teacher education students for the improvement of their self-concepts. There was no significant evidence that improvement was made in either the experimental or control groups.

An additional point was made by Aspy when he reported on the findings of several studies dealing with beginning teachers. He stated:

The minimal goal for each graduate of the undergraduate training program must be the student's belief in his ability to cope with the classroom. Unless this is accomplished before the completion of teacher training, there is not much evidence to support the hope that the teacher will develop into the best teacher he can become (Aspy, 1969, p. 308)

Coopersmith (1967) studied self-esteem and defined it as the evaluative attitudes toward the self. He found that anxiety and low self-esteem were closely related. Persons with low self-esteem were less capable of resisting pressures to conform and less able to perceive threatening stimuli. He found that creative persons have higher self-esteem and that persons with higher self-esteem relate to social activism and move more realistically toward their personal goals. He defined it as follows:

Self-esteem is an evaluation which the individual makes and customarily maintains with regard to himself. It expresses an attitude of approval or disapproval, and it indicates the extent to which the individual believes himself to be capable, successful, and worthy. It is a personal judgment of worthiness expressed in attitudes the individual holds toward himself. It is subjective experience which the individual conveys to others by verbal reports and overt behaviors. (Coopersmith, 1967, p. 4)

Coopersmith stated that self-esteem was not related to height, looks, and was weakly related to social status and academic performance. He found a limited relationship between self-esteem, wealth, education,

and achievement. The implication for teacher education in this study was quite similar to that of Combs.

Rhinewoldt stated that:

Coopersmith and Silverman put forth the strongest statement of all supporting self-esteem in a teacher. They concluded that a teacher who lacks some measure of self-esteem, who doesn't like himself, should not be with children. He could do immense harm. (Rhinewoldt, 1971, p. 112)

There was found to be a general theme in the research that self-concept plays an important part in the ability of the teacher. Researchers were not certain as to precise methods by which the development of self-esteem may be accomplished. The research was also not clear as to what specific lengths of time or strengths of experiences are necessary to provide a basis for definitive structure in gaining improvement in self-concept. The belief that improvement can be made in established self-concept was generally supported.

General and professional knowledge

There has been concern for many years about professional and general knowledge that teachers should have and how knowledge or the lack of it comes to bear on teacher effectiveness. The National Teacher Examinations (NTE) and its alternate form, School Personnel Research and Evaluation Service tests (SPRES), have been widely used to measure the knowledge of teachers and teacher candidates.

Hall (1964) found a coefficient of correlation of .635 between weighted common examination (WCET) scores of the NTE and grade point average of those qualified applicants of a class "A" teaching certificate in North Carolina. The mean score of the sample on the weighted common examination was 543.117 compared to a North Carolina state mean

of 541. Hall stated that his findings supported the viewpoint that the National Teacher Examination measured what it was intended to measure.

Quirk, Witten, and Weinberg made the following summary statement concerning their review of research related to the National Teacher Examinations:

... we found 16 correlations between WCET scores of the NTE and undergraduate GPA; these correlations ranged from .23 to .74 with a median value of .55. (Quirk, Witten, and Weinberg, 1972, p. 32)

Cheers and Carter (1969) reported that two groups of education majors, enrolled in traditional and experimental methods courses, were compared in their knowledge of professional and general educational information, knowledge of the elementary school curriculum, classroom instructional behavior, and adaptability to changing classroom situations. Results of the study indicated that the experimental group scored higher in general educational background, encouragement of pupil discourse and transfer of learning. No significant differences were found in their knowledge of elementary school subject matter and methods.

Peck and Tucker reported on a study done at Kansas State Teacher's College in Emporia where students were gradually introduced to the "live" teaching situation through their four year program. The experimental group started with observations and simulations and culminated with student teaching with continued field experience in between. No formal lectures or tests were given to the experimental group. The experimental program was designed to be dedicated to both cognitive and affective development of the students. The control group experienced a more traditional form of education. Peck and Tucker summarized the findings and stated:

The experimental students earned higher grades in their eventual student teaching, they gained an equal amount on the General Education section of the National Teachers

Examination, and they showed greater gain on the Professional Education section of that exam. Sandefur concluded that directly involving a prospective teacher in the teaching-learning process is a far more potent way to effect behavioral changes than giving theoretical training in advance of firsthand experience. (Peck and Tucker, 1973, p. 956)

Maucker (1969) commented about the lack of achievement testing at the end of teacher education programs. He observed that teacher educators devised general education programs, developed requirements for major and minor fields and developed a professional sequence but then made little effort to find the results that were achieved.

Wood wrote in the same vein earlier when he said:

To abandon examinations of intelligence, general culture, and professional information because they do not also measure personality, moral character, interest in children, and other important factors that determine teaching ability, would be as illogical as to abandon the use of the clinical thermometer and stethoscope because they do not measure a thousand other important diagnostic factors. We should avoid the naive error of judging the validity of such tests in terms of their correlation with available criteria of teaching success, just as the physician refuses to judge the validity of his thermometer in terms of the correlation of its readings with total health or life-expectancy estimates. The validity of the examinations should be judged by the accuracy with which they measure, not the total complex of teaching ability, but those parts which they are designed to measure (Wood, 1940, p. 278)

There was very little literature relating directly to general and professional knowledge of pre-service elementary teachers although it was generally found to be an important consideration in all programs. It would therefore seem that much research is needed to answer the many questions in this area such as, "what knowledge should all students have before teaching and how would that knowledge be assessed?", and "how can students best learn the knowledge necessary for teaching?"

Perceptions of student teaching

Student teachers have often been the basis for research in teacher education as they are usually thought to be the "final product." Many studies have sought the perceptions of student teachers related to various factors in their professional preparation. These student perceptions are suggested for consideration as one of the sources for research and evaluation data.

McCommons conducted a study of student teachers' perceptions toward their student teaching experience at the University of Georgia. Perceptions were evaluated in reference to the help student teachers received, their concerns or anxieties during student teaching, the effectiveness of their college supervisor and supervising teacher, their greatest satisfaction in student teaching, and suggestions for improving the teacher education program.

The findings of the study were as follows:

1. A majority of the subjects indicated a rather early commitment to teaching and perceived teaching attractive as a career.
2. A majority of the student teachers perceived the teacher preparation program with a rather substantial degree of satisfactoriness. Student teaching appeared to be their most satisfactory experience.
3. The student teacher perceptions of the components of the teacher preparation of the components of the teacher preparation program appeared to show significant correlation.
4. The perceptions of student teachers providing self-identification did not differ significantly from those not providing self-identification.
5. The perceptions of men student teachers did not differ significantly from those of women student teachers in regard to the teacher preparation program.
6. With one exception, the perceptions of elementary, academic secondary, and non-academic secondary student teachers did not differ in respect to the teacher preparation program. The perceptions of the non-academic secondary group differed significantly from those of the academic secondary group in regard to general education. (McCommons, 1969, p. 3350)

The Purdue Student Teacher Opinionnaire (PSTO) was devised to measure student teachers' opinions relating to 12 factors of student teaching. Bell attempted to identify personality traits of cooperating teachers and student teachers which were related to the student teachers' perception of the student teaching experience as measured by the PSTO. He found that possession of specific personality traits by student teachers were related to high opinions of student teaching. The student teachers who were more emotionally stable, humble, and shrewd tended to express high opinions of student teaching.

Sorenson investigated what students felt they were expected to learn in student teaching. The study involved 163 education students. Two-thirds of the population were women. All were students at UCLA and student teachers in Los Angeles. As a result of the findings in this study, the following conclusions and hypotheses were made:

1. It would seem that supervising teachers differ radically from one another in their concept of the teacher's role. Teaching is not a well-defined process; it means different things to different people. Consequently, two student teachers who plan to teach the same subject but who have been assigned to different supervising teachers may be taught quite different, even inconsistent, methods and principles.
2. Most student teachers feel that they must learn to conform to the demands of an existing system, or at least to the demands of a person who represents that system. Some students feel that they are learning to know reality; others believe that they will have considerably more freedom when they actually become teachers. At any rate, it appears that in many cases they have learned to give more attention to non-instructional than to instructional variables.
3. There is a great gap between the content of professional courses and the activities of student teaching. The only mention of the application of theory to student teaching was by students who warned their friends not to attempt to apply it.
4. A student's grade in practice teaching probably depends in large part on whether he is well-matched

- or mismatched with his supervising teacher on the basis of preferences as to concepts of the teacher's role, and such personality variables as dependence versus independence.
5. Much of the anxiety, frustration, and resulting hostility experienced by student teachers is probably a result of the assignment of students with one set of beliefs about instruction to supervising teachers with a quite different set.
 6. Most important, practice teaching does not appear to provide the prospective teacher with a theoretical framework for use in planning and evaluating his own instructional activities. The entire emphasis seems to be on the learning of routines for getting through the day rather than on the analysis of the reasons for or the effectiveness of these routines.
(Sorenson, 1967, p. 176)

Trimmer conducted a study on the reactions of student teachers toward their supervising teacher. Students were asked to make an assessment of their supervising teacher after their student teaching experience by answering the question, "Why would you recommend or not recommend that your cooperating teacher be asked to serve again?" The cards were separated according to number of complete rejections and sex differences. Out of 351 assignments, only 31 were completely unsatisfactory.

Deficiencies of supervising teachers in order of frequency as rated by student teachers were: (1) lack of constructive criticism, (2) no regular conferences, (3) never allowed control of the class, (4) no suggestions as to methods and techniques, (5) freedom but no guidance, (6) lack of organization, (7) rigidity, (8) not frank on criticism, (9) poor attitude toward pupils, (10) inflexibility in teaching methods. (Trimmer, 1960, p. 537)

Students' perceptions and opinions have been regarded as important sources of information for the purposes of evaluation and program improvement. With the increased concern for individual needs of learners, greater emphasis has been placed on receiving feedback from students. Instruments necessary to achieve this purpose have been devised and will undoubtedly be improved.

Criticism and reform

Teacher education has been the subject of heated debate since the early nineteenth century, and it has been the object of recurrent criticism and investigation since the end of World War I. Silberman (1970) stated ten major studies of teacher education had been published; one of them ran to six volumes and another to eight volumes.

During the past twenty years, public education and teacher education have been the object of increasing criticism. Popham and Greenberg (1958) made an annual count of criticism from magazines and books over a ten year period, 1948 to 1958. They found the frequency of criticism of teacher education increased tenfold during this period.

In a similar survey, Scherwitzky (1964) reviewed and analyzed criticisms of education courses found in the literature for the period 1949 to 1959. She found the criticism was seldom based on research. Most critics relied on readings, personal experiences, and opinions to support their reactions. Similar bases for criticism were found by Popham and Greenberg, with personal experience being used most frequently.

Evidence of the extent of public concern for teacher education was shown in Koerner's (1963) book, The Miseducation of American Teachers. He presented evidence that American education needed major changes in its entire conception and administration of teacher education.

Dodds (1972) reported that:

Criticism of current institutions for teacher training has been leveled--with varying accents in different places--at the lack of educational relevance or alternatively of scholarly quality of studies in the subjects of instruction, at the inadequacy and primitiveness of methods course, at the redundancy and lack of intellectual rigor in the foundations studies. (Dodds, 1972, p. 12)

Smith (1962) reported on a conference sponsored by the Fund for the Advancement of Education which was held in the summer of 1960. Conference participants consisted of persons who had been involved in teacher education projects sponsored by the Fund. The participants were unanimous in arguing that drastic steps needed to be taken to improve the quality of present teacher education programs.

Several writers have reported on the criticism and comments of students in teacher preparation programs. First year teachers were also used as sources for information concerning their teacher preparation. One common criticism made by students was reported by Hazard (1972). He stated that students who "found" teaching was not for them after student teaching, had already invested three plus years and usually decided to finish the program. These students often then took employment as classroom teachers, according to Hazard. He found that students felt that if they had experienced some line classroom situations early in their undergraduate program, they could have made an early decision to deselect themselves from the program.

Dodds (1972) stated that Plakans and Darling (1967) reported on criticisms of a group of first year teachers. They found:

The most oft expressed criticism at the seminar was the fact that the teacher trainees were not allowed to be with children or take an education course until their junior year. (Dodds, 1972, p. 23)

Similar criticisms were described by Pogue (1964), Sorenson (1967), Wilhelm (1970), and Taylor (1971).

While conducting interviews with students preparing for elementary school teaching, James Conant and his staff found that:

They were frank and specific in their evaluation of courses. Some of these judgments included the eclectic introductory course covering a smattering of topics--job

opportunities in teaching, certification requirements, professional ethics for teachers, and the evolution and organization of American schools. Students were somewhat less critical of the courses in educational psychology but frequently complained that these were far removed from classroom practice. The students were more enthusiastic about child development and methods courses, although a significant proportion believed that the latter could be improved through eliminating duplication, and that both types of courses should be more effectively related to practice. (Conant, 1963, p. 154)

Dodds supported these findings with comments from first year teachers. He stated:

Descriptions of the methods courses to which the teachers had been subjected were categorized as follows: (1) the course is so theoretical that it has no contact with reality; (2) the course treats the student teacher as if he is a child; (3) there is too much busy work involved to allow for any real thinking; (4) the course is mostly a bull session; (5) the course deals with generalities only, ignoring specifics, and leaves absolutely no room for creativity.

Furthermore, the teachers reported that their education professors talk about a type of child who doesn't exist and trainees are not prepared to deal with the wide range of abilities with which they are confronted when they first enter the classroom. (Dodds, 1972, p. 23)

Moving from criticisms, many writers have gone on to suggest necessary changes to bring about reform. The most often discussed area for reform was field experience. Typical of many descriptions for field experience was one given by Ryan (1968) and reported by Dodds. He stated:

Instead of exposing beginning teachers to a series of education courses and then immersing them in the complex replica of a class of twenty-five or thirty students, they should be trained gradually to acquire basic teaching skills through a series of experiences. This aspect of training can be divided into three phases similar to those of pilot training. The first phase is classroom observation. The second phase of this training involves more active participation of the trainee. Here the trainee applies some of the principles learned through previous training but in a setting less complex than a normal classroom.

When the teacher has practiced and demonstrated his ability to teach in simulated situations, he is ready to take on the instructional responsibilities of a regular class. This phase corresponds roughly to our present practices of student teaching and internship, except that the teacher trainee has had an opportunity gradually to build up a repertory of skills and a background of experience. (Dodds, 1972, p. 14)

Other authors supporting a similar view included Conant (1963), Wiles (1966), Beggs (1965), Ryan (1968), and Kalick (1971). Dodds (1972) also reported that Smith (1967), Nebraska Council on Teacher Education (1970), Horton (1971), and Sawin (1971) suggested the same types of reform for field experience.

Shuff and Shuff (1972) found that of 100 schools with teacher education programs, 85 had a pre-student teaching experience for elementary education majors and 78 for secondary. Sixty-eight of the programs were part of a regular course such as human growth and development and/or a general methods class.

There were many writers in teacher education that believe pre-student teaching experiences contributed to the education of the future teacher in one or more of the following ways as listed by Andrews (1964), and reported by Dodds:

1. Providing a basis for a personal decision to become or not to become a teacher.
2. Developing readiness for professional courses, professional experiences, professional growth, and for full responsibility teaching.
3. Developing mature professional purposes and attitudes.
4. Strengthening understanding by exposure to reality which adds feeling and other sensory impressions to verbalize knowledge.
5. Providing an opportunity to acquire, use, and test information.
6. Developing professional understanding of concepts and theories from professional and related disciplines.
7. Developing skill in the use of professional techniques.
8. Developing insight and judgment in applying professional knowledge.
9. Providing a basis for evaluating professional, social, and personal growth.

10. Providing a feeling of significant personal worth-- the satisfaction that comes from giving useful professional service. (Dodds, 1972, p. 35)

Several authors described current reform and also what the future might hold in relation to reform.

Elam (1971) related the response of several deans of large teacher education institutions as to what they thought were the most important improvements made in teacher education programs. He found that each one pointed first to clinical laboratories, increased involvement of the public schools in teacher education, or early clinical experience for all prospective teachers.

When Robins studied the impact of current changes in education upon teacher education by surveying superintendents, college faculty, and teacher education administrators, he concluded that:

1. Basic changes are occurring in elementary and secondary education.
2. They will continue to occur.
3. Changes contain implications for teacher education.
4. Traditional teacher education is not adequate to prepare teachers for schools of the future.
5. Minor modifications are not sufficient with major modifications being essential.
6. Teacher education should demonstrate in practice the innovative procedures found in school.
7. Students in teacher education should observe and have experience with innovative procedures.
8. The preparation of teachers to function with new programs is a function of both pre-service and in-service teacher education. (Robins, 1969, p. 187)

Cooper and Sadker described current trends in teacher education curriculum:

For the innovations surveyed, 60 to 70 percent of the teacher accreditation institutions are affected only slightly, if at all, by innovations in teacher education.

This suggests the need for a greater responsiveness to change, not just for the sake of change but because creative change, when congruent with institutional goals, can provide more effective means of preparing future teachers. (Cooper and Sadker, 1972, p. 316)

Denemark (1973) stated that the issues were no longer involved with the bitter and mostly fruitless controversy between liberal arts and education, but has moved to a new ground centering upon defining appropriate roles for school systems and for colleges or universities in teacher preparation.

Stone gave direction for the future of teacher education by stating where it was and where it should go as follows:

From
recruiting and selecting on
the assumption that anyone
can and should teach

preparing teachers who think
teaching is talking, usually
from "up front" and "on high"

preparing teachers whose
learning is all finished

preparing teachers to be self-
contained, using only them-
selves and books as educational
resources

preparing teachers for whole-
class instruction and product
learning (what and how)

the philosophy that a student
can't possibly know something
if he hasn't had a "course"
in it

lecture-centered and campus-
based professional education

seeking one best teacher
education program

To
recruiting and selecting on
the assumption that, like any
other profession, the skills
and competencies are not
possessed by everyone.

preparing teachers who listen,
who emphasize inquiry, social
sensitivity, and self-direction,
and who are "around and about"
the classroom guiding, probing,
encouraging

preparing teachers who are
life-long learners

preparing teachers to be
organizers of multiple teaching
resources, both human and
technological

preparing teachers for
individual and small group
instruction and process learning
(why and for whom)

flexible teaching arrangements that
emphasize a sequence of experiences
rather than "course coverage,"
"term papers," "final examinations,"
"grades," and "credits"

laboratory-centered and school-
community based professional education

offering multiple pathways to
teaching recognizing the diverse
needs of the profession and the
varying backgrounds and abilities
of those who wish to teach

From
 experimenting and innovating
 "on schedule" every five or
 ten years

To
 inventing strategies whereby
 members of the staff are
 continuously encouraged to
 innovate

(Stone, 1968, p. 175)

Dodds reported on a reformer who looked into the future. He stated:

Seymour Lemeshow believes that in the year 2015 students will spend a considerable portion of their time living and working in situations in which they are learning. The student will experience learnings in vivo--not merely in vitro. Direct contact will largely replace vicarious experiences. When admitted to teacher candidacy, the student will be immediately placed in the school setting as an apprentice teacher.

This apprenticeship will continue throughout his professional education. He will learn on the job, not only in the school setting, but also in observation of the participation in the activities and functions of agencies, clinics, hospitals, and centers dealing with the total development of the individual. When he studies about the people of the world, he will live with the people of the world. He will terminate his formal education when he presents evidence of his competencies as an experienced educational clinician. (Dodds, 1972, p. 24)

In summary, Silberman commented on reform at different times. He first stated:

... there is no cheap or easy way to reform teacher education. I have no panacea or master plan to offer, and know of none worth following--least of all the fancy "models" now being sponsored by the U.S. Office of Education, which use the granting jargon of systems analysis ("performance criteria," "cost effectiveness," "instructional modules," and the like) to mask an absence of serious thought or substantive change. (Silberman, 1970, p. 470)

He later wrote that:

It would be a mistake, however, to conclude that reform is impossible, for educational reformers typically have made little attempt to understand the institution they were trying to change. (Silberman, 1973, p. XV)

He added:

From the criticism of teacher education, much reform has taken place. It has been recognized by several writers that reform will continue as we look ahead to the future.

New programs

Many descriptions of new programs in elementary teacher preparation were found in the literature. The major experimental programs financed by the Federal government are summarized by Burdin and Lanzillotti (1969). At the University of Pittsburgh the trainee was scheduled to observe and participate in the activities of the clinical setting. Data was collected about his attitude, interrelationships, and successes as a tutor. The behavioral data and faculty judgment was to form a part of the new basis for full admission into the training program. They reported that the University of Massachusetts believed the role of the elementary school teacher was changing and would continue to change in the future, thus, they felt that teachers must be prepared for change and not stability. They used a wide variety of instructional procedures to individualize instruction.

The University of Toledo had intern and actual experiences in the elementary classroom incorporated throughout the entire program. The University of Georgia specified the need for five kinds of laboratory facilities. They were:

1. General resources laboratories.
 2. Instructional units central resource laboratories.
 3. Instructional unit field laboratories.
 4. Clinics in which remedial services are provided.
 5. Instructional unit interaction laboratories.
- (Burdin and Lanzillotti, 1969, p. 190)

Teachers College, Columbia University, had a contact laboratory which began in the first weeks of the program, continued ideally into the first year of paid teaching. Only the initial phase included

apprentice teaching of the type most familiar in traditional student teaching programs. The remainder of the experience was in experimental teaching in which the candidates were mastering a variety of strategies and carrying out teaching units which they developed with research designs.

The basic goal of Syracuse University was to enable students to make wise, nonsubstantive teaching decisions. In order to do this, the component helped the student to:

1. Discriminate between increasingly finer differences in teacher behavior as displayed by other teachers;
2. Practice teaching behavior in order to develop a wide repertory of behaviors;
3. Examine the range of objectives of education and prepare measurement techniques to assess their achievement;
4. Interpret and apply the results of research on the effectiveness and strategies of teaching as they relate to achieving specific outcomes;
5. Practice the decision making skills, especially those of "searching" for the potential behaviors and strategies most effective for particular pupils working for specific objectives. (Burdin and Lanzillotti, 1969, p. 94)

The Northwest Regional Educational Laboratory believed its underlying task of the professional preservice component in a Comfield type teacher education program was to prepare prospective teachers to be able to demonstrate that they could perform under laboratory and practicum conditions, that they could bring about the desired outcomes in children, that they could perform the noninstructional tasks required of teachers, and that they had developed a recognized and defensible teaching style. In addition, the model required that each prospective teacher demonstrate competence in the application of what had been termed general adoptive and interpersonal strategies.

There were five features of the preservice program at Florida State University; self-paced experiences rather than courses, criterion-

referenced performance evaluation rather than standard grading, sequenced theory-practice contiguity, progressive synthesis experiences, and a computerized management control system with feedback capabilities.

The disappearance of formal courses in professional education, the provision of simulated to real teaching practice immediately contiguous to trainee learning experiences, the absence of formal grading as a means of evaluating trainee success, and the elimination from the preservice programs of a traditional student teaching or internship experience were characteristic of the program structure.

Michigan State University had developed a tutorial program and a Career-Decision Seminar.

In the tutorial program early experience with children in a teacher education program is deemed important for reality testing purposes. During the first two years of college, the student works in one or more child-related roles. Purposes of this experience include: (1) role identification; (2) self-screening; (3) reality testing of children-models; and (4) general awareness of people.

The general purpose of the Career-Decision Seminar is to aid prospective teachers to make adequate decisions concerning four questions.

1. Should I prepare to become a teacher?
2. If so, with what general age children am I most likely to be effective?
3. Do I prefer the activities and role of a general classroom teacher or should I specialize in a subject area?
4. If I choose to be a subject specialist, which area is most suitable?

In addition to assisting the student to answer questions about his career, the first formal clinical experience is designed to:

1. Collect actuarial and personal data on students.
2. Follow-up tutorial experiences of students.
3. Introduce the role and functions of an elementary teacher.
4. Provide simulated classroom experience for reality testing purposes.

5. Provide the first evaluation checkpoint for candidates. (Burdin and Lanzillotti, 1969, p. 34)

Engbretson did an exhaustive study of all proposals that were submitted for funding under the Comprehensive Undergraduate and Inservice Teacher Education Program for Elementary Teachers. His findings were:

1. Eighty proposals were submitted, nine were funded. The funded proposals tended to come from large, multi-purpose, research oriented universities and one regional education research laboratory. The funded proposals were more comprehensive, specifically dealt with all nine program components, had recognizable uniquenesses, and contained basic rationales, theory and related research.
2. Illustrative model proposals chosen for both uniquenesses and representativeness were edited and included
3. Proposals stressed the definitions of teaching tasks and teaching behaviors to be learned based on analyses of weaknesses in current elementary teacher training programs and on analyses of actual elementary teaching today. Relatively few proposals proposed to develop their respective models on the bases of what elementary teaching should be like in the future.
4. Most proposals stressed heavy proposed use of audio visual or multisensory equipment and considerable attention was given to the use of programmed learning, simulation laboratories, micro-teaching, computer uses in instruction and evaluation, and systems analyses and approaches to both individual trainees, training sequences, and total program component development.
5. As far as actual programs proposed were concerned, they were most frequently marked by stress upon individualized instruction featuring self-pacing, self-instruction, self-selection and self-evaluation all with the potential of cycling and re-cycling training sequences.
6. Abandonment of traditional course and time structures was frequently proposed.
7. Many proposals stressed early concrete experiences with children
8. General agreement was found in presenting the need for many institutions and agencies to be involved in proposed programs.
9. Despite the fact that the guidelines called for them, relatively few proposals dealt with the preparation of personnel for early childhood education or for work with "disadvantaged" children. (Engbretson, 1969, p. 1)

The "Tutorial and Clinical Program" at Northwestern University (Hazard and Chandler, 1967) emphasizes the all-university approach to teacher preparation. That is, the school system and the College of Arts and Sciences are brought directly into the decision-making process with the School of Education. Elementary and secondary majors have their programs planned jointly by appropriate representatives from these three areas. (Elementary majors must do advanced undergraduate work in two academic areas common to the curriculum in elementary education.) What is even more innovative in this program is that all formal courses in education are eliminated and are substituted by group tutorials and related to clinical experiences which are spaced across the four undergraduate years (most universities now call the first two years general education time).

Dodds described a program which was a pilot project initiated by the Teachers College Advisory Board in September, 1968, which was written by May, 1971.

The project entitled TAPP (Teacher's Advisory Pilot Project) places the elementary education student in a classroom three semesters over a period of three years. Dr. James May stated that the objectives of TAPP are threefold: (1) the development of more self-confidence and a "headstart" in student teaching; (2) a closer identification of college courses and the teaching situation; and (3) student affiliation with the school, the cooperating teacher and the teaching philosophy that permeates the building. (Dodds, 1972, p. 33)

Collins (1970) reported on a rather innovative unifying approach for the laboratory phase of teacher training. He envisioned a "Teacher Education Center" as the focal point for teacher training. Physically, a Teacher Education Center was a cluster of two or three geographically contiguous elementary schools, or one or two junior high schools (or

middle schools), and a senior high school. Organizationally, it was a partnership between a school system and one or more preparing institutions, with the possible inclusion of the professional associations and the state department of education. The implications for teacher education for such a center were: (1) more direct integration of on-campus and off-campus aspects of the training; (2) increased responsibility by the public schools for training; (3) a new position, a full time coordinator of the center, who will serve as liaison between the public schools and the university (and will be paid jointly); (4) certainly more new roles for teacher education personnel; (5) abolishment of direct honoraria to supervising teachers--there will be adjustments in faculty loads; (6) increasing concern for teacher education performance skills in employment of public school teachers; (7) emergence of levels of pre-professional status and delineation and clarification of the levels of professional status; strengthening of in-service teacher education programs; (8) emergence of supervising teaching internship as the usual practice rather than the exception; (9) teacher certification after the successful completion of a supervised intern experience; (10) an uninterrupted, carefully planned, sequential transition from entry into the profession to full advanced status, and of course; (11) emergence of standards for off campus clinical teacher education centers. Clegg and Ochoa (1970) also reported on a tri-university project in which all professional training takes place at three cooperating elementary schools.

Monson identified the common elements among many of the programs just discussed.

1. More reliance on technology from video tape machines and programmed instruction to entire computer-assisted and computer-based programs.

2. Greater stress on individualization and flexibility in the form of self-pacing, self-evaluation, added self-responsibility.
3. More emphasis on performance criteria or training cycles and the use of behavioral objectives. More definitions of teacher tasks, thus less structuring of formal courses.
4. Earlier experiences with children and often more and more varied experiences than in present programs.
5. Increased cooperating among those concerned with teacher education in the universities and colleges, in the public schools, in media development, and within other agencies.
6. Highly selected laboratory experiences, simulations, micro-teaching, and internships.
7. Planned in-service follow-up programs for graduates in their first year of teaching.
8. Differentiated roles for elementary school personnel and college staffs.
9. Movement toward a five-year internship program in basic elementary teacher preparation.
10. More emphasis on liberal education and toward an intra-disciplinary approach to teacher education.
11. Small groups of trainees with a favorable staff ratio. (Monson, 1969, p. 101)

As elementary teacher education has been subjected to much criticism, it has gone through considerable reform in recent years. Many new and innovative programs have been developed across the country. Even though tremendous gains have been made, the literature revealed that many institutions still have changed very little and even those institutions that are "leaders" in the field have much yet to accomplish. Hopefully teacher education will not be satisfied with a motto like the university motto described by J. Abner Peddiwell (1939, p. 78) in his book, The Saber-Tooth Curriculum, "That we may have smooth tiger-scaring when our present medicine men shall lie in the dust."

CHAPTER III

PROCEDURES

The purpose of this research was to study the new SODIA Elementary Teacher Education Program by measuring the program's effects upon the knowledge, attitudes, and self-perception of ability of student teachers at Utah State University.

Population of the Study

The subjects in this study were all 104 full-time student teachers enrolled at Utah State University during Fall and Winter Quarters of the 1973-74 school year. Fifteen students completed their teacher education in the former program and 52 completed their teacher education in the SODIA program. Fifteen students completed their teacher education in the Sophomore Bloc Only program and 22 completed their teacher education in the Junior Bloc Only program, which were combinations of the SODIA and former program.

Several portal schools cooperated with the Department of Elementary Education in the student teaching experience. They were: Adams, Ellis, Riverside, Wilson, Woodruff in the Logan City School District and North Park in the Cache County School District. Three students had special student teaching placements outside the Logan-Cache Valley area and were included in the population and sample.

Table 1. The number of student teachers in the four identified groups from Fall and Winter Quarters, 1973-74

	SODIA Program	Former Program	Sophomore Bloc Only Program	Junior Bloc Only Program
Fall	26	7	10	7
Winter	<u>26</u>	<u>8</u>	<u>5</u>	<u>15</u>
Total	52	15	15	22

Hypotheses

Specifically, the study was designed to accept or reject the following hypotheses:

Hypothesis 1. There will be no significant difference in attitude toward children and school between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Minnesota Teacher Attitude Inventory.

Hypothesis 2. There will be no significant difference in open or closed-mindedness between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Rokeach D Scale.

Hypothesis 3. There will be no significant difference in self-perceptions of teaching skill between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Teaching Skills Self Rating Scale.

Hypothesis 4. There will be no significant difference in achievement between student teachers in the SODIA, former, junior bloc

only, or sophomore bloc only programs as shown by their scores on the School Personnel Research and Evaluation Service tests.

Hypothesis 5. There will be no significant difference in opinions concerning student teaching between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Purdue Student-Teacher Opinionnaire.

Instrumentation of the Study

The cognitive, affective, and skill domains were studied by collecting data from student teachers near the end of their student teaching quarter, either Fall or Winter, 1973-74. Five general types of data were collected. They were:

1. Achievement data. Collected with School Personnel Research and Evaluation Services Examinations (SPES).
2. Attitudes toward children and school data. Collected with the Minnesota Teacher Attitude Inventory.
3. Open or closed-mindedness data. Collected with the Rokeach Dogmatism (D) Scale.
4. Opinions concerning student teaching data. Collected with the Purdue Student Teacher Questionnaire (PSTQ).
5. Self-perceptions of teaching skill data. Collected with the Teaching Skills Self Rating Scale (TSSRS).

The first four instruments are recognized as valid tests and national norms have been established for each of the tests. The Teaching Skills Self Rating Scale was developed by the writer and validated as described in a following section in this chapter (page 67).

School Personnel and Research Services
Examination (SPRES)

Common Examinations. The School Personnel Research and Evaluation Services Program offers the Common Examinations, a 190-minute battery of four tests, and 20 Specialty Examinations.

The Common Examinations are adopted from the National Teacher Examinations and, as such, are used to assess a candidate's general and professional education. The following tests are included in this battery:

Test A: Professional Education--90 minutes

Test B: Written English Expression--25 minutes

Test C: Social Studies, Literature and the Fine Arts--40 minutes

Test D: Science and Mathematics--35 minutes

Total: 190 minutes

The Professional Education test includes questions covering such topics as human growth and development, motivation, nature and nature of learning, personality and adjustment, measurement and evaluation, history and philosophy of education, the organization and administration of the American school system, the relationship of the school to society, the teacher's professional role, classroom organization and management, organization of instructional materials, and the instructional behavior of teachers.

The questions that appear in the Written English Expression test have to do with grammatical construction, punctuation, capitalization, word usage, and sentence construction.

The Social Studies, Literature and the Fine Arts test provides an estimate of the candidate's cultural development in these fields. The questions are directed toward measuring broad understanding rather than intensive preparation in these areas.

The Science and Mathematics test measures the candidate's general background in these fields. The questions focus on basic concepts and generalizations in science and mathematics and provide a measure of

the candidate's ability to recognize and apply these concepts and principles in various situations.

Specialty Examination. The test, Education in the Elementary School, concerns the general field of elementary education, grades one through eight. It contains questions on the curriculum of the elementary school, including reading, language arts, mathematics, social studies, science, art, music, physical education, health, recreation, and safety. This test is intended to measure the candidate's knowledge of these curriculum areas as it relates to the following abilities: (1) understanding basic concepts and principles within each discipline or subject area; (2) understanding the interrelatedness of concepts within and among the disciplines of subject areas; (3) understanding cognitive processes and ways of fostering their development; (4) understanding the relatedness of cognitive processes within and among the various disciplines and school subjects; (5) understanding basic concepts concerning the growth and development of the child and how he learns; (6) selecting, planning, and organizing appropriate opportunities to meet objectives; including the provision of a variety of resources to guide the learner in the attainment of his goals; (7) utilizing information relative to changes in the behavior of the learner as a basis for evaluation and planning of further learning; and (8) being aware of information about current educational theory, practices, trends, and research.

The SPRES examinations were administered on November 13, 1973 and February 26, 1974.

The Minnesota Teacher Attitude Inventory (MTAI)

Examinees are presented with 150 statements concerning the nature and behavior of children in general, and are asked to express their

degree of agreement or disagreement on a five-point Likert scale. The options range from "strongly agree" to "strongly disagree"; there are no "right" or "wrong" answers. Raw scores can vary from plus 150 to minus 150. High scores indicate permissiveness toward children and uncritical, positive attitudes toward teaching; low scores suggest critical, authoritarian attitudes. Mid-range scores may be optimal in that they reflect a democratic, but at the same time realistic, orientation toward children and teaching.

The manual for interpreting MTAI scores describes the test as one which:

...Investigation carried on by the authors over the past ten years indicate that the attitudes of teachers toward children and school work can be measured with high reliability, and that they are significantly correlated with the teacher-pupil relations found in the teachers' classrooms. The Minnesota Teacher Attitude Inventory has emerged from these researches. It is 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 students for teacher preparation and the selection of teachers for teaching positions. A parallel use is in counseling students about a vocational choice. These two uses stem directly from research evidence available at present. Logically, the use of the Inventory may possibly be extended to other areas, such as measuring the effectiveness of a teacher-education program or measuring the ability to work with youth groups. (The Psychological Corporation, 1956, p. 3)

The MTAI was administered during the weeks of December 3 to 7, 1973 and March 4 to 8, 1974.

Rokeach Dogmatism (D) Scale

The Rokeach D-Scale, Form F is a 40 item Likert scale to measure individual differences in openness or closedness of belief systems. It is assumed that a person's beliefs are organized into two independent

parts: a belief system and disbelief system. Rokeach defines a belief system as the psychological system (not necessarily logical) which represents all the beliefs, sets, expectancies, or hypotheses, conscious and unconscious, that a person at a given time accepts as true of the world in which he lives. The disbelief system is composed of a series of sub-systems. It contains all the disbelief, sets, expectancies, conscious and unconscious, that a person at a given time rejects as false to one degree or another.

Finally, a belief-disbelief system has a dimension of time. A person's belief-disbelief system includes a perspective about the past-present, and future, and the manner in which the person can receive, evaluate, and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside.

The 40 items of the scale are distributed among the three aspects of dimensions of the definition: the belief-disbelief demension, the central peripheral dimension, and the time perspective dimension.

Each item has six alternatives ranging from "I agree very much" to "I disagree very much" with weights being from +3 to -3. The scoring range for an individual item is from 1 to 7 since the constant 4 is added to the weight of the selected alternatives. The total score for the test is the summation of the item scores. The higher the score the more closed is the person's belief system.

The Rokeach D-Scale was administered during the weeks of December 3 to 7, 1973 and March 4 to 8, 1974.

Purdue Student-Teacher Opinionnaire (PS-T0)

The Purdue Student-Teacher Opinionnaire is designed to measure student teacher morale. It provides meaningful factor scores which break student teacher morale into some of its dimensions. The 12 factors or categories included are: (1) "Student Teacher Rapport with the Supervising Teacher"; (2) "Student Teacher Rapport with the Principal"; (3) "Teaching as a Profession"; (4) "Student Teacher Rapport with the University Supervisor"; (5) "Community Support of Education"; (6) "Student Teacher Load"; (7) "Student Teacher Rapport with Student"; (8) "Student Teacher Rapport with other Teachers"; (9) "Satisfaction with Housing"; (10) "Professional Preparation"; (11) "School Facilities and Services"; and (12) "Curriculum Issues."

Scoring is done on a four point scale with agree, partly agree, partly disagree, and disagree as response choices. The opinionnaire consists of 100 statements. The PS-T0 was administered during the weeks of December 10 to 14, 1973 and March 11 to 15, 1974.

Teaching Skill Self-Rating Scale (TSSRS)

The Teaching Skill Self-Rating Scale is an instrument developed by the author of this study from teaching competencies identified by Dr. David Stone and Dr. Carolyn Steel, Utah State University. It was piloted with junior level elementary education majors and critiqued by a panel composed of Dr. Stone and the writer's doctoral committee.

Following these two validation procedures, the revised instrument was approved and utilized.

The Teaching Skill Self-Rating Scale is designed to measure the self-perceived level of ability in 14 identified skill areas of teaching. The skill areas are: (1) Persons; (2) Physical Environment and Materials;

(3) Culture; (4) Stimulus; (5) Sensory; (6) Aptitudes; (7) Self; (8) Perception; (9) Cognition; (10) Transfer; (11) Mode of Attack; (12) Affective Feedback; (13) Informative Feedback; (14) Self-Directed Feedback. Examinees rate themselves on a scale of one to five (low ability to high ability) on 68 statements. The total score is determined by adding the response of each item. The student has the option of marking "Do Not Understand" on any item. The TSSRS was administered during the weeks of December 10 to 14, 1973 and March 11 to 15, 1974.

Statistical Analysis

The School Personnel Research Evaluation Service examination answer sheets were machine scored by Educational Testing Service and the Purdue Student-Teacher Opinionnaire answer cards were machine scored by Purdue University Measurement and Research Center. The responses to all other instruments used were hand scored. Total scores were entered on a master sheet from which all other statistical operations were performed. One way analysis of variance was used to test for significance between group means. The results of the analysis of the data are presented in Chapter IV.

Limitations

The study sample was limited to include only regular elementary education student teachers who completed student teaching Fall or Winter Quarters of the 1973-74 school year. In addition, the study was limited to the use of the five selected instruments.

CHAPTER IV

RESULTS OF THE STUDY

This study attempted to determine whether or not different types of preparation programs have an effect on several identified variables related to elementary teacher education at Utah State University. Data collected from 104 elementary education student teachers were compared. Data collection was carried out during Fall and Winter Quarters of the 1973-74 academic year.

The student teachers were divided into four groups based on the type and amount of preparation for teaching they had received. The four groups were SODIA, Former, Sophomore Bloc Only, and Junior Bloc Only.

Testing of the data for significant differences was done by the use of one way analysis of variance at the .05 level of significance. Where statistically significant differences were found between groups; the Scheffe Test at the .05 level of significance was used to determine where the differences were.

On the basis of comparisons of mean scores made between the four treatment groups, all five null hypotheses were accepted for Fall Quarter, 1973, student teaching groups.

The comparison of mean scores from Winter Quarter, 1974, student teaching groups revealed significant differences on three sub-sections of Hypothesis 1. The Sophomore Bloc Only group scored significantly lower on the Science and Mathematics, Common Weighted Examination, and Education in the Elementary School sections of the School Personnel

Table 2. Mean scores of SODIA, Former, Sophomore Bloc Only, and Junior Bloc Only groups of elementary education student teachers at Utah State University on 22 independent variables, Fall Quarter, 1973

Variable	SODIA	Former	Sophomore Bloc Only	Junior Bloc Only	F	P
Dogmatism	152.8	140.0	156.6	154.0	1.05	P>.05
MTAI	37.0	56.7	27.1	26.4	1.66	P>.05
TSSRS	258.3	251.9	254.2	251.6	.17	P>.05
Professional Information	58.5	62.6	57.1	60.1	.74	P>.05
Written English						
Expression	55.8	53.6	54.6	55.0	.13	P>.05
Social Studies	52.9	55.9	52.8	56.3	.61	P>.05
Science, Math	61.3	61.0	62.2	58.9	.22	P>.05
Common Weighted Exam	575.1	595.0	570.5	582.9	.24	P>.05
Education in the Elementary School	646.5	644.3	627.0	644.3	.28	P>.05
Rapport with Supervising Teacher	60.5	61.3	64.8	66.3	1.11	P>.05
Rapport with Principal	38.5	39.1	41.2	41.1	.38	P>.05
Teaching as a Profession	40.5	43.1	40.2	42.0	.64	P>.05
Rapport with University Supervisor	30.3	32.7	30.7	26.6	.81	P>.05
Community Support of Education	16.7	16.4	17.6	17.4	.36	P>.05
Student Teaching Load	22.2	24.4	23.4	23.6	.59	P>.05
Rapport with Students	21.4	22.7	22.5	22.6	1.05	P>.05
Rapport with other Teachers	21.4	21.0	20.4	21.3	.41	P>.05
Satisfaction with Housing	17.5	17.7	17.8	18.4	.29	P>.05
Professional Preparation	26.0	26.1	25.7	24.9	.19	P>.05
School Facilities	17.0	16.1	17.6	17.7	.67	P>.05
Curriculum Issues	16.8	16.3	17.6	17.1	.52	P>.05
Total PS-TO	32.9	33.7	34.0	33.9	.41	P>.05

Required F to be significant 2.81.

Research and Evaluation Services tests at the .05 level of significance. All other sub-sections of Hypothesis 1 and the other hypotheses tested contained no significant differences between groups tested during Winter Quarter, 1974.

Table 3. Mean scores of SODIA, Former, Sophomore Bloc Only, and Junior Bloc Only groups of elementary education student teachers at Utah State University on 22 independent variables, Winter Quarter, 1974

Variable	SODIA	Former	Sophomore Bloc Only	Junior Bloc Only	F	P
Dogmatism	144.2	147.8	157.6	141.5	1.05	P>.05
MFAI	39.2	26.8	11.2	37.8	2.35	P>.05
TSSRS	256.6	251.8	236.8	265.6	1.38	P>.05
Professional Information	62.0	58.1	52.0	60.2	2.05	P>.05
Written English						
Expression	59.9	57.0	49.0	56.7	1.95	P>.05
Social Studies	58.7	53.6	48.8	53.6	2.18	P>.05
Science, Math	64.2	64.9	50.6*	63.0	4.01	P>.05
Common Weighted Exam	615.2	586.0	505.4*	588.7	3.43	P>.05
Education in the Elementary School	686.5	662.5	570.0*	662.0	4.39	P>.05
Rapport with Supervising Teacher	63.4	66.4	66.8	63.1	1.14	P>.05
Rapport with Principal	41.0	44.1	39.2	43.9	1.13	P>.05
Teaching as a Profession	42.0	42.6	41.6	41.1	.26	P>.05
Rapport with University Supervisor	30.7	32.1	35.0	29.8	.89	P>.05
Community Support of Education	17.3	17.1	19.4	17.6	1.80	P>.05
Student Teaching Load	23.4	23.6	23.4	22.2	.32	P>.05
Rapport with Students	21.5	22.0	22.2	21.1	.65	P>.05
Rapport with other Teachers	21.3	22.8	22.8	21.5	1.05	P>.05
Satisfaction with Housing	18.0	18.9	18.6	17.7	.46	P>.05
Professional Preparation	24.2	27.3	25.8	24.0	1.48	P>.05
School Facilities	16.9	18.3	19.2	16.4	2.42	P>.05
Curriculum Issues	16.5	18.1	18.8	16.7	2.10	P>.05
Total PS-TO	366.0	353.3	352.8	335.1	1.19	P>.05

* = Significant at .05 level of confidence.
 Required F to be significant 2.81.

CHAPTER V
DISCUSSION

The findings of this study were such that a separate chapter for discussion seemed necessary. This study found significant differences between the groups tested on the Science and Mathematics, Common Weighted Examination, and Education in the Elementary School tests. The difference was determined to be between Sophomore Bloc Only group and the other three groups during Winter Quarter, 1974. The Sophomore Bloc Only group had significantly lower mean scores on the three tests at the .05 level of significance.

As the three tests were generally mental ability type tests, it could have been that students of less ability decided not to enroll in Junior Bloc because they perceived it as a difficult segment of the program. These students then became part of the Sophomore Bloc Only group as they avoided the Junior Bloc and enrolled in the separate elementary education methods courses available in the Former Program.

There was no significant difference found between groups in any of the other testing. There were several possible circumstances recognized which could have limited differences in effects of the programs.

First, the new SODIA program had been in operation for a relatively short period of time and was only in its second year when the testing was initiated.

Second, data were collected from only five general areas. Thus, the scope of the measurement was limited and differences likely existed that were not measured.

Third, the small sample size may have produced atypical comparisons.

Fourth, student responses on opinion and attitude measurements may not have been accurate descriptions of their true feelings. Because the student teachers knew comparisons were being made, they may have attempted to improve the appearance of any data that related directly to them.

In the Winter Quarter testing, there were three other areas investigated which revealed differences between groups at a level approaching significance. An F score of 2.35 was found on the scores on the Minnesota Teacher Attitude Inventory. The Sophomore Bloc Only group had the lowest mean score and the SODIA group had the highest MTAI mean score. One possible explanation for this would be that the SODIA program had a positive influence on attitudes toward children.

Also in the Winter Quarter testing, the SODIA group scored lower (at a level that approached significance) on the School Facilities and Curriculum Issues sub-sections of the Purdue Student-Teacher Opinionnaire. This could be an indication that SODIA students were more aware of what better facilities and curriculum plans were possible. Thus, they held the public school situations they experienced in lower regard than did the members of the other groups.

The new SODIA program has had considerable positive informal evaluation and feedback. This informal evaluation information has been reported by cooperating public school personnel, university staff, students in the program, and outside sources including the American Association of Colleges for Teacher Education which awarded the SODIA program a Certificate of Recognition in the 1974 Distinguished Achievement Awards Program.

On the basis of the information from these sources, it has been concluded that the new SODIA program has many components which provide

a better quality elementary teacher preparation program than any that has been available at Utah State University. More research and evaluation efforts are needed to provide a basis for continued improvement of elementary teacher education at Utah State University.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study explored the effect of a new elementary teacher training program at Utah State University. The new program was given the acronym SODIA with each letter representative of a level in the program. The levels were:

S--Self (Freshman Orientation)	Students learn about self with introduction to elementary teaching through readings, discussions, and observations.
O--Others (Sophomore Bloc)	Students learn about others with the following general topics: variability in children, community services, world of work, legal aspects of education. Students spend approximately a half of each day serving as an instructional aide.
D--Disciplines (Junior Bloc)	Development of methods of teaching in science, math, language arts, social studies and reading through seminar instruction and practical application in elementary school classrooms.
I--Implementation (Student Teaching)	Students have total day assignment in portal school--all previous experiences synthesized to develop total teacher--also a weekly seminar with university coordinator.
A--Associate (Associate Teaching)	A post student teaching experience defined by students to strengthen a weak area or to develop a specialty.

The population of the study consisted of 104 students enrolled in the regular elementary student teaching program during Fall and Winter Quarters of the 1973-74 academic year at Utah State University. These student teachers were divided into four groups on the basis of type and

amount of preparation for teaching they had received.

Five instruments were used in the study to test for differences between the groups on 22 independent variables. The general areas of testing and instruments used were as follows:

1. Achievement data. Collected with School Personnel Research and Evaluation Services Examinations (SPES).
2. Attitudes toward children and school data. Collected with the Minnesota Teacher Attitude Inventory.
3. Open or closed-mindedness data. Collected with the Rokeach Dogmatism (D) Scale.
4. Opinions concerning student teaching data. Collected with the Purdue Student Teacher Questionnaire (PSTQ).
5. Self-perceptions of teaching skill data. Collected with the Teaching Skills Self Rating Scale (TSSRS).

This study tested the following five null hypotheses.

Hypothesis 1. There will be no significant difference in attitude toward children and school between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Minnesota Teacher Attitude Inventory.

Hypothesis 2. There will be no significant difference in open or closed-mindedness between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Rokeach D Scale.

Hypothesis 3. There will be no significant difference in self-perceptions of teaching skill between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Teaching Skills Self Rating Scale.

Hypothesis 4. There will be no significant difference in achievement between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the School Personnel Research and Evaluation Service tests from the following six test areas:

- a. Professional Information
- b. Written English Expression
- c. Social Studies
- d. Science and Math
- e. Weighted Common Examination Total
- f. Education in the Elementary School

Hypothesis 5. There will be no significant difference in opinions concerning student teaching between student teachers in the SODIA, former, junior bloc only, or sophomore bloc only programs as shown by their scores on the Purdue Student-Teacher Opinionnaire in the following 13 areas:

- a. Student Teacher Rapport with the Supervising Teacher
- b. Student Teacher Rapport with the Principal
- c. Teaching as a Profession
- d. Student Teacher Rapport with the University Supervisor
- e. Community Support of Education
- f. Student Teacher Load
- g. Student Teacher Rapport with the Students
- h. Student Teacher Rapport with the Other Teachers
- i. Satisfaction with Housing
- j. Professional Preparation
- k. School Facilities and Services
- l. Curriculum Issues
- m. Factor Total

To determine if there were significant differences between the groups on the mean test scores, the one-way analysis of variance at the .05 level of significance was used. When the one-way analysis of variance determined that there were statistically significant differences in mean test scores, the Scheffe Test at the .05 level of significance was used to determine where the differences were.

Conclusions

The study found no significant differences between groups of student teachers tested during Fall and Winter Quarters, 1973-74, with the exception of Winter Quarter testing on the sub-sections of the School Personnel Research and Evaluation Service tests. The Sophomore Bloc Only group scored significantly lower than the other three groups on the Science and Mathematics, Common Weighted Examination, and Education in the Elementary School sub-sections of the test.

These tests were generally mental ability type tests. It was possible that students which were of less general mental ability deselected themselves from Junior Bloc. This could be a result of these students perceiving Junior Bloc as a difficult segment of the program.

Recommendations

In light of the various factors influencing the results of this study, the following recommendations are made:

1. It is suggested that further analysis of performance of student teachers be made to provide a basis for continuing evaluation of the SODIA elementary teacher preparation program.

2. It is suggested that an additional study be undertaken considering the limitations of the present study as described in the Discussion section (Chapter V).

3. It is suggested that an analysis of success of first year teachers, who were trained in the SODIA program, be made to provide a basis for continuing evaluation of the SODIA program.

4. It is suggested that a five year longitudinal study be made to assess long term effects of the SODIA program.

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APPENDIXES

Appendix A

MEMO

TO: Student Teachers, Portal School Staff, and University Staff
FROM: Ronald G. Petrie, Chairman, Department of Elementary Education
SUBJECT: Days on Campus for Winter Quarter Student Teachers
DATE: January 22, 1974

The Department of Elementary Education is presently evaluating its teacher education program. An important part of the total evaluation is data that must be collected from Winter Quarter student teachers. Therefore, we are requesting that all student teachers report to Room 313 of the University Center promptly at 8:15 a.m., on Tuesday, February 26. Room 313 is next to the Placement Center in the University Center. Students should plan for an all day session running from 8:15 a.m. to 4:15 p.m. There will be a lunch break from about 12:30 p.m. to 1:30 p.m. Please plan to make your own arrangements for lunch.

Thank you for your cooperation.

RGP

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Reminder: All student teachers will also be given a day on campus for early registration during the week of February 4, 1974.

Appendix B

Questionnaire Study
for
Elementary Education Student Teachers

Department of Elementary Education

1973-74

Directions

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3, or -1, -2, -3, depending on how you feel in each case.

- | | |
|--------------------------|-----------------------------|
| +1: I Agree a Little | -1: I Disagree a Little |
| +2: I Agree on the Whole | -2: I Disagree on the Whole |
| +3: I Agree Very Much | -3: I Disagree Very Much |

- _____ 1. The United States and Russia have just about nothing in common.
- _____ 2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
- _____ 3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.
- _____ 4. Obedience and respect for authority are the most important virtues children should learn.
- _____ 5. A person who has bad manners, habits and breeding can hardly expect to get along with decent people.
- _____ 6. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
- _____ 7. Man on his own is a helpless and miserable creature.
- _____ 8. Fundamentally, the world we live in is a pretty lonesome place.
- _____ 9. If people would talk less and work more, everybody would be better off.
- _____ 10. The businessman and the manufacturer are much more important to society than the artist and the professor.
- _____ 11. Most people just don't give a "damn" for others.
- _____ 12. I'd like it if I could find someone who would tell me how to solve my personal problems.
- _____ 13. It is only natural for a person to be rather fearful of the future.
- _____ 14. Science has its place, but there are many important things that can never possibly be understood by the human mind.
- _____ 15. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
- _____ 16. There is so much to be done and so little time to do it in.
- _____ 17. Once I get wound up in a heated discussion I just can't stop.
- _____ 18. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

- | | |
|--------------------------|-----------------------------|
| +1: I Agree a Little | -1: I Disagree a Little |
| +2: I Agree on the Whole | -2: I Disagree on the Whole |
| +3: I Agree Very Much | -3: I Disagree Very Much |

- _____ 19. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.
- _____ 20. No sane, normal, decent person could ever think of hurting a close friend or relative.
- _____ 21. In a heated discussion, I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.
- _____ 22. It is better to be a dead hero than to be a live coward.
- _____ 23. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.
- _____ 24. Nobody ever learned anything really important except through suffering.
- _____ 25. What the youth needs is strict discipline, rugged determination, and the will to work and fight for family and country.
- _____ 26. The main thing in life is for a person to want to do something important.
- _____ 27. If given the chance I would do something of great benefit to the world.
- _____ 28. In the history of mankind there have probably been just a handful of really great thinkers.
- _____ 29. An insult to our honor should always be punished.
- _____ 30. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped, or worse.
- _____ 31. There are a number of people I have come to hate because of the things they stand for.
- _____ 32. A man who does not believe in some great cause has not really lived.
- _____ 33. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
- _____ 34. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.

- | | |
|--------------------------|-----------------------------|
| +1: I Agree a Little | -1: I Disagree a Little |
| +2: I Agree on the Whole | -2: I Disagree on the Whole |
| +3: I Agree Very Much | -3: I Disagree Very Much |

- _____ 35. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feebleminded people.
- _____ 36. Of all the different philosophies which exist in this world there is probably only one which is correct.
- _____ 37. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.
- _____ 38. To compromise with our political opponents is dangerous because it usually leads to betrayal of our own side.
- _____ 39. Homosexuals are hardly better than criminals and ought to be severely punished.
- _____ 40. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things.
- _____ 41. When it comes to differences of opinion in religions we must be careful not to compromise with those who believe differently from the way we do.
- _____ 42. People can be divided into two distinct classes: the weak and the strong.
- _____ 43. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
- _____ 44. Every person should have complete faith in some supernatural power whose decisions he obeys without question.
- _____ 45. Some people are born with an urge to jump from high places.
- _____ 46. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.
- _____ 47. A group which tolerates too much differences of opinion among its own members cannot exist for long.
- _____ 48. There are two kinds of people in the world: Those who are for the truth and those who are against the truth.
- _____ 49. In times like these, a person must be pretty selfish if he considers primarily his own happiness.
- _____ 50. Some day it will probably be shown that astrology can explain a lot of things.

- | | |
|--------------------------|-----------------------------|
| +1: I Agree a Little | -1: I Disagree a Little |
| +2: I Agree on the Whole | -2: I Disagree on the Whole |
| +3: I Agree Very Much | -3: I Disagree Very Much |

- _____ 51. My blood boils whenever a person stubbornly refuses to admit he's wrong.
- _____ 52. A person who thinks primarily of his own happiness is beneath contempt.
- _____ 53. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
- _____ 54. Wars and social troubles may someday be ended by an earthquake or flood that will destroy the whole world.
- _____ 55. No weakness or difficulty can hold us back if we have enough will power.
- _____ 56. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
- _____ 57. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.
- _____ 58. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.
- _____ 59. Most people don't realize how much our lives are controlled by plots hatched in secret places.
- _____ 60. Human nature being what it is, there will always be war and conflict.
- _____ 61. Nowadays more and more people are prying into matters that should remain personal and private.
- _____ 62. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."
- _____ 63. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
- _____ 64. Familiarity breeds contempt.
- _____ 65. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them.
- _____ 66. Most people just don't know what's good for them.

- | | |
|--------------------------|-----------------------------|
| +1: I Agree a Little | -1: I Disagree a Little |
| +2: I Agree on the Whole | -2: I Disagree on the Whole |
| +3: I Agree Very Much | -3: I Disagree Very Much |

- _____ 67. The present is all too often full of unhappiness. It is only the future that counts.
- _____ 68. The wild sex life of the old Greeks and Romans was tame compared to some of the goings-on in this country, even in places where people might least expect it.

Appendix C

TEACHING SKILLS SELF RATING SCALE

This instrument is designed to measure the level of ability you think you possess in various areas of teaching. Rate yourself by circling a number from 1 (low ability) to 5 (high ability) on each item as you see your ability level at this point in your teacher education program. If you do not understand what the question is about circle the X. Each statement should be preceded by "I am able to:"

I am able to:	Low		High			Do Not Understand
	Ability		Ability			
1. identify my objectives in the teaching process and state them clearly.	1	2	3	4	5	X
2. arrange for a balance between teacher-talk and student interaction.	1	2	3	4	5	X
3. vary the structure and process of group interaction so that it is appropriate to the learning task.	1	2	3	4	5	X
4. evaluate group interaction and use the information to structure the group learning activities.	1	2	3	4	5	X
5. have parent-teacher communication which will promote home atmospheres for favorable student learning.	1	2	3	4	5	X
6. recognize and utilize community agents (resource people) in order to affect student learning.	1	2	3	4	5	X
7. establish working relations with colleagues.	1	2	3	4	5	X
8. participate in a team (cooperative) approach to teaching.	1	2	3	4	5	X
9. make available a variety of persons who typify a variety of models for student imitation and identification.	1	2	3	4	5	X
10. build a learning environment that is of current interest.	1	2	3	4	5	X
11. organize materials and objects for easy reference and focus.	1	2	3	4	5	X

I am able to:	Low Ability		High Ability			Do Not Understand
12. stimulate creativity.	1	2	3	4	5	X
13. provide a variety of environments for learning.	1	2	3	4	5	X
14. adapt heat, light, atmosphere, and sound to various learning activities.	1	2	3	4	5	X
15. organize activity schedules which coordinate individual student needs with available facilities.	1	2	3	4	5	X
16. utilize teaching materials appropriate to equipment available.	1	2	3	4	5	X
17. use and maintain instructional equipment.	1	2	3	4	5	X
18. evaluate the learning environment on a continuing basis.	1	2	3	4	5	X
19. understand the influence of the various cultural backgrounds of students	1	2	3	4	5	X
20. meet individual learning needs created by varying cultural backgrounds.	1	2	3	4	5	X
21. set objectives for learning that are determined by age-related tasks, and scope and sequence systems.	1	2	3	4	5	X
22. select behavioral objectives for students which are appropriate to school objectives and individual cultural backgrounds.	1	2	3	4	5	X
23. understand the school's objectives and modify these objectives to resolve any conflicts between these school objectives and the cultural backgrounds of students.	1	2	3	4	5	X
24. utilize principles of conditioning.	1	2	3	4	5	X
25. utilize principles of cognitive structuring.	1	2	3	4	5	X

I am able to:	Low Ability		High Ability			Do Not Understand
	1	2	3	4	5	
26. utilize principles of association in combining new stimuli with old stimuli.	1	2	3	4	5	X
27. place stimuli in appropriate sequences.	1	2	3	4	5	X
28. control and enhance stimuli by use of demonstrations, models, and programmed learning materials.	1	2	3	4	5	X
29. recognize sensory handicaps of students.	1	2	3	4	5	X
30. estimate sensory satiation levels and threshold conditions of students to manage the learning situation (i.e., teacher effectively uses, breaks, or changes activity levels).	1	2	3	4	5	X
31. recognize the effects of drugs on sensory and nervous system mechanisms.	1	2	3	4	5	X
32. estimate sensory capabilities of students so as to select especially adapted materials and activities for use as stimuli.	1	2	3	4	5	X
33. use ability measures to help students set goals for themselves.	1	2	3	4	5	X
34. use student ability information to estimate the level of stimulus materials and activities appropriate to the students.	1	2	3	4	5	X
35. recognize the range of ability in a group of students.	1	2	3	4	5	X
36. identify students who have special aptitudes or handicaps through the use/or interpretation of various formal measures.	1	2	3	4	5	X
37. describe achievement and skill levels of students through the use of standardized and teachermade tests, including the limitations of prediction for an individual student.	1	2	3	4	5	X

I am able to:	Low Ability		High Ability			Do Not Understand
	1	2	3	4	5	X
38. evaluate the self-concept of students with reference to their values, interests, attitudes and emotions.	1	2	3	4	5	X
39. estimate a student's level of aspiration in relation to his self-concept.	1	2	3	4	5	X
40. use appropriate techniques to gain rapport and communication with a student in order to clarify and interpret his present status as a "self."	1	2	3	4	5	X
41. understand techniques (Rogers, Glasser) used to foster students' independence and self-direction.	1	2	3	4	5	X
42. train students in discriminating between or among objects, acts, or sounds by paying attention to their important characteristics.	1	2	3	4	5	X
43. use techniques which aid the student in perceiving the structure, pattern, and/or organization of ideas.	1	2	3	4	5	X
44. identify and correct perceptual errors of students.	1	2	3	4	5	X
45. recognize differences in students perceptual frames of reference due to background, needs and expectations.	1	2	3	4	5	X
46. evaluate students' thinking processes.	1	2	3	4	5	X
47. help students think on different levels and to enlarge students' use of different thinking processes.	1	2	3	4	5	X
48. teach a variety of concepts with appropriate selection of relevant examples.	1	2	3	4	5	X
49. help students learn to order and classify objects and activities.	1	2	3	4	5	X
50. help students to use generalizations from past experiences.	1	2	3	4	5	X

I am able to:	Low Ability		High Ability			Do Not Understand
51. identify the parts and kinds of materials to be memorized.	1	2	3	4	5	X
52. help students utilize generalizations.	1	2	3	4	5	X
53. plan activities which reduce competition and confusion between learning experiences.	1	2	3	4	5	X
54. use advance organizers to structure approaches to learning (i.e., use of study guides of questions to organize learning).	1	2	3	4	5	X
55. help students to cultivate varied modes of attack in a learning situation.	1	2	3	4	5	X
56. provide students with a step by step guide for learning activities.	1	2	3	4	5	X
57. help students set up task-related practice schedules.	1	2	3	4	5	X
58. recognize and utilize appropriate inductive and deductive strategies.	1	2	3	4	5	X
59. organize sustained activity for a class for a particular period of time.	1	2	3	4	5	X
60. utilize continuous reinforcement to build learning and gradually phase to an intermittent pattern in order to retard forgetting.	1	2	3	4	5	X
61. use contingency management to secure attention and control of students.	1	2	3	4	5	X
62. influence student behavior by rewarding actions leading to the desired final behavior.	1	2	3	4	5	X
63. achieve student self-direction by decreasing frequency of reward.	1	2	3	4	5	X
64. make a task analysis.	1	2	3	4	5	X
65. select and/or construct diagnostic instruments to measure specific instructional objectives validly and reliably.	1	2	3	4	5	X

I am able to:	Low Ability		High Ability			Do Not Understand
66. provide information to students which is relevant to the task and students' needs, is appropriately timed, and is ordered.	1	2	3	4	5	X
67. help students think by stimulating and challenging their formation and testing of hypotheses and their use of logic.	1	2	3	4	5	X
68. encourage students to creatively restructure their experiences by considering new causes and consequences, and alternative approaches.	1	2	3	4	5	X

VITA

Larry D. Klein

Candidate for the Degree of

Doctor of Education

Dissertation: A Study of the New SODIA Program in Elementary Teacher Education at Utah State University

Major Field: Curriculum Development and Supervision

Biographical Information:

Personal Data: Born at Algona, Iowa, August 8, 1943, son of DuWayne and Kathryn Klein; married Jean Klein August 22, 1964; one child--Keith.

Education: Attended elementary school in Algona, Iowa; graduated from Algona High School in 1961; received the Bachelor of Arts degree from University of Northern Iowa, with a major in elementary education, in 1965; received the Master of Arts degree from University of Northern Iowa, with a major in elementary school administration, in 1970; completed requirements for the Doctor of Education degree, with a major in curriculum development and supervision with a special emphasis in elementary education, at Utah State University in 1974.

Professional Experience: 1972 to 1974, Graduate Assistant in Elementary Education, Utah State University; 1970 to 1972, Elementary School Principal, Elko, Nevada; 1967 to 1970, Supervising Teacher, Malcolm Price Laboratory School, Cedar Falls, Iowa; 1965 to 1967, Elementary Teacher, Elko, Nevada.