A Study of the Relationship between Length of Student Teaching and Administrator Ratings of Teacher Effectiveness

Douglas H. Johnson
Western Michigan University

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A STUDY OF THE RELATIONSHIP BETWEEN
LENGTH OF STUDENT TEACHING AND ADMINISTRATOR
RATINGS OF TEACHER EFFECTIVENESS

by

Douglas H. Johnson

A Dissertation
Submitted to the
Faculty of The Graduate College
in Partial Fulfillment
of the
Degree of Doctor of Education

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Kalamazoo, Michigan
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Douglas H. Johnson
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In recent years teacher education has come under increasing criticism. Few people are satisfied with the training programs being provided for prospective teachers. Complaints come from elementary and secondary school teachers and administrators, elder statesmen and admirals, and from teacher educators and their students.

Criticism from within the educational community is perhaps more indicative of the issues of concern since it comes from the people who have to live with the results. John R. Verduin (1967) stated, "The study of education and the careful re-thinking about the preparation of teachers are perhaps at their highest point in history, and they should remain under critical study for some time." The writing of James B. Conant (1963) has prompted professional teacher educators to think critically about teacher education preparation programs. Dissatisfaction with many of the present teacher education preparation programs seems to center on the relevance of present professional training to the daily work of teachers. The charge of irrelevancy usually stems from the judgment that exposure to the courses, seminars, texts, and so forth, has little relationship to the teacher's task in the classroom (Ryan, 1968).

Student teaching as a component part of a prospective teacher's professional training was designed so as to bring about relevancy to the task of teaching. However, due to the limited time provided
for student teaching in most teacher education programs--average around 10 to 14 weeks (Perry and Johnson, 1967)--student teaching becomes a total immersion experience. Is this total immersion experience realistic and can the student teacher have enough varied experience opportunities to develop his own feelings about whether he really wants to be a teacher?

Although the traditional student teaching program is said to be based on the model of classic apprenticeship training, several critical elements seem to be lacking (Ryan, 1968). For one thing, the apprentice teacher does not begin at the bottom; he does not begin by performing very small tasks. When he takes over from the supervising teacher, he takes on the entire assignment. He is faced with massively complex demands, i.e., to direct simultaneously the learning of 25 or 30 children. Suddenly, the teacher is immersed. He is supposed to demonstrate effectively many different instructional skills. He must be able to perform many activities with a high degree of precision. The student teacher must be able to handle explaining activities, order-maintaining activities, demonstrating activities and a host of other activities.

Assumptions

It would seem that a more realistic approach to the student teaching component of teacher education would be a full year of student teaching. The extended time period should allow for a more realistic exposure to the teaching environment, i.e., the
development of teaching skills and the increased opportunity to be involved in a variety of teaching experiences.

Learning how to diagnose problems and how to provide for the individual differences of students requires experience opportunities and, indeed, experiences with a wide variety of problem types. Learning how to manage the educational environment is another highly experience-centered activity. It involves planning activities, making presentations or demonstrations, organizing the student's learning environment so that students are participating in the learning activities and classroom control.

Experience with the use of instructional media and with community and school resources as well as relationship experiences with parents and students are all part of a prospective teacher's learning needs. Again a comprehensive experience in these teaching activities would seem to be important so as to maximize the possibilities in the learning experience for the prospective teacher.

It would seem that it could be expected that the more depth and breadth a prospective teacher has in his field training experiences, the more likely he is to be an effective beginning teacher. By permitting a wide variety of teaching experiences for a prospective teacher aimed at improving particular skills, a full year of student teaching experience should provide more and broader experience opportunities for the prospective teacher.

Programs of this kind have been developed to a limited degree and are often called teaching internships. Ryerson (1967) in an
exploratory study of the internship teacher in Iowa concluded that internship programs promise to be more effective than any other procedure in developing the many high-level skills required of teachers today. It would seem that the teaching internship should be developing teachers who are more effective, at least in their first years of teaching, than are those teachers who student teach the traditional (10-14 weeks) period of time. Also, it would seem that the internship type experience would develop a teacher who is more likely to stay in the teaching profession.

Need for the Study

In 1963, James D. Koerner wrote a very controversial book entitled, *The Miseducation of American Teachers*. One of his basic criticisms of teacher education programs was that professional education lacked congruence between the actual performance of its graduates and the training programs through which they are put.

A study published in 1961 by the National Education Association (Blume, 1971), in which all of the research available on good and poor teaching was reviewed, failed to find any method of teaching which was clearly superior to all others.

At about the same time Arthur Combs was conducting research with good and poor teachers to determine if good teachers knew better than poor teachers the characteristics of a good helping relationship (Combs, 1969). He found no significant difference between the knowledge of the two categories of teachers.
If not knowledge about teaching or the helping relationship and if not methodology, what is there that teacher training programs can do to improve the congruence between the actual performance of their graduates and their training programs?

In his book, The Professional Education of Teachers, Arthur Combs reviews "third force psychology" (Combs, 1965), the alternative to the Freudian and stimulus-response theories which have dominated our educational thought for the past half-century. Three basic principles of perceptual psychology as presented by Combs provide insight into one area (the field experience) which might be improved to add congruence to the actual performance in teacher training programs.

These three principles are presented in Table 1 to show the relationship to some of the findings of the Michigan State University Experimental Internship Program for Elementary Teachers which was supported by the Ford Foundation during the years of 1964 through 1966.

In early 1968 the Institute for Development of Educational Activities, Incorporated (I/D/E/A) sponsored a symposium on the training of teachers for elementary schools. The participants were all elementary teachers who had just completed their fourth month of teaching. Each had graduated from a teacher training institution in June of 1967. Dr. Jerome Bruner of Harvard University served as chairman (I/D/E/A Occasional Paper, 1968).

The conferees strenuously objected to half-day type teaching as an unrealistic approach to the matter of learning to teach. They
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<td>All behavior of an individual is the direct result of his field of perceptions at the moment of his behaving.</td>
<td>The internship setting confirmed the expectation that it would provide many opportunities for the immediate transfer of formal instruction in pedagogy to work in the classroom.</td>
</tr>
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<td>The most important perceptions an individual has are those about himself. The self-concept is the most important single influence affecting an individual's behavior.</td>
<td>It became possible to take advantage of many non-programmed opportunities. More experience with children in real problem situations.</td>
</tr>
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<td>All individuals have a basic need for personal adequacy. We all behave in ways which will, according to our view of the situation, lead to our self-enhancement.</td>
<td>From an Intern's View—Important factors were time, confidence, security, experience, and a true desire to be a part of and see improvement in the profession of teaching. You are able to get time and experience completely on your own. You get the opportunity to make decisions and set your own policy. If you want help, it is readily available. This is of great help to your feeling of confidence and security in your profession. It seems true that nothing succeeds like success. It is this relationship between independence and assistance that helps the beginning teacher through his most difficult year.</td>
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<td>One unexpected advantage of the internship approach for formal instruction proved to be its efficiency. Those professors who have taught in both programs attest to this. They were impressed by the fact that they did not have to spend time convincing their students that there are problems in teaching which merit serious study.</td>
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unanimously agreed that there is something very special about teaching a whole day, as well as every day, over a considerable period of time. Dr. Bruner pointed out that one can not know the total picture (discipline problems, exhaustion, etc.) when one is allowed to teach for only short periods of time.

Being considered a full participant in the teaching-learning activities in a school may be vital to developing more congruence between the actual performance of teacher education graduates and their professional training programs. To be a full participant seems to imply a period of time for student teaching considerably longer than the traditional 10 to 14 week periods.

If it is true that there is a lack of congruency between what a teacher actually does and the experiences his professional training program provides, then it would seem as if efforts to increase this congruency through increased reality experiences would be welcomed. However, this does not seem to be the case.

At the present time most field experiences for teacher trainees are no longer than 10 to 14 weeks and many are of shorter duration. The teacher education graduate moves into a nine to ten month school year while having had experience amounting to approximately one-third or less of that period of time.

What seems to be lacking is research which can confirm that longer student teaching experience does in fact provide more effective beginning teachers and indeed more career-oriented educators. The research that has been done is not clear as to the outcomes in
the actual job situation as a result of different approaches to the
field experience component of teacher education. For example, the
Michigan State Experimental Internship Program for Elementary
Teachers which was supported by the Ford Foundation made no attempt
to compare directly their experimental program with their regular
teacher education program. They felt that there was too much dis­
parity between the instructional problems and opportunities for
learning in the two groups to make a meaningful comparison. For the
internship student, performance in a classroom is the relevant crite­
ron; for the regular students, only grades in formal classes and
student teaching were available. The only job-related information
available on this program was the indication that internship grad­
uates have been sought as teachers by a large number of school
districts (MSU, 1964).

The teaching internship is yet in a confused state. It has
conflicting definitions, poor financing, loose alliances, and incon­
sistent experimentation. Many of the relatively few current pro­
grams are still dependent upon foundations or other outside support
(MSU, 1964). Occasionally the teaching internship is regarded as
an alternative route toward state certification. In a few states,
internship is merely a new label for full-time student teaching
(10-14 weeks), and in one state (Teaching Internship, 1960) it has
become a way of classifying all field and laboratory work not
included in student teaching.
In some colleges, the internship is being used to consolidate the teacher education program. Other colleges offer internship as a substitute for student teaching. A majority of colleges and universities use internship as a fifth-year plan for students choosing careers after completing an undergraduate degree.

If the internship is to have any lasting future as part of teacher education, certain conditions must be met. Continuing and expanding support from universities and public school districts is of prime importance.

Research needs to be done which can define the internship with practical related outcomes. Information is needed so that teacher education programs can determine whether or not they are becoming more or less congruent with the actual job of teaching in the field.

Statement of the Problem

The major problem of this study was to investigate whether or not graduates from teacher education programs where the student teaching component consists of a 10-14 week period of time are as effective in their first years of teaching as graduates of teacher education programs where a one-year student teaching experience was provided. A second problem which was investigated in this study was how well the subjects in the study felt they were trained in specific areas during student teaching experiences. Third, an investigation was made to determine the education career orientation of the subjects included in the study.
Questions to be Investigated

The major problem of this study involved the following specific questions:

1. Are teacher education graduates who student taught full-days for one year more effective as beginning teachers than teacher education graduates who student taught for one quarter?

2. Are teacher education graduates who student taught half-days for one year more effective as beginning teachers than teacher education graduates who student taught for one quarter?

The second problem of this study involved the following specific questions:

1. Do teacher education graduates of full-day, one-year student teaching programs rate the training they received in student teaching as more effective than teacher education graduates of one-quarter student teaching programs?

2. Do teacher education graduates of half-day, one-year student teaching programs rate the training they received in student teaching as more effective than teacher education graduates of one-quarter student teaching programs?

The third problem of this study involved the following specific questions:

1. Are teacher education graduates who student taught full-days for one year more teacher or education career oriented than
teacher education graduates who student taught for one quarter?

2. Are teacher education graduates who student taught half-days for one year more teacher or education career oriented than teacher education graduates who student taught for one quarter?

Scope and Limitations of the Study

The study was delimited in the following ways:

1. It was limited to a comparison of graduates of two different student teaching programs within one institution, St. Cloud State College. However, it was expected that the results would have implications for student teaching programs in similar higher education teacher training programs.

2. It was limited primarily to evaluation of beginning teachers who were teaching in schools within the State of Minnesota.

3. It was limited to data from 10 full-day, one-year student teachers and 12 half-day, one-year student teachers and their respective matched one-quarter student teaching students. Although the N for these groups was small, the N of the full-year interns represented the total population parameter of these two groups for the study.

4. Determination of the beginning teacher's effectiveness rating was done by the subject's respective building principal. Variance in rator's interpretation of rating standards was expected. However, in terms of evaluation
of beginning teachers' effectiveness, the building principal was considered to be the most appropriate choice as evaluator.

Overview of the Study

Chapter One of this study includes the assumptions and background of the need for an investigation of the relationship between length of student teaching and the effectiveness of beginning teachers, a statement of the problem, the questions to be investigated, scope and limitations of the study and a preview of the entire dissertation.

Chapter Two contains a review of the related literature including: recent developments and concerns in teacher education, and studies and research in the area of field oriented experiences.

Chapter Three presents the design and methodology of the study including: a review of the problem, the design, the sample selection, the instrumentation and a complete statement of the procedures used in the study.

Chapter Four presents the results of the study and the analysis of the data.

Chapter Five comprises the summary of the results of the study and the conclusions drawn. Implications and recommendations for teacher training programs suggested by the study conclude the dissertation.
CHAPTER II

Review of the Related Literature

Chapter Two of this study presents a review of the related literature including:

1. An introductory section in which the purpose and intent of teacher education and the concerns and problems in program development and research are reviewed.
3. A review of studies, research, and developments in the area of teacher education field oriented experiences.

Introduction

There exists today widespread agreement that a school is not much better than its teachers. There is also agreement that pedagogical skills and competencies can be learned and that teacher education should provide the professional preparation and enhancement of teachers. Just how effective teacher education has been and how effective it is now, is currently the major topic of discussion among those advocating reform in teacher training programs. John Goodlad (1971) stated:

High on our list of 'old business' is the overhaul of teacher education from top to bottom. The continuing debate over the value of 'methods' courses, whether to have more or fewer of them,
and how to regulate teacher education by legislative fiat only reveals the poverty of our approaches to the problem. Shuffling courses is not the answer (p. 5).

Answers on the effectiveness of teacher education now familiar to everyone, from Conant (1963), Mayer (1961), Sarason et al. (1962), Stinnett (1962) and others, indicated that teacher education resembles a confusing and baffling network rather than a meaningful process of professional preparation.

Smith (1969), in *Teachers for the Real World*, wrote:

Teacher education is at a critical point in history. There is now enough knowledge and experience to reform it, to plan a basic program of teacher education for an open society in its time of upheaval. But if this knowledge and experience are dissipated in prolonged discussions of issues, doctrines and trends leading only to more dialogue, instead of a fundamental program of education for the nation's teachers, teacher education is likely to fragment and its pieces drift in all directions (IX).

Other educational reformers have advocated similar positions to that of Smith. There has been the call for a thorough revision of curriculum allowing for man's growing knowledge and understanding, as well as change in man's physical and social environment (Glass, 1969). Goodlad (1971) postulated the position that change strategies in preservice teacher education cannot be separated from inservice teacher education or from the elementary and secondary schools themselves. It is his viewpoint that the teacher for tomorrow's learning must be prepared in schools which are working on the task of creating a new kind of tomorrow.
In the fall of 1971, a report on teacher education in New York State was completed. This report contained the findings of a six-month study which was directed by Mario D. Fantini, Dean of Education at State University College, New Paltz, New York. The report reviewed such problems as teacher oversupply, public accountability, current certification policies, academic vs. professional education, who makes a good teacher, training the teachers of teachers, staff differentiation among professors of education, urban teacher preparation, overlapping inservice preparation of teachers, racial imbalance of professional teacher preparation staffs, separation of campus from public schools, and inter-institutional cooperation. Fantini (1972) stated, "This study of teacher preparation clearly concludes that reform is necessary (p. 476)."

Teacher Effectiveness and Teacher Education. Arthur Combs focuses his call for change on the teacher. Combs (1965) stated:

Some of the improvements we seek in education can be brought about by spending more money, by building better schools, by introducing new courses of study, new standards, or new equipment. But the really important changes will only come about as teachers change. Institutions are made up of people, and it is the behavior of teachers in classrooms that will finally determine whether or not our schools meet or fail to meet the challenge of our time (p. V).

The position that reform in teacher education is needed currently receives agreement from many sources. However, the complexity of analysis of effectiveness of present programs, as well as the vastness in numbers of institutions training teachers and
their geographic distances creates many problems for any type of reform movement. Differences in philosophical positions on the purposes of education and the availability of dependable knowledge on which to base the research and thus develop new program designs is also a major deterrent in bringing about reform. Reform authorities in the field of education have spoken to many of these issues.

For example, the problem of evaluating the effectiveness of teacher training programs has been centered on disagreement over what criterion should be used. While this debate is continuing, some authorities in the field are indicating that the problem is not the criterion. The problem confronted with the "criterion-of-effectiveness" paradigm (Gage, 1963) should not be a deterrent according to Yee (Yee, 1969). Yee indicates that the problem in useability of research in teacher education research which so far has been unable to declare for sure what teaching effectiveness is, is lack of systematic analysis and so many changes that we have been unable to measure the effectiveness of many of the change aspects.

In the fourth edition of the Encyclopedia of Educational Research, research in teacher education up through the mid-1960's is reviewed. Stiles and Parker (1969), in an article entitled "Teacher Education Programs," review previous studies in teacher training programs. These authors described the situation as follows:
Teacher education programs have been studied more than researched. Innovations have tended to be implanted and imitated with minimum of evaluation. Practices and procedures have evolved rather than developed through experimentation. The past decade has seen programs of teacher education the center of intense controversy; the prospects are that this will become a field of more concentrated and more objective research in the years ahead (p. 1414).

In another article from the same source, Flanders (1969), in dealing with "Teacher Effectiveness," reviewed studies to the mid-1960s which link teaching processes and product:

Teacher effectiveness is an area of research which is concerned with relationships between the characteristics of teachers, teaching acts, and their effects on the educational outcomes of classroom teaching. The research which is reviewed herein permits cautious optimism and indicates that the tools long needed for the analysis of teaching-learning process are gradually being developed (p. 1423).

The regular reviews of research on various topics which appear in the Review of Educational Research include an article in the June 1967 issue by Denemark and Macdonald (1967) on the topic of pre-service and inservice education of teachers:

Although the general or liberal arts aspects of the education of teachers are said to be crucial for the program, no direct research on general education as it relates to teacher education was located by the reviewers.

Research on the role of the disciplines, per se, was equally disappointing.

After student teaching, the most frequently studied area of teacher education was instructional methods and media.

It is apparent from a review of the literature that the large grants for teacher education have been given for program development and not for theory or research activity (pp. 235-241).
A review of the research in teacher education found important detailed studies on interaction analysis, micro-teaching and simulation experience. A review of some of these studies will be included in the section of this chapter concerned with current trends and developments in teacher education. The review of the research in teacher education also found a number of studies in student teaching: Garland, Williams, and Corrigan (1968), McLaren (1968), Yee (1968), Sorensen (1967), Dumas (1966), Hinley, Galloway, Goody, and Sandefus (1966), and Popham (1965). Topics covered included developing an instrument for measuring role expectations for student teaching, relating student teaching marks to personality variables, developing and testing a triad model for interpersonal relationships, teaching styles and effects of methods courses on performance. Studies on attitudes were also found, such as the studies on attitudes of different kinds of candidates (elementary vs. secondary, various majors), changes in attitudes, the effect of teacher candidates' attitudes on performance, etc. The authors were Giebink (1967), Brim (1966), Chabassol (1968), Walberg, Melzner, Todd, and Henry (1968), Horowitz (1968), Davis and Yamanto (1968, 1969), McAulay (1968), Jacobs (1968), Miller (1968), and Wagoner and O'Hanlon (1967).

Several studies examining personality were found. A selected number of these will be reported here. Siebel (1967) found that using personality measures it was possible to predict teaching behavior. Amidon (1967) reported a 2½-year study on the effect upon the behavior and attitudes of both student teacher and cooperating teachers of training in interaction analysis. A major finding was
that such training increases teacher indirectness. McGaw (1967)
found that teachers in training did not in fact hold ideas contra-
dictory to the personality dimension authoritarianism. Kosier and
Vere De Vault (1967) found that college instructional approaches
had some effect on personality traits.

Theory and Research in Teacher Education. Two good articles
on theory development in teacher education were found. Joyce and
Hodges (1969) listed five areas of reality around which the concepts
of their proposed rationale were built: education decision-making,
control over teaching styles, control over the analysis of teaching,
control over research skills through the research component, and
control over self. Spodek (1969) dealt with a model for a teacher
education program in early childhood education by identifying six
assumptions and dividing the content of the program into preactive,
interactive, and pro-active stages (the latter being evaluation and
feedback), and listing and describing six components of teacher
education: selection and recruitment, general education, professional
foundations, instructional knowledge, practice, evaluation and pro-
gram modification.

In the review of the research the writer did not find any
direct studies which examined two different programs in teacher edu-
cation. However, in reviewing the book Research in Teacher Education
(Smith et al., 1971) the writer found reference to an article by
S. C. T. Clarke which included a summary of a study by Sandefur which
compared two different programs of teacher education. Sandefur and
his associates compared the behavior of fifty students in a program of teacher education for secondary school teaching with sixty-two in an experimental program, where the latter stressed coordination of laboratory experiences with conceptualization. The experimental group was rated as demonstrating more desirable teaching behaviors.

In a study which polled certified graduates each year Jay (1969) reported on the open-ended comments elicited from graduates related to their teacher education program. They listed their "felt needs": "More practical experience, more observation, more in the area of discipline, more on professional organizations, additional preparation in subject matter other than the major field, and too much theory (p. 23)."

Insofar as research on teacher effectiveness is successful, it can be related back to teacher education. The design, the instruments, the conceptualization of the process and replicable findings all feed back into and support research in teacher education. What we have had are particularistic studies. What we have not had is theory development, revolutionary new proposals for teacher education programs, and no research on programs and program designs as such. Cogan (1968) had this to say about teacher education in the United States:

There is a scarcity of plans aimed at fundamental reconstruction of teacher education. This is in part a consequence of the complexity and scope of the unknowns built into the problem . . . . It appears likely that reforms in teacher education will follow rather than precede new conceptualizations of education itself (p. 394).
It is generally recognized in educational circles that there are limitations in our knowledge about teaching and teaching effectiveness. It is also readily acknowledged that sufficient information is not available on the relationship between a teacher's behavior and student learning in the classroom from which to design effective teacher education programs. Turner, analyzing the research related to skills in teaching, concluded that there are few, if any, skills of teaching whose superiority can be counted as empirically established (Smith, Clarke, Furst, Peck, McDonald, Loree, Rosenshine, and Turner, 1971). It is apparent that all approaches except correlation studies have produced information of little value to teacher education. In reference to correlational studies, Smith in a recent review on educational research (Smith, et al., 1971) stated:

Correlational studies give only rough approximations to efficacious teaching behaviors. In these studies only high inference-level variables, such as clarity and enthusiasm, yield significant correlations with measures of pupil growth. But these sorts of variables yield little if any content or specific skills for a teacher education program. They tell little if anything about what to train a teacher to do in order to be clear or enthusiastic. Until these highly abstract variables are analyzed into specific behaviors, they can be of little use to the teacher educator (p. 4).

A major problem confronting research in teacher education is the establishment of "causal" relationships between particular aspects of a teacher education program. A "causal" relationship requires true experimental design. According to Turner, too many variables intervene in the process of teacher education between the treatment and the performance for research to be done which can
control variance more finitely than gross quasi-experimental studies (Smith, et al., 1971).

Another problem confronting research in teaching is that rather different theoretical viewpoints may be the basis for conceptualization of teacher preparation programs at different institutions. Thus, research in teacher education proceeds from different theoretical bases. One of the most generally accepted conceptualizations is that teaching is seen in terms of skills and concepts presented to mostly normal pupils with little or no adjustment to individuals. Emphasis is on the teacher as a controlling figure and the pupil as a receiver of instruction. In opposition to this viewpoint is the conceptualization that the learner can be guided to carry on the learning process himself, thus, to become self-directed (Rogers, 1969). In order for teachers to produce pupils of this degree of self-control and self-instruction, skills different from those in the teacher-controlled perspective are indicated (Smith, et al., 1971).

An unfortunate consequence of the lack of substantive research on the relationship between teacher behaviors and student growth is the perpetuation of contradictory programs in teacher training. For example, Rosenshine and Furst described a situation in which two different institutions are training teachers in opposite performance criteria. The Far West Regional Laboratory trains teachers to repeat student answers less often, while a training program at the Northwest Regional Laboratory includes in its program Flanders' Interaction Analysis which lists more teacher repetition of student
answers as one measure of preferred instructional strategy (Smith, et al., 1971).

Another issue which confronts those who take on the task of examining the education of teachers is the enormous social distance between the faculties of the colleges and universities and the staffs of elementary and secondary schools. The trainers of teachers never get near the public school (Haubrick, 1969). Armstine (1972) stated, "Faculties who will not deal with the practical problems of teaching, ... and who avoid the places where these events occur, should not be in the business of teacher education (p. 49)."

The I/D/E/A symposium on the training of teachers for elementary schools conducted in June of 1967 and chaired by Jerome Bruner of Harvard concluded with twelve recommendations for the training of teachers. Included among the twelve was the following recommendation: "Teachers of methods courses for elementary school teachers should be required to rotate back into the elementary school and teach an elementary class at regular intervals (p. 16)."

Jackson (1968) found that interviews with experienced teachers revealed that they use simple concepts in interpreting pupil behavior, concepts which included few of the elements of sophisticated knowledge found in studies of educational psychology. This fact bears out the claim made by preservice teachers that courses in educational psychology, educational sociology, educational philosophy and other theoretical courses are unrelated to the competencies expected of the student teacher.
B. Othanel Smith (Smith, et al., 1971) in Chapter I of the book *Research in Teacher Education* articulated the problems of reform in teacher preparation programs. Were it not for the fact that about one thousand higher institutions are producing 200,000 beginning teachers per year, there would be little point to this symposium, for the chief purpose of research on the education of teachers is to improve the programs of teacher preparation in these institutions. These programs have developed over the last hundred years, and especially since the beginning of the present century, on the basis of meager and inadequate knowledge acquired largely from the practical experiences of teachers, general psychological principles, and studies in philosophy and the social sciences. The problem which confronts those who are concerned with research on teacher education involves a quest for more dependable knowledge of teaching behavior—its elements and their influence on pupil learning. But even if there were an abundance of such knowledge, there would still be the problems of training teachers to use it in their practice and of inducing institutional changes that incorporate these training procedures into preparatory programs—a task comparable to rebuilding vehicles while they are moving (p. 1).

**Need for Change in Teacher Education.** In a paper which he presented at the Grove Park Institute on "Higher Education, Teaching and the Education of Teachers," in 1969, Bernon Haubrick, Professor of Education at the Educational Policy Studies Center of the University of Wisconsin, outlined five basic bureaucratic aspects of the system of education in the United States. The resultant effect of these considerations according to Haubrick is that teacher training programs have an enormous capacity to absorb change and not change at all. In a review of programs related to teacher education he indicated that he found the apparent philosophical differences

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between programs were "... but shadows in the illusory series of debates held at conventions and in classrooms (p. 107)," (Haubrick, 1969).

The question that surfaces here is how can teacher training programs possibly accommodate change in teacher education without changing? Insight into this problem most likely lies somewhere within the complexity of the multiple-component aspects of a teacher training program. Change in one component may not have an interaction effect on other components and as such may not affect the overall total effectiveness of the particular teacher education program. Extending the situation of absorbing change with no effect relationship to the elementary and secondary schools in which the preservice teacher will teach, we may find that change in one component, which in fact does affect the total teacher training program effectiveness, may be change which the teacher will not be given opportunity to or be allowed to implement in the classroom setting. For example, a teacher training program develops into its curriculum course work and field experiences in individualizing instruction. The preservice teacher develops competencies in individualizing instruction and begins teaching this way during the first year of teaching. Within a relatively short period of time the teacher is asked to conform to the district policies of instruction related to amount of time spent in each curriculum area. The teacher's method is considered inappropriate.
The confusing and baffling network of teacher education and its problem of congruency with the actual work of teaching (Conant, 1963; Mayer, 1961; Sarason, et al., 1962; Stinnett, 1962) appears to be absorbing change and diverting it so that reform in teacher education becomes increasingly more difficult rather than less difficult.

Goodlad (1970) feels the major problem of reform in education at all levels is the piecemeal character of efforts to improve education. He cited historically the curriculum reform movement of the 1950's which within a few years found the teacher education component falling by the wayside. More recently the efforts of school reorganization have not been accompanied by the kinds of curricular and pedagogical changes needed. Generally speaking, Goodlad believes teachers have not been prepared for redesigned schools and classrooms. Nothing short of total reconstruction of education will bring about the necessary reforms. Goodlad (1970) stated:

Forward-looking administrators have difficulty finding the innovative teachers needed to redesign schools. Forward-looking teacher educators, on the other hand, experience comparable difficulty in seeking to identify innovative schools in which to prepare new personnel. More often than not efforts to improve the schools and efforts to improve teacher education proceed with very little mutual awareness (p. 1).

It is readily apparent that the task of improving the effectiveness of teachers is a complex one. It is a multi-dimensional task with highly dependent, interrelated, and interacting components (Goodlad, 1971). The implication is that many diverse resources will need to be focused on the problem of improving
teacher effectiveness. Edward Pomeroy, Executive Director of the American Association of Colleges of Teacher Education, has stated (Pomeroy, 1971):

If it ever was, it is no longer possible for a college or university, a school, a government agency, an organization, or an individual to effectively prepare teachers without the resources and assistance of others (p. 2).

To Pomeroy the major issue of the present circumstances surrounding teacher education is the need to relate individual efforts in such a catalytic way as to bring together the resources of all who have a role to play in the teacher education programs as they bring about change in the preparation of teachers.

A. Yates, editor of the 1968 issue of the International Review of Education, noted that there is a dissatisfaction with arrangements for professional education of teachers and a developing need for close links between the university, the teacher education programs, and the schools. In the AACTE 1972 Yearbook, Pomeroy stated:

For those too wedded to "the" way of preparing teachers or who find the pace too swift, the action in teacher education will soon pass by them. On the other hand, for those who have been looking forward to new visibility for our efforts and who have confidence in new configurations of study and experience, an exciting time is at hand (p. 37).

Pomeroy cited five targets for future professional action which are summarized as follows:

1. Greater involvement with actual school situations for the preservice teacher will become the hallmark of teacher education programs of the future.
a. Development of teacher renewal sites and teacher centers based on school and teacher needs rather than arbitrary faculty decisions of collegiate institutions.

b. Involvement of schools, colleges, state departments of education and communities in a consortium approach to teacher education.

2. The development of performance-based teacher education.

3. Bringing about excellence in the quality of the teacher education student and his preparation experience.

   a. The need for more information about teaching.

   b. The development of assessment procedures and instruments.

   c. Selection of teacher education candidates.

   d. The development of exemplary teacher training programs.

4. The restructuring of accreditation procedures and practices.

5. The development of prototypes for future research in teacher education which can provide research that can be instrumental in setting directions and evaluating results (p. 31).

The recommendations for reform submitted in the New York State study of teacher education also include the call for total reform in education as well as the coordination of resources (Fantini, 1972). The New York study based its recommendations for reform on the eight assumptions which are summarized as follows:

1. The preparation of teachers cannot be separated from reform needed in the public schools.
2. There should be a competency-based or performance-based licensing procedure.

3. There should be a complex of teaching-learning centers, clinical laboratories, with research development and training capabilities.

4. Teacher preparation programs should develop options emphasizing diversity in teachers and programs.

5. Teacher preparation cannot be separated from the reform of undergraduate education, including the liberal arts.

6. Reform of teacher education is a regional matter which requires coordination of the region—community colleges, business, industry, regional centers, related educational agencies, etc.

7. Institutions now preparing teachers must be given the opportunity to go through a conversion process. A process which will enable institutions to utilize their current resources differently.

8. Reform is not possible unless the basic parties of interest (teacher preparation institutions, public school officials, laymen, students, regional, state education agencies) participate in reform. No super-imposed model will work (p. 12).

Since school systems provide the realistic classroom situations for the practice of student teachers, teachers and principals need to become more involved in this component. Elementary and secondary schools are the consumers of output from teacher education systems. The schools can only gain by being more closely involved with training programs.

Through interrelated, interreacting, and interdependent involvement in the total teacher education system, Yee (1969) feels
responsibility could be shared for the determination of:

(1) appropriate professional education for the needs of the student and the society; (2) laboratory and clinical experiences rewarding to all persons involved; (3) professional criteria for certification; and (4) improved curriculum development in the schools (p. 40).

Paul Sharp (1969) in reviewing the development of new accreditation standards for NCATE pointed out that NCATE was in fact encouraging institutional experimentation and innovation with standards that urged institutions seeking accreditation to demonstrate flexibility and variety in their programs. Sharp (1969) stated:

This provision recognized that there is no single design for teacher preparation and that major changes may be required of many programs before they achieve relevance and current utility. Each institution, therefore, is encouraged to experiment and to create those patterns of teacher education best calculated to fulfill its educational mission (p. 77).

Considering the limitations that exist in knowledge and information about teaching and the training of teachers, there is reason to believe that even such knowledge that we have is not being utilized in teacher education programs. For example, there are only a few studies that have actually examined the relationship between teaching behavior and school effectiveness (Rosenshine and Furst, 1971).

The belief that we are not utilizing the knowledge we do have has led many institutions, including the United States Office of Education, to concern itself with the task of designing new programs (Smith, 1971).
Recent Trends and Developments in Teacher Education

New Teacher Education Models. During the latter half of the 1960's there was considerable activity in teacher education in the area of program design. A number of model programs in teacher education were developed and published. The major initial activity was provided through the United States Office of Education. In October of 1967, the United States Office of Education submitted a request for the development of proposals on "... educational specifications for comprehensive undergraduate and inservice teacher education programs for elementary teachers (Burdin and Lanzillotti, 1969)."

Eighty proposals were submitted for the design phase (phase I) of a three-phase project. Nine of the design phase proposals were funded. The models proposed are designed to create a structure for the total education of elementary teachers. As one reads the summaries it appears that the models are formal arrangements of the components of a teacher education program, and are concerned with the relationship of the various parts of a program to each other, whether those relationships are structured or sequential. A review of each of the funded proposals is reported here.

The Florida State University Model (Burdin and Lanzillotti, 1969) emphasizes flexibility. The model recognized that teacher education must change and must change as the purposes and content of education itself changes within the context of social, political and economic changes that take place in the United States.
The model is divided into three phases: (1) an underclass phase, (2) a preservice phase, and (3) an inservice phase. A paradigm showing the relationship of each of these three phases including the purposes of each is presented in figure 1. It is expected that most students will need six years beyond high school to complete this program. However, there is enough flexibility in the program's requirements to enable a student to take less or more time if it is necessary to do so, depending upon the desires of the student.

In addition to the three developmental phases of the program three facilitating components are described. First, there is an admissions component with the purpose of selecting candidates qualified for and committed to remaining in teaching. This component includes diagnosis of entrance skills and knowledges which candidates possess as they enter the program.

The second facilitating component is a computerized management control system. The complexity of program logistics created the demand for such a system. The third facilitating component suggests the type of staff utilization patterns needed if the model is to be implemented and is basically a staff redevelopment program.

The Florida Model (Sowards, 1968) proposed an "early awareness-involvement" in the preservice phase, which would include the following:

1. Individual counseling and planning with program faculty;

2. Small continuing seminars;
A THREE-PHASE PLAN FOR PREPARING ELEMENTARY TEACHERS
3. Videotape viewing sessions, accompanied by lecture and discussion;

4. Clinical involvement in simulated teaching situations, observations of ongoing classroom teaching, one-to-one tutorial experiences with children, small group instructional experiences with children, and service assignments with selected community agencies (p. 47).

The inservice phase of the model covering two years and three summers included the following (Sowards, 1968):

1. Work oriented towards practical problems in teaching which will be done during the regular school year.

2. On-campus work during three summers designed to supplement and complement the already completed preservice phase of the program. The model is so designed that to omit the in-service phase would jeopardize the total operation (p. 114).

The Michigan State University Model (Burdin and Lanzillotti, 1969) emphasized developmental experiences for teachers in training beginning in the freshman year and continuing through a full year of internship. The program is divided into five major areas: (1) general-liberal education, (2) scholarly modes of knowledge, (3) professional use of knowledge, (4) human learning, and (5) clinical study. The program focuses the skills and knowledges of the behavioral sciences on educational problems. This model presented the most complete treatment of the relationship with general education and academic disciplines. Not only was the program developed by an interdisciplinary team, but its continued direction was to be representative of the various interests. The procedure has been summarized (Le Baron, 1969) as follows:

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An extensive and flexible management system is necessary since this program was planned and will be implemented by faculty members from seven colleges plus representatives from the public schools, preschool agencies, and students. An Educational Policies Council including deans of the seven cooperating colleges will assume overall institutional responsibility for general administration of the program. A Project Advisory Committee with members appointed by the deans and representing the seven colleges will form a liaison agency between the Educational Policies Council and the administrative staff of the program (p. 91).

The Michigan State Model (Houston, 1968) included a Career Decision Seminar for each student who enters the teacher education program, which will help the student answer such questions as the following: Shall I consider a career in teaching? Do I like to do what teaching demands? What age of children do I prefer to work with? Would I prefer to be a "general" teacher or specialize in some particular area?

Another significant feature of the Michigan State Model is the development of performance modules—that is, distinguishable elements of teaching, or teaching tasks which can be mastered. The Michigan State Model includes over 2,700 modules. The standard format for these modules includes objectives, prerequisites, experience setting, materials, level, hours, and evaluation. These criteria have been designed for IBM card recording.

The model also places considerable emphasis on the development of clinical behavior with the sequence starting during the first two years with one-to-one tutorial experiences, continuing through a study of teaching using simulation and microteaching, to team teaching, an internship and teacher specialization.
The Northwest Regional Educational Laboratory Model (Burdin and Lanzillotti, 1969) is a competency-based model. The model was developed through a consortium effort which included twenty-six colleges and universities from the Northwest region of the United States, five state departments of education, the Teaching Research Division of the Oregon State System of Higher Education and the Northwest Regional Educational Laboratory. The model specifies that each prospective teacher demonstrate the ability to perform specific teaching tasks prior to certification.

A major process feature of this model designed to structure the assurance of reaching a competency-based state is its systems design. It is designed to (1) bring about a specified and measurable outcome, (2) provide continuous evidence as to the effectiveness of the intended outcome, and (3) provide corrective or adaptive recycling processes based on need determined by the evidence of the effectiveness of the intended outcome. This system then becomes the method of the process. This process is represented schematically in figure 2.

It is easily seen that this model creates a comprehensive and complex implementation problem. A simplistic analysis of the model breaks implementation down into the three areas described as follows:

1. The Development of Program Objectives.
   a. What will education be like in the future?
   b. Specify educational functions.
   c. Specify tasks to be performed within each function.
FIGURE 2
A SCHEMATIC REPRESENTATION OF THE ADAPTIVE PROCESS
REFLECTED THROUGHOUT THE COMFIELD MODEL
2. The Development of the Means to Assess the Realization of Program Objectives.

a. Specify behaviors that are acceptable as evidence of competence.

b. Specify how and under what conditions behaviors can be observed.

c. Specific measurement of observations provided within the context of validity and reliability.

3. The Development of Learning Experiences Which Assure the Realization of Program Objectives.

The sequence of steps involved in the systematic design of this model that lead to and constitute the teacher education program are illustrated in figure 3.

The limitations of this model, as is true of most of the models, are deeply based in the limited information base that exists in teacher education today. As has been noted in the introductory section of this review of the literature, there are few, if any, tested and empirically researched instructional principles upon which to specify learning outcomes. Competency criteria now being developed are based on teaching experiences and opinion and contain very little if any generalizable content for teacher education program development. It is just not possible to identify explicitly and with confidence the instructional conditions which permit concepts to be mastered and attitudes to be modified. As a consequence, it is difficult to specify knowledge, skills, and sensitivities needed by prospective teachers and thus, it is difficult to design a program of teacher education within a performance-based context.
Step 1
Pupil outcomes that are desired

Step 2
Conditions that bring about the outcomes that are desired in pupils

Step 3
The knowledge, skill and sensitivities needed by teachers to provide the conditions that bring about the outcomes that are desired in pupils

Step 4
Conditions that bring about the competencies needed by teachers to provide the conditions that bring about pupil outcomes that are desired in pupils

The goals of education

The instructional program within the schools

The goals of teacher education

The teacher education program

FIGURE 3
SEQUENCE OF STEPS IN THE SYSTEMATIC DESIGN
OF A COMFIELD-BASED PROGRAM
Another important feature of the Northwest Regional Laboratory Model is the aspect of control. In this model student and staff bargain to agreement about performance criteria (Schalock, 1968). This aspect of student involvement in addition to the individualization of instructional experiences in this model provides a focus of "student centered" activity for this teacher education program. The model listed ten propositions in the conceptual framework underlying the model (Schalock, 1968). Number six is as follows:

The instructional experiences that lead to both the development and personalization of competencies should be individualized with respect to point of entry into the curriculum, pacing, sequencing, information processing, preferences, etc. (p. 6).

Perhaps the most significant feature of the Northwest Regional Educational Laboratory Model (Schalock, 1968) is the centralizing aspect of the field experience. There is no delineation of time or specific type of experience. Time and type of experience are determined by the specific competency or competencies which are to be learned in the laboratory. For the instructional program (Schalock, 1968):

The laboratory provides that the individual student will progress through instructional systems in which the criterion behaviors are appropriate practice of each significant performance of the effective instructional manager (p. 40).

All of the model programs developed were designed for education as it will be, not as it is known today. For example, the Syracuse Model (Hough, 1968) speaks of "A model program that is an open system, a program which will nurture a pluralistic and changing
teacher education program in the near and somewhat distant future (p. 2)." The Syracuse design calls for a cooperative control system between school systems and the teacher training institution regarding the practicum. This cooperative model actually extends beyond the relationship described previously and permeates the entire model. For example, the model (Hough, 1968) has "liberal education" as one component of seven which constitutes teacher education. The model has a policy board representative from each of the disciplines involved in the teacher education program, college administrators, students and public school representatives. This special kind of cooperative relationship is called "proto-cooperation." As was common for most of the models, the Syracuse Model utilized the concept of performance criteria. The performance criteria were grouped as follows for this model: first, as operational objectives; second, in instructional situations; and third, as the criteria for assessment of student performance (Hough, 1968).

The Syracuse Model seems to focus on developing teachers who will modify education and adapt to its changes. Self-renewal received major emphasis throughout the model (Hough, 1968):

We assume, therefore, an uncertain future in which there will be children to educate. We further assume that since we do not know what form or how the children of such a society should be educated, ... teachers educated today must be educated to be continually self-renewing as they adapt to and play a major role in shaping the changes that seem certain in the future world of education (p. 2).
From a slightly different perspective of performance-based teacher education the Columbia University Model (Burdin and Lanzillotti, 1969) is designed as conceptualizing the education of the teacher as preparation for experimentation in education.

It is our choice to build a performance model which is not based so much on a description of the teacher as a functionary as it is on the conception of the teacher as an innovator-scholar--a person who, working with his colleagues, develops and tests solutions to educational problems (p. 113).

The rationale for this model is based on the premise that we do not have enough knowledge about what teaching is, that teaching is not yet being studied effectively, that there are many conflicting and diffuse ideas about teaching and teaching theory and that teaching is a highly complex interacting process. Thus, what is needed is a model which trains a teacher how to approach what he does in such a way that he tests and otherwise studies educational strategies.

This model identifies four roles in which the prospective teacher will be trained. Within each role certain controls are necessary which give rise to performance capabilities needed. These four roles are described as follows:

1. Institution-Builder (shaper of the school)
   a. Works with faculty, community, students and administrators in educational program design and building of organizational structures.
   b. Control of strategies for studying and designing curricular systems; analyzing and creating effective social systems in
the school; and assembling and employing technical support systems which facilitate education.

2. Interactive Teacher (contact with children)
   a. Strategies for making instructional decisions.
   b. Group dynamics and building effective democratic structures for the educational environment.
   c. Control of teaching strategies and technological assistance.
   d. The teacher as a student of individualization.
   e. Working with colleagues in sharing analysis of teaching and learning as a continuous and re-cycling aspect of their professional life.

3. Innovator
   a. Building educational settings in which innovation rather than imitation is the norm.
   b. Developing techniques for analyzing the social structure of the school, especially as it relates to inhibiting or facilitating creative behavior.

4. Scholar
   a. Control of techniques for studying the process of interactive teaching and theories of learning.
   b. Study of a discipline and modes of inquiry in that discipline.
   c. Study of research that relates a discipline to the lives of children.
   d. Control of structures for studying the school and for studying teaching and learning (p. 115).
The performance model of this program was to design behavioral, yet general, definitions of the functions within each role domain and to proceed to the identification of the means for achieving competence in the roles. Structurally, there are two aspects to the program. One is a set of general methodologies which are designed to facilitate:

1. Welding the student body into a community of scholar-teachers.
2. Providing for individual differences in personality development.
3. Enabling students to set their own pace in learning.
4. Providing a laboratory in which students can practice creating and testing educational environments (p. 118).

Figure 4 represents the interaction of the General Methodologies with the four role domains for this model (Burdin and Lanzillotti, 1969).

Table 2 describes the six phases of the contact laboratory as described for this program.

The second aspect of the program is four basic components, each one derived from the fundamental roles of teaching. It is convenient to relate the four basic components to the contact laboratory. The contact laboratory begins early in the program and proceeds into the first year of paid teaching. Only the initial phase includes apprentice teaching familiar to traditional student teaching programs. The remainder of the experience is experimental teaching in which the candidates are mastering a
### General Elements

<table>
<thead>
<tr>
<th>Inquiries groups (democratic method)</th>
<th>Differential training model (faculty administered)</th>
<th>Inquiry school (laboratory school)</th>
<th>Contact lab. (direct experience with children)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution-Builder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interactive teacher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher-Scholar</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 4**

RELATIONSHIP BETWEEN GENERAL STRUCTURAL ELEMENTS AND FOUR BASIC COMPONENTS
<table>
<thead>
<tr>
<th>Phase</th>
<th>Type</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Experiencing the school</td>
<td>A four- to eight-week apprenticeship to a public school</td>
</tr>
<tr>
<td>Two</td>
<td>Small-group and tutorial teaching (preferably in candidate-operated program)</td>
<td>10 to 20 weeks of experimenting with teaching strategies</td>
</tr>
<tr>
<td>Three</td>
<td>Unit-experimentation in inquiry school</td>
<td>Group experiments in teaching units taking four to eight weeks</td>
</tr>
<tr>
<td>Four</td>
<td>Experience in curriculum modes in inquiry school</td>
<td>Observation-participation experience in a variety of ways of teaching</td>
</tr>
<tr>
<td>Five</td>
<td>Carrying on an educational program</td>
<td>Inquiry groups develop and carry on a candidate-operated school program</td>
</tr>
<tr>
<td>Six</td>
<td>Internship</td>
<td>Paid teaching, preferably in teams derived from inquiry groups</td>
</tr>
</tbody>
</table>
variety of strategies and carrying out educational programs which they develop and design research for. Table 3 presents the four basic components to the sequence of the contact laboratory experiences.

The Georgia Educational Model (Burdin and Lanzillotti, 1969), like many of the other models, is based on teacher performance behaviors. The competencies listed embrace both professional performance and liberal education. The model specifies that approximately 25 percent of the time will be spent in general education and 30 percent of the time on an area of concentration. The performance behaviors were systematically developed by interdisciplinary teams. The vehicle for organizing and presenting learning activities is a manual of instructions called a proficiency module (PM). It is designed to provide guidance through individual study and group interaction activities toward acquiring particular behavioral competencies. A control feature of the model is that the dean of the college of education heads a committee representative of all colleges responsible for the education of teachers, plus representatives from school districts and the state department of education. An interesting feature of the Georgia Model is the relationship between selection of teacher education candidates and the graduated practice of teaching component of the model. The selection of candidates is based on a career field with multi-entry points and paths through that career field. This allows an individual to enter the profession at the lowest category level, and
Table 3
Contact Laboratory and Basic Components

<table>
<thead>
<tr>
<th>Phase</th>
<th>Genre</th>
<th>Activities</th>
<th>Components Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Experiencing the school</td>
<td>Teacher aide and analysis of school and classroom</td>
<td>Institution-builder, Innovator, Teacher-Scholar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two</td>
<td>Tutorial-small group teaching</td>
<td>Experimenting with teaching strategies</td>
<td>Institution-builder, Interactive teacher (teaching strategies subcomponent), Teacher-Scholar, Innovator</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three</td>
<td>Unit Study</td>
<td>Experimenting with unit teaching</td>
<td>Interactive teacher (teaching strategies subcomponent), Institution-builder, Teacher-Scholar, Innovator</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four</td>
<td>Experience in inquiry school teams</td>
<td>Studying school as an inquiry center</td>
<td>Innovator, Institution-builder</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Five</td>
<td>Operating own school program</td>
<td>Experimenting and studying teaching and learning</td>
<td>All components</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six</td>
<td>Internship</td>
<td>(As in five)</td>
<td>All components</td>
</tr>
</tbody>
</table>

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through training and experience, to advance as far as he is capable. The graduated experience component of this model is based on a career development ladder which parallels the multi-entry points for teacher selection. That is, entry at the level of an aide, teaching assistant, teacher in an area of competence and a specialist in teaching. In addition, the average student would work with children of different grade levels, ethnic backgrounds and socio-economic levels through three six-week practical laboratory experiences.

An internship of ten weeks is provided near the end of the professional program. The graduated nature of the experience is emphasized by the model: "The professional program provides a continuous sequence of study and practical laboratory experiences through the media of proficiency modules" (Johnson, Shearron, and Stauffer, 1968). The Georgia Model is purported to be based on the teaching act itself. The model stated:

GEM's [Georgia Elementary Model] position is that the teacher education program should be designed in relation to the job the teacher is required to perform in the classroom. By defining what the job actually is, the competencies necessary to perform specific tasks may be adequately determined. In other words, it would logically follow that the content of a teacher education program should be based on the teaching act itself (p. 3).

In practice, the objectives of the elementary school, plus general instructional principles, learning principles, and organizational principles were analyzed to deduce the teaching tasks and necessary competencies. Most of the Georgia Model is devoted to this analysis of education.
The University of Toledo Model (Burdin and Lanzillotti, 1969) was developed by a consortium of the twelve state-supported universities of Ohio. In addition to these institutions the Research and Development Center for Cognitive Learning at the University of Wisconsin and EVCO, a private consulting firm from Albuquerque, New Mexico, were involved in the program development phase. The model contains 818 teaching specifications which include over 2,000 behavioral objectives. The specifications were developed within five broad contexts. They are listed as follows (Burdin and Lanzillotti, 1969):

1. Educational technology will play a substantial role in the development of teacher education programs in the decades ahead. This role of educational technology has heretofore not been adequately identified, but pressures both from within and without teacher education will increase its development.

2. The instructional organization of the elementary school will change markedly. In the model used, the instructional organization was the multi-unit school as developed through the R & D Center at the University of Wisconsin.

3. The contemporary learning-teaching process needs a re-evaluation and its orientation should be more toward behavioral outcomes.

4. A multi-cultural society, such as our present society, requires detailed consideration of societal factors in preparing the elementary teacher of the future.

5. Research in education in the past has not been adequately incorporated into teacher education programs, and if research is to make an adequate contribution to the improvement of education, research findings must
be incorporated into teacher education programs (p. 202).

The related student teaching component of the Toledo Model is focused on the differentiated staffing concept of the multi-unit school (Dickson, 1969).

The experiences for the various target populations as reflected in the specifications require a better operational marriage between academic-cognitive type experiences than has been true in the past. The participation of students in actual school experience has been markedly increased over what is generally found in present programs. Much of this is related to the actual preparation for teaching in the multi-unit school (p. 205).

A significant feature of the Toledo Model is the development and articulation of its evaluative process. Despite the fact that both computerized management systems and curricular modules with performance criteria would facilitate institutional (process) evaluation and research, these elements were not developed in detail within the models designed for the United States Office of Education (Engbretson, 1969). The most notable exception is the Toledo Model (Dickson, 1968). This model described the distinction between teacher behavior and teacher effectiveness for evaluative purposes. The ultimate goal of effective teaching being measured in terms of what happens to students. The intermediate goal being measured by what effect a teacher training program is having on the behavior of its students.

The Massachusetts Model (Allen and Cooper, 1968) is performance criteria oriented.
The formulation of performance criteria requires the specification of instructional and program goals in terms of behaviors to be exhibited by the trainee when instruction has been completed. . . . Careful formulation of performance criteria liberates the planners from describing the program in terms of traditional "courses" (p. 17).

For this model performance criteria have been developed in three broad conceptual areas—human relations, behavioral skills, and subject matter knowledge (Burdin and Lanzillotti, 1969). Figure 5 illustrates these three areas in relationship to the conceptualization of the performance criteria. The three areas imply a hierarchy of performance criteria necessary for teaching. This hierarchy is illustrated in Table 4 (Burdin and Lanzillotti, 1969).

The student teaching aspect of the Massachusetts Model is primarily based upon performance criteria rather than time criteria. Different students will engage in practice teaching at different times and for different periods of time, since the student, with the aid of a faculty advisor, chooses his own set and sequence of learning experiences. Much of the instructional skill development is done via micro-teaching, simulation and role playing and can actually be acquired prior to student teaching in this model.

The Pittsburgh Model (Southworth, 1969) specified that "this is a training model for individualized instruction (p. 2)." This model focused heavily on the concept of individualization. The following statement reflects the totality of the intent of individualization in this model (Southworth, 1968).
FIGURE 5

PERFORMANCE CRITERIA

Content Knowledge

Performance Criteria

Human Relations Skills

Behavioral Skills
Table 4
A Hierarchy of Teaching Competencies Developed
Through Performance Criteria

<table>
<thead>
<tr>
<th>Necessary Skills</th>
<th>Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content knowledge</td>
<td>Equal</td>
</tr>
<tr>
<td>Behavioral skills plus Content knowledge</td>
<td>Equal</td>
</tr>
<tr>
<td>Human relations skills plus Behavioral skills plus Content knowledge</td>
<td>Equal</td>
</tr>
</tbody>
</table>
Also unique is the flexibility of the model which will permit and facilitates individual program development for each trainee. In relation to the "mastery," the trainee will be expected to work through an ordered set of objectives in the most effective way for him to obtain mastery of them. The degree of proficiency will determine mastery and his movement to another competency (p. 27).

In general, individualization facilitated via (1) performance criteria in curriculum modules (performance demonstrated-module considered mastered); (2) differential guidance services based on individual need; and (3) self-direction and self-selection by students. It should be pointed out, however, that the model does have some required curriculum modules.

Figure 6 presents the sequential movement of the student through the four sequences of this model (Burdin and Lanzillotti, 1969).

The amount of time devoted to this segment of the program will be based on performance mastery. For example, at the internship level of experience, the internship will continue until the specified degrees of mastery are achieved.

Table 5 summarizes the nature of the contributions of the model's major components to individualization.

A continuous process monitoring system has been developed for this model to facilitate assessment. Figure 7 illustrates this monitoring system.

The models developed under the funding structure of the United States Office of Education have led the way for independent model...
INDIVIDUALIZED INSTRUCTION: TOTAL SEQUENTIAL MOVEMENT OF TRAINEE THROUGH (HYPOTHETICAL PLAN)

C1, C2: Academic learning sequences—tutorial, courses.
1, 2, through 32: Competency experience units needed for B.A. in education

FIGURE 6
Clinical learning sequences—tutorial, clinical
1, 2, through 32: Competency experience units needed for B.A. in education

FIGURE 6 (continued)
Table 5
Nature of the Contributions of Each Component to Individualization

<table>
<thead>
<tr>
<th>Nature</th>
<th>Component</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive input</td>
<td>Academic knowledge</td>
<td>Cultural background</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Liberal arts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Behavioral science</td>
</tr>
<tr>
<td></td>
<td></td>
<td>School in society</td>
</tr>
<tr>
<td>Cognitive input</td>
<td>Professional knowledge</td>
<td>Specifying goals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assessing achievement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diagnosing learners</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learners</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Controlling behavior</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluating learning</td>
</tr>
<tr>
<td>Affective experience</td>
<td>Guidance</td>
<td>Self-development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Team work</td>
</tr>
<tr>
<td>Field experience</td>
<td>Clinical setting</td>
<td>Application of cognitive input and affective experiences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Refinement of ed. skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Study of the learning process</td>
</tr>
</tbody>
</table>
FIGURE 7
PROGRAM REGENERATION SYSTEM
development by a few colleges and universities across the nation. One such institution is the University of North Dakota. The University of North Dakota has developed "The Center for Teaching and Learning" (Insights, 1972) as its model for restructuring teacher education and began actual implementation of the model on July 1, 1972.

The North Dakota model has a philosophical organizational orientation which seeks the integration of the academic disciplines with teacher training components. Major emphasis in the model is focused on the student as an independent learner. "Students are encouraged to assume greater initiative and independence in their own learning with the Center providing options for individualization, independent study, colloquia, and seminars (p. 2)." (Insights, 1972)

The program consists of three major organizational areas: Center Seminar(s), Cluster Areas, and Field Experiences. This structure reflects the philosophy and the rationale of the model. Figure 8 is a diagram of the model.

In the Elementary Education program the Center Seminar(s) involve student exploration and discussion. It is at this level that the student will have an opportunity to discover the personal meaning of the various aspects of his entire educational program. Counseling is considered to be an integral part of this area. The Cluster Areas provide an alternative to separate departments and courses which have a tendency to focus on relatively narrow issues.
FIGURE 8
THE CENTER FOR TEACHING AND LEARNING
Structurally this part of the model is organized around four major cluster areas: Human Relations, Communication, Math-Science and Creative Expression. In the Field Experience Area students are encouraged to become involved in some form of field experience early in their educational program. Student and advisor plan field experiences from among the following: observation, tutoring, teacher associate experiences, extended field experiences, community experiences, etc. The University of North Dakota has assumed a leadership role in restructuring the educational opportunities for elementary and secondary students in the State of North Dakota. Its primary emphasis in this effort has been on developing the independent learner. The teacher education model it has developed was designed to be congruent with the teaching-learning act, thus, "the program strives to become a model of the kind of educational environment it is promoting in the elementary and secondary schools (p. 4)." (Insights, 1972)

The assumptions upon which the Elementary Education Program is based articulate the congruency rationale and are listed as follows (Insights, 1972):

1. Development of a strong educational program by providing a variety of learning environments and educational opportunities for the personal and professional growth of students.

2. Individualization, a primary function of the Center, will contribute to the description and interpretation of a unique human being through its goals, design, organization, use of personnel, management, and content selection.

4. Provision of first-hand on-going contacts with children and youth in a variety of settings designed to help students fuse their academic background, knowledge of child growth and development, and learning theory into teaching strategies best suited to their particular talents and interest.

5. A strong advising program for all students in teacher education.

6. Provision for options for students in teacher education.

7. Establishment of University-wide cooperative arrangements for the preparation of teachers.

8. Integration of campus-wide components of teacher education with the communities to be served by the Center into a single, self-governed effort.

9. A program which would facilitate and nurture experimental education.

10. Removal of artificial barriers between elementary education, secondary education . . . (p. 3-4).

The University of Denver's Long-Range Planning Committee has recently submitted its proposed program of teacher education to the university (Long-Range Planning Committee, 1972). The program emphasizes stronger advisor-advisee relationships, course work in education organized into fewer discrete courses and an increase in the major areas of professional study, as well as an increase in the number and kind of field experience opportunities. The program is designed to extend beyond the school of education.
faculty to faculty of other schools and departments, to elementary and secondary school teachers, to educational administrators, to representatives of education-related community organizations, to professional education organizations and to the students of teacher education. Table 6 presents a breakdown of the areas of study and the corresponding study sequences (Long-Range Planning Committee, 1972).

Four of the five Distinguished Achievement Awards of the American Association of Colleges for Teacher Education for 1972 went to higher education institutions that were undergoing considerable reform in their teacher education programs. The four institutions receiving the awards were: Temple University, Philadelphia, Pennsylvania; Austin College, Sherman, Texas; the University of Dayton, Dayton, Ohio; and the University of Washington, Seattle, Washington (AACTE, 1972).

The Temple University program has placed its emphasis on building a cooperative structure with the public schools, the teachers' union and the community. The concept is that of the portal school. In the portal school concept, the university, the public schools and the community join forces in reallocation of resources. The resource reallocation is implemented through a concentration of programs such as tutoring, micro-teaching, student teaching, internships, special projects and the joint appointment of staff by mutual agreement (AACTE, 1972).
Table 6
Proposed Teacher Education Program

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>GENERAL STUDIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisee group membership</td>
<td>to include Introduction to Psychology</td>
</tr>
<tr>
<td>Recommendation to begin professional studies</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EducationCourse Work</th>
<th>Field Experiences</th>
<th>Extended Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Second Year: Area I Studies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Learning and Growth and Development of School Age Children, K-12</td>
<td>5 q. h.</td>
<td>Related Field experiences</td>
</tr>
<tr>
<td><strong>Recommendation to continue in the Program</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second or Third Year: Area II Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessing the Learner and the Educational Environment, K-12</td>
</tr>
<tr>
<td>General Elementary School Curriculum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third and Fourth Years: Area III Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods and Materials, K-12 in major teaching subject field</td>
</tr>
<tr>
<td><strong>Recommendation for Student Teaching</strong></td>
</tr>
<tr>
<td>Student Teaching</td>
</tr>
<tr>
<td>Elementary</td>
</tr>
<tr>
<td>Secondary</td>
</tr>
<tr>
<td>Advanced Problems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Education Credits:</th>
<th>Course work</th>
<th>25 q. h.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Related field experiences</td>
<td>4 to 8</td>
<td></td>
</tr>
<tr>
<td>Student teaching</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Extended studies</td>
<td>0 to 10</td>
<td></td>
</tr>
<tr>
<td><strong>Extended field experiences (school or non-school setting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>or Elective courses in education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>or Elective courses in other subjects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>or Combination of Field Experiences and elective courses, as approved by Education advisor-team</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>8 to 10 q. h.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Possible for all extended studies credits to be outside the field of Education</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

44 to 58 q. h.
The Austin College teacher education program covers five aca-
demic years, terminating in a Master of Arts degree. The program
is performance-based, highly individualized, and built from a
liberal arts foundation. Each student is given primary responsi-
bility for his own education. The student and a faculty member
select concepts and skills to be learned. A contract is then
drawn up specifying the competencies to be demonstrated. The
roles of the faculty members in this program become redefined to
that of coordinators of activities for students (AACTE, 1972).

The University of Dayton program relates primarily to formu-
lation of a new role for the classroom supervisor. The major
assumption underlying this program is that there are classroom
teachers specifically interested in teacher education. Thus, the
idea takes on a much broader reform perspective in that of neces-
sity a partnership relationship will need to be established between
the university and the public school systems (AACTE, 1972).

The University of Washington program provides its students
with a choice. The student can choose the traditional way of
theory courses, academic preparation and one quarter of student
teaching, "or an alternative program, Teacher Education: Perform-
ance and Field Oriented (TEPFO), which correlates theory and prac-
tices for juniors, seniors, and post graduates (p. 12, AACTE,
1972)."

Cooperative Teacher Education Organizational Structures. It
is apparent in the review of the literature that much thought has

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been given to the need to involve many organizations and institutions in the preparation of teachers. The most frequently mentioned link-up of resources included the public elementary and secondary schools, state departments of education and the teacher preparation institution. Several organizational structures have emerged from the recent emphasis on total reconstruction of teacher education in model designs.

One such organizational structure relates to a regional or state-wide consortium of centers. Generally speaking, a number of regional centers are organized which include the public schools and one or more colleges and universities. These regional centers are coordinated by some central coordinating agency such as the state department of education. Under this organizational structure, instruction and certification would be the responsibility of the regional centers, while support services would be coordinated by the central agency. A major strength of this organizational structure is in the area of resource management. The Northwest Regional Educational Laboratory (Schalock, 1968) has utilized this concept in the development of their programs.

A second organizational structure which has emerged is that of the university center concept. In this concept the university coalesces with a number of school systems. The center resulting from this coalition is not necessarily located at the university; however, the university plays a dominant role in its development. The coordination of interinstitutional cooperation is the responsibility of
an administrative unit representative of all involved agencies. The concept requires staff in both the university and the public schools to explore and implement new roles.

The third organizational structure which is appearing is that of the school training center. In this concept public elementary and secondary schools take on considerable responsibility for training teachers. The colleges and universities become increasingly involved in inservice programs directly related to the development of curriculum and teaching strategies in the public schools that are of an exemplary nature. The link-up becomes one of public schools that are of an exemplary nature with teacher training institutions intimately sharing the responsibilities for preservice and inservice education programs. The control of such centers is the responsibility of an administrative unit including representatives of the university, the schools, professional teacher associations and community agencies.

Model programs which contain elements of the previously described organizational structures of multi-agency teacher education programs or represent the descriptions quite closely are: Florida State University's portal school; Michigan State University's clinical school network; Syracuse University's teaching centers located in the public schools; Teachers College's inquiry school; University of Pittsburgh's clinical settings; University of Toledo's multi-unit elementary school; the Northwest Regional Educational Laboratory's consortium of centers; Temple University's
portal school; and the University of Dayton's program defining new roles for the classroom supervisor (Burdin and Lanzillotti, 1969; and AACTE, 1972).

The State of West Virginia has made a significant effort in the direction of developing cooperative structures for teacher education. West Virginia developed the Multi-Institutional Teacher Education Center (MITEC) concept as an outgrowth of a seven-state project known as the Multi-State Teacher Education Project. Since MITEC was originated in 1968 the State Department of Education in West Virginia has established six Teacher Education Centers (Maddox, 1972). Each of the seventeen teacher preparation institutions in the state is a member of one of the six centers.

The Teacher Education Center as defined in the West Virginia model is a concept rather than a physical place. The concept involves mutual decision making shared by public schools, communities, students, the state department of education, and colleges in matters of teacher education. It includes shared financial responsibilities and joint appointments.

The program's initial goal was to seek ways to improve teacher education, particularly in the area of laboratory experiences. Six areas of cooperation have been identified as having been achieved by the MITEC program thus far (Maddox, 1972).

SET ONE

1. Placement of Student Teachers.

2. Selection of Clinical Supervising Teachers.

4. Designing In-service Programs for Teachers.

5. Coordination of Pre-Student Teaching Laboratory Experiences.

6. Cooperative Offering of Special Methods Courses (p. 13).

Five areas for additional cooperative efforts have been identified as future goals (Maddox, 1972).

SET TWO

1. Yielding Supervision of Student Teachers to School-Based Teacher Educators.

2. Establishing Minimum Expectations for Prospective Student Teachers.

3. Cooperative Planning of Syllabi for Special Methods Courses.

4. Establishment of Internship Experiences after College Graduation.


Performance-Based Teacher Education. Similar to the recent emphasis on multi-institutional cooperative structures for teacher education programs is the emphasis on performance-based instruction. The concept of performance-based or competency-based instruction was referred to in the reporting of the trend toward development of model programs earlier in this chapter. The writer feels the current emphasis on performance-based teacher education programs and its relationship to field-oriented experiences requires a specific review of the concept.
Performance-based education is based on the specification or definition of what constitutes competency in a given field. Specific, behavioral objectives for which criterion levels of performance are established are utilized as the point of determination by which a competency is considered to be performed at a satisfactory level. Once the required behaviors have been specified, they are placed in a hierarchical structure from simple to complex. Then an instructional sequence is planned that will assist the learner in achieving the desired behaviors. When the learner considers himself ready, a performance check of some sort is completed to determine if the required level of competency has been achieved.

In performance-based instruction time is a variant, while achievement is held constant. The criterion level is the same for each person or group.

Different instructional routes can be developed to increase the probability of learner success. The individual learner can select the route most compatible with his learning style. Should the learner not reach the criterion level established for the behavior he is to perform, a recycling process allows the learner to select an alternate route to the behavioral goal.

Table 1 provides a comparison of a competency-based instructional system with a conventional system of instruction (Young and Mondfrans, 1972).

The concept of performance-based teacher education is relatively new, and although there are a number of writings dealing with
Table 7
A Comparison of Competency-Based and Conventional Systems of Instruction

<table>
<thead>
<tr>
<th></th>
<th>COMPETENCY-BASED</th>
<th>CONVENTIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Who sets the goals and objectives of instruction?</td>
<td>Both the teacher and student are usually involved. When the teacher sets the goals and objectives the student is told what they are and often is allowed some choice of objective or goal.</td>
<td>The teacher usually sets the goals and objectives. Often they are not clearly defined. Students are usually not told what they are. Students usually do not have a choice.</td>
</tr>
<tr>
<td>2. Who decides on the means and procedures of instruction?</td>
<td>Students often have a choice of alternative routes, experiences and materials to use in pursuing a given goal or objective. The student controls the amount of time spent in the goal or objective.</td>
<td>The teacher usually controls the situation and presents all students with the same materials and experiences for the same amount of time.</td>
</tr>
<tr>
<td>3. What is learned?</td>
<td>Students usually learn how to do something.</td>
<td>Students may learn about something.</td>
</tr>
<tr>
<td>Question</td>
<td>Competency-Based</td>
<td>Conventional</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4. Who decides on the evaluation procedures?</td>
<td>The teacher ensures that the evaluation procedures are consistent with the objectives. Often the student has a choice of ways to demonstrate that he can perform as expected.</td>
<td>The teacher usually gives a test of his or her own design. Students often don't know what is expected of them. Testing procedures tend to be paper-and-pencil tests.</td>
</tr>
<tr>
<td>5. When does evaluation take place?</td>
<td>When the student indicates he is ready.</td>
<td>When the teacher is through teaching a unit of instruction.</td>
</tr>
<tr>
<td>6. When does the student move on to the next set of learning goals and objectives?</td>
<td>When the student has mastered the last set of objectives and goals. The student continues working on a set of goals or objectives until mastery is achieved.</td>
<td>When the last unit has been taught and the evaluation of students is completed. Students may have &quot;failed&quot; or &quot;passed&quot; the last unit at various levels of proficiency. Nevertheless, all students move on to new content.</td>
</tr>
</tbody>
</table>
the concept, they consist mainly of opinions, discussions, and descriptions. Very little research on performance-based or competency-based education has been reported.

Stanley Elam writing on the "state of the art" of performance-based teacher education identified some distinct advantages of the concept (Elam, 1971).

The student preparing to become a teacher must either be able to demonstrate his ability to promote desirable learning or exhibit behaviors known to promote it. He is held accountable, not for passing grades but for attaining a given level of competence in performing the essential tasks of teaching; the training institution is itself held accountable for producing able teachers (p. 3).

Elam (1971) identified other advantages such as the development of closer relationships with schools, teachers, and communities. The heavy emphasis upon performance in real settings involving pupils creates a situation where by necessity performance-based teacher education is field-centered with much of the performance-based preparation conducted in the field. Another advantage cited by Elam is the facilitation of self-pacing, individualization, personalization, independent study, and alternative means of instruction.

J. W. Maucher (AACTE, 1972) in his report to the 1972 AACTE annual meeting summarized the essential elements of performance-based teacher education.

... goals of instruction designed to prepare teachers, derived from analysis of teaching behavior, are stated publicly in advance of the instruction in terms of evidence regarding
the student's performance which will be accepted as indicative that the goals of teacher preparation have been attained. Second, instruction is guided and individualized as much as possible through systematic feedback from frequent assessment of the degree of attainment of the instructional assignments. Third, instructional assignments are considered completed only when the performance criteria are met. In addition, such instruction is usually more field-oriented than has been customary and decision making is more broadly based and more learner-influenced than in the past (p. 75).

Berry (1960) found in a study which compared the teaching effectiveness of beginning teachers who were provisionally certified (due to lack of certain required or prescribed preparation in education courses) with teachers who had met full certification requirements that the fully certified beginning teachers were consistently and significantly rated by competent observers to be more effective teachers. Borg (1969) tested the effectiveness of utilizing a mini-course as a vehicle to change specific teaching behaviors and found substantial gains were made on most of the behaviors measured. Biet, Frank, and Butts (1969) in a study which examined the relative effectiveness of a teacher education program related to the development of certain teaching competencies in the area of successful implementation of curriculum innovation found that both preservice and inservice participants were successful in developing knowledge of the processes of science and in changing instructional decision behavior. Ziebrath and Jones (1971) conducted a study which compared student achievement and attitudes. No significant difference was found between two groups in final achievement or in the amount
of gain in achievement between the beginning and end of the course. The attitudes and reactions of students who experienced the individualized instructional mode were found to be more positive than those of students who were instructed by the more traditional methods.

Benjamin Rosner (1972) in the "Report of the Committee on National Program Priorities in Teacher Education," which was a study developed and conducted under a contract with the United States Office of Education, reported considerable interest in the development of performance-based teacher education programs as a national priority. This "Committee" in its initial task developed a number of program proposals. These proposals were then submitted for review to a group of external reviewers.

The external reviewers represented a broad base; however, the group was small in number and as a group could not be considered representative of all teacher education related agencies. The reviewers represented community groups, school administrators and teachers, critics of teacher education, associations for professional groups in education, faculty groups in education and university faculty and administrators—both in education and the liberal arts.

The following items were rated as critical by 80 percent of the group responding as having potential utility in the redesign of teacher education programs (Rosner, 1972).

1. Establish performance-based teacher education programs.
2. Develop measuring "instruments" for knowledge, skills, and observation of teaching behaviors.

3. Personalize or individualize teacher training programs (p. 238).

A second group of items were rated as critical by at least 60 percent of the individuals responding (Rosner, 1972).

1. Establish a parity group for policy making.

2. Use training materials.

3. Develop a data-based feedback system for performance following training.

4. Establish training complexes, consortium training centers, parity-based centers.

5. Recruit students and adults from minority groups (p. 239).

Reviewers were asked to comment on the aspects of each proposal which they thought most useful for reform, and on the elements in each which they found less desirable. A few of the summaries and specific comments have been selected to be reported in this study and can be found on pages 241 through 244 of Rosner's (1972) report.

The statement of basic guidelines for education personnel development programs was endorsed by many reviewers. The statement included a field centered, personalized, and performance-based teacher education program; a broad base for decision making; evaluation data; and a research orientation. Some reviewers questioned certification at the "product level," i.e., teacher behaviors must result in specified learning outcomes for children.

The idea of a statewide network of centers, established on a cost-sharing basis, received both positive and negative comments.
The push to performance-based preparatory programs runs the danger of re-inventing the two-year normal school to train teachers. Lack of knowledge on the performance-based area should be fully recognized.

We do not have the know-how to prepare fully professionally trained people in performance-based settings.

It must be recognized that competence for teachers exists in a context.

Maucher in his report to the American Association of Colleges of Teacher Education in 1972 summarized what many have said are the major problems in the development of performance-based teacher education. In general he felt that:

1. Objectives not easily defined or measured may be neglected. A special effort in developing subjective, intangible goals of education is necessary so these vital aspects of education do not get lost in the shuffle.

2. Inadequate evaluation is currently being developed.

3. There is a problem of distribution and uses of power. As practicing teachers and the general public become more involved, it is inevitable that teacher education will undergo increasing stresses and strains.

Component Developments in Teacher Education. In the review of the literature one also finds the use of video-tape, micro-teaching, student self-evaluation, simulation and internships as integral parts of new program designs or models or as particularistic developments within the context of traditional teacher education programs.
The use of video-tape as a tool in teacher training programs has received multi-dimensional development in the past few years. This is largely due to the flexibility of video-tape as a media. Competency-based programs, as well as non competency-based programs, find uses for video-tape. Playback of cognitive information to large groups, small groups, or individuals, is only dependent upon what is called for in the teacher training program. Development of individual video-tapes to be utilized as support items to a teacher training program can be totally controlled by the developers, regardless of philosophical orientation. Specific training skills can be programmed for video-tape, video-tapes for observation purposes can be developed, or broad conceptual presentations which can be developed into an entire series can be programmed.

Micro-teaching, a teacher training tool which has increased in usage in the past few years, has enhanced its potential effectiveness via use of video-tape. Micro-teaching is designed for persons interested in both inservice and preservice teacher education. Micro-teaching is a technique developed at Stanford University during the mid 1960's as a part of its experimental teacher education program. Basically, micro-teaching is scaled-down teaching (5-20 minutes) to a small group of students on some topic or skill in teaching. This constitutes a real teaching encounter, not one which is simulated, only it is reduced in terms of students and time.
The purpose of micro-teaching is both to provide an opportunity for preservice or intern teachers to obtain a liberal amount of practice immediately upon their entrance into training, and for experienced teachers to refine and examine their own techniques, under optimum conditions and without endangering the learning of pupils.

With the advent of the portable video-tape recorder, a major breakthrough in supervision of micro-teaching has been achieved. After having a lesson taped, the teacher can sit down and objectively view his own performance. He can also view a model session which illustrates a particular teaching skill and compare its elements with his own performance. Like audio tapes, video-tapes can be used over and over again. Interesting segments of a lesson can be saved for demonstration purposes or can be erased and reused. Viewers can stop the tape and go over it as often as they wish. Under a controlled situation such as this, a teacher can use the experience of initially teaching a lesson to a group of students to a different group of students for comparative evaluation. The adaptability of the video-tape and the scaled-down nature of the micro-lesson make this teach-reteach pattern both feasible and economical.

Many of the model programs developed in recent years have included the use of video-tape as a tool for instruction. The Michigan State Model, The Teachers College Model, The Georgia Model, The University of Toledo Model, The University of Massachusetts
Model (Burdin and Lanzillotti, 1969) all incorporate the use of video-tape. A number of models have also gone beyond the general uses of video-tape and developed the concept of micro-teaching as an integral part of their teacher education programs. The Michigan State Model, The Syracuse Model, The Teachers College Model, The Northwest Regional Educational Laboratory Model, The Georgia Model and The Massachusetts Model (Burdin and Lanzillotti, 1969) all rely heavily on micro-teaching for the development of a large number of teaching skills in preservice components of their programs. The Massachusetts Model (Allen and Cooper, 1968) makes the most extensive use of micro-teaching. Heavy emphasis is placed on instructional skill development via micro-teaching in this model.

Borg (1969) testing the effectiveness of a mini-course which was developed as an instructional micro-teaching package found that in a pretest-posttest analysis that teachers had retained most of the skills acquired in the mini-course without need for a refresher course. Young and Young (1969) studied the effects of the use of micro-teaching by following the student into his classroom experience. The experimental group (micro-teaching) was found to have acquired a significantly greater number of selected, specific teaching behaviors and also utilized more flexibility and alternative teaching patterns in their instruction.

The use of simulated environments or simulated conditions received considerable emphasis in a number of the teacher training models reviewed. Although simulation cannot be considered as a
recent development, it appears as if performance-based instruction requires considerably more active environments even for cognitive skills, thus creating a demand for simulated activities. The review of the literature found the term simulation being used in a rather general sense. The Northwest Regional Educational Laboratory Model specifies that prospective teachers demonstrate competencies under two conditions: (1) under laboratory-simulated conditions prior to entry into the ongoing classroom situation, and (2) under classroom conditions. The Michigan State Model (Houston, 1968) states: "Simulated and live contact with elementary school-age children is planned (p. 31)." In this model clinical procedures are analyzed and practiced through both simulated and actual conditions. An example of the use of simulation can be seen quite clearly in the teacher analysis component of the Michigan State Model (Burdin and Lanzillotti, 1969).

This set of experiences provide various opportunities to test teaching skills in simulated or real classroom situations . . . each student participates in simulated classroom episodes . . . each student analyzes sets of visually recorded classroom sequences. This permits him to make his first translation of ideas from analysis into practice. Third, each student works with three to five pupils in micro-teaching experiences (p. 36).

Other teacher training models reviewed which incorporated the use of simulation were The Florida Model, The Syracuse Model, The Teachers College Model, The Toledo Model, The Massachusetts Model and The Pittsburg Model (Burdin and Lanzillotti, 1969).
Another area which is receiving increased emphasis in teacher education program development is that of student self-evaluation and feedback. The development of, and/or increased use of, videotape, micro-teaching and simulation in teacher training programs has perpetuated the use of and increased the need for feedback systems and student self-evaluation. The trend toward performance-based programs has also increased the use of feedback and student self-evaluation. Eight of the nine Office of Education Models included feedback systems with each model including student self-evaluation in varying degrees (Burdin and Lanzillotti, 1969).

The type of feedback and self-evaluation varied from generalized feelings and reactions to experiences to specific observation systems, such as Flanders Interaction Analysis (Smith, 1972), usually incorporated with the use of video-tapes and micro-teaching. A few studies were found relating to feedback and self-evaluation. Gibb and Gibb (1952) found that involving students in analyzing problems and deciding what to do about them produced students who were significantly superior in role flexibility and self-insight when compared with students taught by traditional lecture-discussion methods. Sandefur (1967) found that student teachers who were trained by means of video-taped feedback to maximize their use of indirect teaching methods made their pupils significantly more alert, responsible, confident, and self-initiating than pupils of conventionally-trained teachers. Davis and Smoot (1969) found that self-administered audio-taped feedback during student teaching made
students evoke more pupil-initiated ideas and also made them more flexibly diversified in the range of instructional tactics they use. Fuller, Pick, et al. (1969) in an experimental study found that feedback from personal assessment data and feedback from video-taped teaching episodes, when conducted in a personalized, open-ended manner, led to significantly improved open-mindedness, self-confidence, and career dedication of student teachers. This treatment also increased their tendency to use more indirect teaching techniques, encouraging more initiative and independence in their pupils. In a study where student teachers evaluated themselves from video-tapes with no external evaluation involved, Salomon and McDonald (1969) found little change in teaching behaviors. This finding implies that self-confrontation without external feedback may have limitations.

Considerable change has also been taking place in the field experience component of teacher education. The most notable trends in field experiences are the extension of the amount of time spent in the field and the expansion in number and kind of field experience opportunities. Prospective teachers are entering the environment of the school via the field experience earlier than they used to and in increasing numbers are entering into what is called an internship in the final phase of their teacher training program.

The term internship needs to be interpreted from a rather broad perspective. In some programs, such as the Georgia Model (Burdin and Lanzillotti, 1969), internship is defined as a ten-week field
experience provided near the end of the program. The Syracuse Model defines the internship as a full-year half-time internship. Then there are the model programs developed by the Northwest Regional Educational Laboratory (Schalock, 1968) and Massachusetts (Allen and Cooper, 1968), and Pittsburgh (Southworth, 1968), which do not describe the internship in terms of time but in terms of continuation until the specified degrees of mastery are achieved which have been chosen by advisor and student. The Michigan State Model (Houston, 1968) defines internship as a full-time academic year experience as the final phase of the prospective teacher's undergraduate program. Another description of the internship is that of a full-year paid teaching experience, usually included as the major part of the fifth year in a five-year program of teacher education. This definition is included in the Teachers College Model (Joyce, 1968), in the Florida Model (Burdin and Lanzillotti, 1969) portal school concept, and in the team teaching concept of the Toledo Model (Burdin and Lanzillotti, 1969).

It is apparent that internship has received a wide variety of interpretations as part of a prospective teacher's field experience. However, it is consistently offered as part of a graduated conceptualization-practice process. The programs reviewed here all placed considerable emphasis upon graduated experiences leading up to some form of practice teaching such as simulation, analysis of teaching, tutoring, and micro-teaching. In some cases practice teaching was replaced by the particularistic activities listed.
Student teaching as usually conceived was not a vehicle for graduated practice in the majority of programs reviewed. Tutoring, simulation, micro-teaching and analysis of teaching were stressed, along with a variety of internship proposals which completed the graduated practice concept and at the same time phased in the inservice component as part of the internship.

Field Oriented Experiences in Teacher Education

Graduated conceptualization-practice (Smith, 1972) defines much of the recent development in the field experience component of reform in teacher education programs today. When Conant (1963) made his study of teacher education, the one commonality he found was student teaching. Most authorities are in agreement that practice in functioning as a "real" teacher is a necessary component of any teacher education program. The students of teacher education programs have consistently rated their teaching experience as more valuable than other aspects of their teacher training program. Research on student teaching has also consistently substantiated the value of student teaching for prospective teachers in their teacher education programs. Woodring (1965) stated: "There is general agreement that a period of classroom observation and practice teaching under supervision is a desirable part of a teacher's preparation . . . (p. 107)."

The question which emerges is why a shift to graduated exercises leading up to practice teaching and in many cases on into the more involved internship experience? Although there is consistency in
the inclusion of practice teaching in teacher education programs and there is agreement regarding the importance of practice teaching in the actual school setting, the current situation in teacher education is one of remoteness of the prospective teacher from the realities of the classroom practice. The trend is apparent everywhere that prospective teachers must be brought into contact with reality through a variety of training experiences and increased actual encounters with children in the classroom. The complexity of the teaching-learning act has in recent years received increasing emphasis (Smith, 1972). Smith in Teachers for the Real World (1969) stated: "Teacher preparation reform must stress the ability to conceptualize and analyze, which is the essence of scholarship." The prospective teacher must be prepared not only to diagnose problems, but also to devise programs to remedy the situation, and finally to evaluate the success of these programs.

Student teaching as traditionally practiced in teacher education programs has not been able to fulfill the need for field-oriented experiences. The limited time factor of the student teaching experience has required this experience to become one of total immersion. Ryan (1968) identified the problem in most student teaching programs as one of the student teacher having to take over the entire teaching assignment. Jerome Bruner (I/D/E/A Occasional Paper, 1968) emphasized the fact that one cannot know the total picture of teaching including discipline problems, exhaustion, etc., when one is allowed to teach for only short periods of time.
J. D. Hoffman summarized the situation as follows (1968):

The student of professional education usually practices or applies his previous education in ten or fewer weeks, in a tension-producing environment, in someone else’s classroom. Practice means taking the fantastically broad, yet unrelated content of your culture (the total educated man) and applying it in the education of complex humans, using processes virtually unknown, yet incredibly important, that have been taught in behavioral information courses, methods courses, and foundation courses as principles, generalizations, and theories. Practice means translating everything previously learned in education sequences of the educated and professional man into specific teaching behaviors. It cannot be done. It isn't done (p. 68).

Hoffman suggested that what is actually happening in the ten-week period is that the student teacher is bringing to the teaching act behaviors learned from having been exposed to teachers for 25 hours per week for 36 weeks per year for 12 years—a total of nearly 11,000 hours.

Arthur Combs stated (1965):

Participation in teaching should be the occasion of learning, not of testing methods after learning is finished. Young teachers ought to be involved with students and teaching at every step of their training... The laboratory for the student teacher is interaction with people in all kinds of settings and particularly in educational ones. Long ago we learned that the gradual approach to teaching children to swim or breaking horses to the saddle was superior to throwing them in the water, or riding the bronco down. In similar fashion the learning methods needs to be a slow process of discovering solutions to problems and one’s own best ways of working. This calls for continuous opportunities to be involved in teaching activities rather than a traumatic plunge at the end of professional training (p. 104).
Andrews (1964) has characterized this general area of professional training as follows:

Nowhere are the vast extremes between excellence and inadequacy in student teaching more striking and more shocking than in the dimension of quality. Some student teachers have skillfully guided growth experience which leads them to an artistic and professionally effective performance in directing learning, while others have a continuously frustrating emotionally disturbing experience during which they receive little positive direction or assistance, and may in fact learn unwise and professionally unsound procedures (p. 38).

Yee (1967, 1968) studied the group dynamics of the student, the college supervisor and the cooperating teacher operating in student teaching. It was found that this group seldom approaches levels of social interaction and professional activities worthy of the purposes for practice teaching. It was felt that the chief causes for such superficiality in interpersonal relations may be attributed to the inadequate resources to handle the large number of candidates and the administration of practice teaching which force many students to work under unqualified and ill-prepared cooperating teachers and supervisors.

The concern for establishing a higher level of congruency between teacher education programs and the actual tasks of the classroom teacher have led to the development of earlier contact with children in teacher training programs to extended student teaching experiences often described as internships. As institutions develop these experiences and begin to refine them, the
graduated conceptualization-practice concept seems to be emerging (Smith, 1972).

The development of performance-based teacher education programs has contributed significantly to the reform of traditional student teaching into graduated field experiences. If a performance-based program adopts output criteria as its points of reference, there is little opportunity but to have a considerable amount of the teacher training program take place within a field setting. For a prospective teacher to demonstrate that he can bring about a particular learning outcome he must have access to children, preferably in a school setting. This access needs to be of a continuing nature over a relatively long period of time in order to demonstrate that meaningful outcomes on the part of pupils can be effected (Burdin and Reagan, 1971).

Elam in discussing performance-based teacher education stated (Elam, 1970):

The program is field centered. Because of the heavy emphasis upon performance in the teacher role and assessment in real settings involving pupils, much of performance-based preparation is conducted in the field (p. 4).

Although performance-based teacher education programs have contributed significantly to the development of more field-centered teacher training experiences, the call for variety in field experience as well as for more experience in the field has come from many sources and permeates a wide variety of teacher education programs, a number of which are not performance-based.
The 1968 I/D/E/A-sponsored Symposium of the Training of Teachers for Elementary Schools made the following recommendation (I/D/E/A Occasional Paper, 1968):

Teacher trainees should be scheduled into laboratory courses built around directed observation beginning in their first year of college and should have many hours of observation in different types of special situations before embarking on a program of practice teaching (p. 16).

Following its Symposium on the Training of Teachers for Elementary Schools, I/D/E/A invited a group of high school teachers from all parts of the country to a corresponding Symposium on the Training of Teachers for Secondary Schools. J. Lloyd Trump, Associate Secretary of the National Association of Secondary School Principals, served as chairman for this symposium. The major change recommended for teacher training programs by this group was earlier exposure to the actual teaching situation during teacher training (I/D/E/A Occasional Paper, 1970).

The conferees generally agreed that student teaching was the most valuable part of their preparation for teaching. However, they had a number of criticisms and suggestions for this area of teacher education. They stated (I/D/E/A Occasional Paper, 1972):

A realistic approach to practice teaching should begin at least by the sophomore year through observation, micro-teaching, or other techniques. Even more ideal, the trainee should come face to face with practice teaching in his freshman year. From that point on, there should be exposure in increasing doses through graduation (p. 14).
The recommendations to provide earlier exposure to the school and the classroom environment for the prospective teacher have been acted upon by a number of teacher education programs. Each of the nine OEO-funded comprehensive models for preparing elementary teachers reviewed in this chapter provided the opportunity for the prospective teacher to become involved in the actual school setting early in his teacher education program. The North Dakota program (Insights, 1971), the University of Denver program (Long-Range Planning Committee, 1972), the Temple University Program (AACTE, 1972), the Austin College program (AACTE, 1972), the College of Saint Elizabeth (AACTE, 1972), Cardinal Stritch College (AACTE, 1972) and many other teacher education programs emphasize and encourage students to become involved in some form of field experience early in their educational program.

In a national study conducted in January, 1972, on teacher education programs Carlin and Yevak (1972) reported the following:

Efforts are being made in many of the programs to have the candidates actually work with youth and children before acceptance for candidacy. It is hoped that 50 to 100 hours of contact with children or youth in camps, church setting, scouting, schools, or nursery schools would be an experience defining the candidate's goal. In programs requiring such an experience, the applicants are requested to furnish evidence of success and recommendations from their field experience supervisor (p. 3).

Following the early exposure of the prospective teacher to the teaching situation, many of the teacher education programs reviewed had sequenced the field experience into some form of graduated
practice. The New York State report on teacher education made the following recommendation regarding practice in teaching (Fantini, 1972):

This model shifts the bulk of teacher training from campus to school. Teacher education students begin work with children as freshmen, increasing exposure through the years as assistant teacher, associate teacher, and, finally, as full-year teacher-student. Professional work is integrated around the clinical experiences of the teaching candidate (p. 478).

In the review of the literature a number of teacher education programs which incorporated sequenced-oriented field experiences were found. A few of these programs have been selected to be reported in this study.

The "Center for Teaching and Learning" of the University of North Dakota has the student and his advisor plan field experiences from the following types of experience (Insights, 1971):

1. Classroom observation.

2. Tutoring and working with small groups of children.

3. Teacher Associate Experiences--at this level the student would be ready to accept more responsibility for the planning and execution of a variety of learning experiences for children in an elementary school classroom.

4. Extended field experience--at this level the student would work in a classroom full time for an extended period of time assuming more responsibility for the planning of the total experience in the classroom.

5. Community experiences other than school classrooms (p. 8).

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The teacher education program for the preparation of mathematics and science teachers at Ohio State University has students teaching at elementary, junior high, and senior high levels during four or five quarter sequences (AACTE, 1972). During the junior year emphasis is on the individual student: first, in a one-to-one tutorial setting, then as a teacher in small-group activities, and finally as a class instructor. During the two-quarter senior sequence focus is on the socio-economic setting and the school. Initially there is a half-day teaching assignment divided in time between two schools in contrasting contexts (inner city, suburban); then there is a full-day teaching assignment in a single school, usually one from the past quarter experience.

Edgecliff College, Cincinnati, Ohio (AACTE, 1972), includes in its teacher education program 20 hours of directed observation and participation during each of the first three years of training and a final professional year. The Creighton University field experience component is described as (AACTE, 1972):

... concerned with the need for more practicality in teacher education courses and for earlier experiences with public school pupils, the university's cooperative program begins with tutorial work in a nonschool setting, progresses to service as teacher aides in psychology and methods classes, and ends in the complete classroom teaching assignment; students spend over 700 clock hours in direct association with children (p. 18).

In the Columbia Model (Burdin and Lanzillotti, 1969), Table 8, the prospective teacher begins having experiences in school settings in the first weeks of the student's teacher training program and
<table>
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<th>Phase</th>
<th>Type</th>
<th>Purpose</th>
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<tbody>
<tr>
<td>One</td>
<td>Experiencing the school</td>
<td>A four- to eight-week apprenticeship to a public school</td>
</tr>
<tr>
<td>Two</td>
<td>Small-group and tutorial teaching (preferably in candidate-operated program)</td>
<td>10 to 20 weeks of experimenting with teaching strategies</td>
</tr>
<tr>
<td>Three</td>
<td>Unit-experimentation in inquiry school</td>
<td>Group experiments in teaching units taking four to eight weeks</td>
</tr>
<tr>
<td>Four</td>
<td>Experience in curriculum modes in inquiry school</td>
<td>Observation-participation experience in a variety of ways of teaching</td>
</tr>
<tr>
<td>Five</td>
<td>Carrying on an educational program</td>
<td>Inquiry groups develop and carry on a candidate-operated school program</td>
</tr>
<tr>
<td>Six</td>
<td>Internship</td>
<td>Paid teaching, preferably in teams derived from inquiry groups</td>
</tr>
</tbody>
</table>
continues in the experience-oriented environment of the contact laboratory into the first year of paid teaching.

The final phase of the sequence-oriented or graduated conceptualization-practice field experience programs is usually an extended preservice teaching experience or an internship. The typical 10- to 14-week student teaching experience was included in only a few of the programs reviewed for this study. The extended preservice teaching experience varied from two quarters of teaching to five quarters of teaching in a four-year teacher education program; a fourth year of full-time teaching (unpaid internship); a paid internship consisting of a full year of teaching either at the fourth or fifth year of the student's teacher preparation program; or a preservice teaching experience based on performance-based criterion with length determined by mastery of the established performances to be demonstrated.

From a historical context the past fifteen years show an interesting development in the area of extended preservice teaching experiences. Harap (1961) in a report of the teaching internship for the United States Office of Education, which was completed in 1961, reviewed forty-eight programs of internship teaching. The internships studied were described as a period of full-time teaching usually consisting of two semesters. The majority of the programs were designed for graduates of liberal arts colleges. The student was salaried and, in half of the programs reviewed, received no credit for the teaching segment. According to Shalpin and Powell
In a report from the 1963 Columbus Conference, there were two basic types of internships which were in existence at that time: (1) the certification patterns in certain states which already required five years of preparation, and (2) the master's degree program.

Smith (1969) writing about the internship defined the intern as "one who enters professional practice under supervision after a period of training in the knowledge and techniques of his profession (p. 102)." According to Smith there are no true intern programs in teaching. He feels we have a few pseudo-programs such as the MAT (Master of Arts in Teaching) programs which require little, if any, prior preparation in the field of teaching and actually are apprenticeships not internships. Smith called for a genuine internship (Smith, 1969):

A period of residence in a school system preceded by a well-defined, systematic program of training in the knowledge and skills of teaching. . . . the intern should gradually assume a full teaching schedule, step-by-step over a period of a year, starting with a very light teaching load (p. 103).

A review of present-day teacher education programs finds the extended preservice teaching experience continuing in some programs just as it was initiated in the early 1960's, while a number of teacher education programs have begun structures similar to internships at the undergraduate level. All of the programs reviewed included the extended experience as a credit component of the total teacher education program. The basic change in the structure was that of providing more short-term experiences in the field during...
the early phases of the student's teacher education program and the internship or extended preservice teaching experience being a final phase component of the field experience. Table 9 presents a listing of some of the teacher education programs reviewed for this study which included extended preservice components.

In discussing the strengths of extended preservice teaching experiences Hoffman (1968) stated: "Nothing in present-day teacher education programs stands a ghost of a chance of changing teaching behavior to a more professional stance—except structures like internships (p. 71)." Hoffman recommended that for full development of teaching behaviors, including perceptual skills necessary for situation analysis and autonomy and responsibility in decision making, an internship of one year in length following introductory field experiences is necessary. Ryerson (1967) concluded from a study on the internship teacher that internship programs promise to be more effective than any other procedure in developing the many high level skills required of teachers today. The evaluation of the Michigan State University Experimental Internship (MSU, 1969) found:

1. That the internship provided many opportunities for the transfer of formal instruction in teaching strategies to work in the classroom.

2. That the internship made it possible for prospective teachers to take advantage of non-programmed activities.

3. That the internship provided the prospective teacher with more experiences
<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>EXTENDED PRESERVICE</th>
<th>DESCRIPTION</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida State Un.</td>
<td>Full year experience</td>
<td>M. A. Program (graduated-experience model)</td>
<td>Sowards, 1968</td>
</tr>
<tr>
<td>University of Massachusetts</td>
<td>Completion of performance criteria</td>
<td>B. S. or Fifth year program (graduated-experience model)</td>
<td>Allan and Cooper, 1969</td>
</tr>
<tr>
<td>Michigan State University</td>
<td>Intern Teacher Specialization</td>
<td>B. S. Level (graduated-experience model)</td>
<td>Houston, 1968</td>
</tr>
<tr>
<td>University of Pittsburg</td>
<td>Intern</td>
<td>B. A. Level (graduated-experience model)</td>
<td>Southworth, 1968</td>
</tr>
<tr>
<td>Northwest Regional Educational Laboratory Model</td>
<td>Extended field experience (Indeterminate time, since the preservice teacher must demonstrate performance at specified criterion levels)</td>
<td>B. S. Level or Fifth year (graduated-experience model)</td>
<td>Schalock, 1968</td>
</tr>
</tbody>
</table>
Table 9 (continued)

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>EXTENDED PRESERVICE</th>
<th>DESCRIPTION</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syracuse University</td>
<td>Intern</td>
<td>Fifth year program (graduated-experience model)</td>
<td>Hough, 1968</td>
</tr>
<tr>
<td>Teachers College</td>
<td>Intern (paid teaching)</td>
<td>M. A. Level (graduated-experience model)</td>
<td>Joyce, 1968</td>
</tr>
<tr>
<td>Columbia Un.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Toledo</td>
<td>Extended Field Expe-</td>
<td>B. S. Level (graduated-experience model)</td>
<td>Dickson, 1968</td>
</tr>
<tr>
<td>rience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Hills State College</td>
<td>Two year field expe-</td>
<td>B. S. Level Participants complete two years of college and go out into the field for two years.</td>
<td>AACTE, 1972</td>
</tr>
<tr>
<td></td>
<td>rience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Denver</td>
<td>Up to two quarters</td>
<td>B. S. Level</td>
<td>Long-Range Planning Committee, 1972</td>
</tr>
<tr>
<td>University of North Dakota</td>
<td>Extended Field Expe-</td>
<td>Phase four of a graduated-experience process</td>
<td>Insights, 1972</td>
</tr>
<tr>
<td></td>
<td>rience</td>
<td>B. S. Level</td>
<td></td>
</tr>
<tr>
<td>Temple University</td>
<td>Intern</td>
<td>M. A. Level</td>
<td>AACTE, 1972</td>
</tr>
<tr>
<td>INSTITUTION</td>
<td>EXTENDED PRESERVICE TEACHING/INTERNSHIP</td>
<td>DESCRIPTION</td>
<td>REFERENCE</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Austin College</td>
<td>Contract outlining competencies to be demonstrated—length open</td>
<td>Master of Arts Level (graduated-experience model)</td>
<td>AACTE, 1972</td>
</tr>
<tr>
<td>University of Colorado</td>
<td>Intern Performance-based, field-oriented</td>
<td>B. S. Level</td>
<td>AACTE, 1972</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M. A. Level</td>
<td></td>
</tr>
<tr>
<td>Edgecliff College</td>
<td>Professional-Year Extended field experience</td>
<td>B. S. Level</td>
<td>AACTE, 1972</td>
</tr>
<tr>
<td>Moorhead State College</td>
<td>Professional Year</td>
<td>B. S. Level</td>
<td>The Bulletin, 1973</td>
</tr>
<tr>
<td>Mars Hill College</td>
<td>Intern—during junior year</td>
<td>B. S. Level</td>
<td>AACTE, 1972</td>
</tr>
<tr>
<td>Seattle Pacific College</td>
<td>Intern—paid</td>
<td>Full year of teaching required for initial certification</td>
<td>AACTE, 1972</td>
</tr>
<tr>
<td>Ohio State University</td>
<td>Four-Five Quarter sequence in junior and senior year</td>
<td>B. S. Level</td>
<td>AACTE, 1972</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(graduated-experience model)</td>
<td></td>
</tr>
</tbody>
</table>
with children in real problem solving situations.

4. That the intern felt he was given more time, that he had more confidence, more experience, and more desire to become a professional teacher as a result of the internship.

5. That the intern felt he was given more opportunity to get experience completely on his own to make decisions and set policy.

6. That the internship provided more help for the prospective teacher.

7. That professors of education found that the internship developed prospective teachers who felt that the problems in teaching merited serious study (p. 3).

Summary

It is apparent from the review of the literature that the effectiveness of teacher education programs is currently under critical examination. The major focus in the review of teacher education programs centers around the congruency of the preservice training experiences and the effectiveness of the teacher in the field. To resolve this problem, a number of authorities in the field have recommended changes in the field-oriented experience component of teacher education programs.

Concurrent with recommendations to bring about change in the field-oriented experiences of teacher training programs has been the call for total reform of teacher education. The inter-relationships and inter-dependency of:

1. Teacher effectiveness and teacher education.
2. A theoretical basis from which to design research and to develop programs.

3. Preservice and inservice teacher education as related to change strategies.

4. The elementary and secondary schools to teacher education programs.

The complexity of implementation of such total change in teacher education, the realization of the need for the involvement of the consumer of the product of teacher education training programs in program development and implementation, and the need for a catalytic approach to the effective use of resources in teacher training programs has increased the need for interdependent relationships in teacher education programs. Within the context of each of the new models of teacher preparation is the centralizing concept of the field-oriented experience.

The field experience is presented in a variety of formats and time modules. It is consistently presented as a graduated conceptualization-practice experience. The interdependency of the conceptualization of learning in teacher education through course work, simulation and field experience becomes paramount. It becomes literally impossible and totally impractical to isolate the one-week tutoring experience or the extended practice teaching experience from the other study components of the teacher education program. The most important aspect of the inter-relationships of all other components of the teacher education program to the field experience is that it is in the final phases of the field experience that competency in teaching is demonstrated. Following the sequential
orientation of the graduated conceptualization-practice concept, structures similar to the internship complete the field experience. The rationale for and descriptions of such structures were found in the literature. However, research related to the extended field experience or internship was too limited to contribute significantly to the present study.

The writer found several reviews of related research in teacher education supporting the dearth of investigation into the areas of extended field experiences and the internship experience. Smith (1972) in the book Research in Teacher Education reported finding one experimental study (The Sandefur Study) and two survey-type studies, neither of which related directly to the study of teacher effectiveness. Smith (1972) stated:

If research findings are to be of value in teacher education, they must be able to show differences between particular kinds of teacher education programs. Indeed, if research is really to be of value, it must ultimately show relationships between particular treatments in particular education programs and subsequent teacher performances (p. 11).

According to Smith there is a high probability that studies of this nature often remain unpublished. He feels the pressure to use such research locally, and not to publish is very great. Smith (1972) stated:

If findings show that the products of the institution seem to be satisfactory in a number of ways, it is argued that no one else would be interested, while if they are unsatisfactory, it is argued that the institution ought not to be publicly embarrassed (p. 151).
A number of other problems are apparent in the area of research related to successful teaching in the field. If the candidate's preparation has prepared him for team teaching, individualized instruction, nongradedness, open education, etc., and he enters teaching in the environment of the customary self-contained classroom, it becomes difficult to establish a causal relationship between teacher effectiveness and teacher education programs (Smith, 1972). There is also the problem of uniformity and diversity from state to state in the education programs designed for our youth and in teacher education programs. Such diversity if variant enough creates a considerable research problem. The problem of intervening variables in research related to teacher effectiveness in the field is considerable.

These problems have served as a major deterrent to research related to the extended field experience and to internship programs. Despite all the difficulties, research related to teacher effectiveness needs to be done. Only after a number of such studies have been conducted over a significant period of time will teacher education programs be able to show relationships between particular treatments in teacher training programs and subsequent teacher performance.

It was the purpose of this study to conduct such a research project. Recognizing the problem of considerable intervening variance, the researcher attempted to control the variance as finitely as was possible and then test the difference in teacher
effectiveness between teachers who had experienced two different treatments of field experiences in their teacher education programs. The major problem of the study was to investigate whether or not graduates from a teacher education program where the student teaching component consists of a 10 to 14-week period of time were as effective in their first years of teaching as graduates of teacher education programs where the full-year internship teaching experience was provided.

Chapter Three defines the processes and procedures utilized in narrowing and controlling for the amount of intervening variability in the study and describes the procedures utilized in conducting the study.
CHAPTER III

Design and Methodology

This chapter presents the design of the study and describes the procedures used to analyze the data. The chapter is organized as follows:

1. Review of the Problem
2. The Design
3. Sample Selection
4. Instrumentation
5. The Data Analysis

Review of the Problem

This study explored the impact of length of student teaching experience upon selected outcome variables. The outcome variables were beginning teacher effectiveness, effectiveness of teacher training experience in student teaching, and differences in teacher or education career orientation.

The length of student teaching experience was partitioned into the conventional one-quarter (12 weeks) period and an experimental one-year internship. The experimental one-year internship was equivalent to three quarters of student teaching (36 weeks) and included the additional partition of a one-year full-day student teaching group and the one-year half-day student teaching group.

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Subjects within the study were further partitioned by years of professional experience.

The first objective was to determine the impact of length of student teaching upon effectiveness in the first years of teaching. The second objective was to investigate how well the subjects rated the training they received during their student teaching experience. The subjects were asked to rate their student teaching experience on the same criteria used by their respective principal to rate their effectiveness as a beginning teacher. The third objective was to assess the difference between the one-year interns and the one-quarter student teaching group in the desire to make teaching or education a career.

The following hypotheses were tested:

Hypothesis 1 Teacher education graduates who student taught full-days for one year will receive higher administrator ratings of teacher effectiveness from their respective principals than will teacher education graduates who student taught full-days for one quarter.

Hypothesis 2 Teacher education graduates who student taught half-days for one year will receive higher administrator ratings of teacher effectiveness from their respective principals than will teacher education graduates who student taught full-days for one quarter.

Hypothesis 3 Teacher education graduates who student taught full-days for one year will rate the training they received in student teaching as more effective according to the specific areas they are being
Hypothesis 2. Teacher education graduates who student taught half-days for one year will rate the training they received in student teaching as more effective according to the specific areas they are being rated on than will teacher education graduates who student taught full-days for one quarter.

Hypothesis 3. Teacher education graduates who student taught full-days for one year are more teacher or education career oriented than teacher education graduates who student taught full-days for one quarter.

Hypothesis 3' Teacher education graduates who student taught half-days for one year are more teacher or education career oriented than teacher education graduates who student taught full-days for one quarter.

Design

This study was conducted as an ex post facto field study. The general design was that of partitioning four groups of student teachers according to length of student teaching experiences and years of professional experience. The group factors are shown in figure 9.

The independent variables in this study were the length of student teaching experience and years of professional experience in teaching. The dependent variables for this study were the administrator ratings of teacher effectiveness, the beginning teacher ratings of training effectiveness of their student teaching program, and the teacher or education career orientation rating.
from beginning teachers.

<table>
<thead>
<tr>
<th>Group</th>
<th>Size</th>
<th>Student Teaching Experience</th>
<th>Years of Teaching</th>
<th>Credit Hours Waived</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10</td>
<td>one quarter full-day</td>
<td>one year</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
<td>one year full-day</td>
<td>one year</td>
<td>32</td>
</tr>
<tr>
<td>C</td>
<td>12</td>
<td>one quarter full-day</td>
<td>two years</td>
<td>0</td>
</tr>
<tr>
<td>D</td>
<td>12</td>
<td>one year half-day</td>
<td>two years</td>
<td>16</td>
</tr>
</tbody>
</table>

**FIGURE 9**

**DESCRIPTION OF SAMPLE**

The Group A students were matched with the Group B students and the Group C students were matched with the Group D students by accumulated grade point average as of the end of their junior year in college, their score on the Institute for Personality and Ability Testing Sixteen Personality Factor Test (IPAT 16 PF), experience with children previous to student teaching, and by age and sex. This study covered a two-year period with different experimental manipulations of the independent variables. The relationship between hypothesis number, group identification, outcome measures, and statistical test are noted in figure 10.

The administrator ratings of teacher effectiveness for the full-day one-year student teaching group were compared with the
administrator ratings of teacher effectiveness of the one-quarter student teaching group for Hypothesis 1. The administrator ratings of teacher effectiveness for the half-day one-year student teaching group were compared with administrator ratings of teacher effectiveness of the one-quarter student teaching group for Hypothesis 2.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Groups</th>
<th>Outcome Measures</th>
<th>Statistical Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1</td>
<td>B vs A</td>
<td>Administrator Rating of Teacher Effectiveness</td>
<td>Correlated t</td>
</tr>
<tr>
<td>Hypothesis 2</td>
<td>D vs C</td>
<td>Administrator Rating of Teacher Effectiveness</td>
<td>Correlated t</td>
</tr>
<tr>
<td>Hypothesis 3</td>
<td>B vs A</td>
<td>Teacher Ratings of Training Effectiveness of Student Teaching Program</td>
<td>Correlated t</td>
</tr>
<tr>
<td>Hypothesis 3</td>
<td>D vs C</td>
<td>Teacher Ratings of Training Effectiveness of Student Teaching Program</td>
<td>Correlated t</td>
</tr>
<tr>
<td>Hypothesis 4</td>
<td>B vs A</td>
<td>Teacher or Education Career Orientation Rating</td>
<td>Correlated t</td>
</tr>
<tr>
<td>Hypothesis 4</td>
<td>D vs C</td>
<td>Teacher or Education Career Orientation Rating</td>
<td>Correlated t</td>
</tr>
</tbody>
</table>

FIGURE 10

DESIGN SUMMARY
The teacher ratings of training effectiveness of student teaching programs for the full-day one-year student teaching group were compared with the teacher ratings of training effectiveness of student teacher programs of the one-quarter student teaching group for Hypothesis 2. The teacher ratings of training effectiveness of student teaching programs for the half-day one-year student teaching group were compared with the teacher ratings of training effectiveness of student teacher programs of the one-quarter student teaching group for Hypothesis 2.

The teacher or education career orientation ratings of the full-day one-year student teaching group were compared with the teacher education career orientation ratings of the one-quarter student teaching group for Hypothesis 3. The teacher or education career orientation ratings of the half-day one-year student teaching group were compared with the teacher or education career orientation ratings of the one-quarter student teaching group for Hypothesis 3.

Sample Selection

The experimental student teaching groups (B and D) were elementary education interns who student taught for one year as part of an experimental program at St. Cloud State College, St. Cloud, Minnesota, during the academic years of 1969-70 and 1970-71. The groups were composed of twelve interns (Group D) in 1969-70 and ten interns (Group B) in 1970-71 who were under contract to teach as of September 1, 1971. The total number of one-year student teaching interns was twenty-two. The investigator obtained complete
response data for this study from all twenty-two interns.

The control group of student teachers was drawn from the population of all elementary education graduates who graduated from St. Cloud State College during the academic years of 1969-70 and 1970-71, and who were under contract to teach as of September 1, 1971. The records of 734 former students were initially reviewed from which 205 subjects were drawn based on the initial matching criteria. The investigator matched the control group with the experimental one-year interns on criteria considered relevant to the study.

The selection criteria for the one-year interns, which were applied prior to their being accepted and enrolled in the intern program, were as follows (Jones, 1971):

1. Could the student's college program be modified to fit credit hour needs of the student for graduation?

2. Student statement of why he wanted to enter the one year of student teaching internship program. A level of commitment was of primary concern.

3. An interview with Dr. Jack Jones and an interview with Dr. Owen Hagen of the School of Education, St. Cloud State College, was required. Subjects were ranked following the interview. High rank was given to subjects who could relax and respond freely to questions, who seemed secure with themselves and their commitment intent (see no. 2), and who were more outgoing.

4. An autobiography was required. Experience in working with children was the major factor sought from this criterion (Boy Scouts, Girl Scouts, 4-H, youth work, etc.).
Program modification in regard to credit hours needed for graduation was assumed to have been satisfied for all student teaching candidates for each year in the study. Thus, matching of subjects on the first criterion for selection was not required. It should be noted, however, that this first criterion was the major factor limiting the available candidates for the one-year internship program at the time of selection (Jones, 1971).

The second and third criteria for selection into the one-year internship program relate primarily to personality characteristics. To match control and experimental groups the IPAT 16 PF inventory was administered to both the one-quarter student teaching subjects and the one-year student teaching subjects. The personality profiles from the IPAT 16 PF inventory were then analyzed both visually and by deviation scores to secure the least difference possible in variance of personality characteristics between the one-year and one-quarter student teachers matched for this study. One-quarter student teaching subjects were selected whose personality characteristics as represented on the IPAT 16 PF profile most closely matched the profile of a matched one-year student teaching subject.

The fourth criterion focused primarily on previous experience with children. Control group students were matched with the experimental group students according to autobiographical data describing experience with children prior to student teaching. These data were obtained from the subjects' student teaching application files.
The sample control group subjects were initially selected on a random basis from the elementary education students who student taught during the same year as the one-year student teaching group. Final selection was based upon a match with a one-year intern. Two hundred and five potential control group subjects were compared with the twenty-two experimental group subjects on the basis of the criteria of grade point average, age, sex, and previous experience with children prior to student teaching.

As an additional control of variance, experimental and control group subjects were paired as closely as possible on quarter-hours of credit earned during or after the first year of teaching and also on involvement in inservice education programs during or after their first year of teaching.

From the group of potential control subjects who had matching grade point averages, and who could also be matched by age, sex, and previous experience with the full-year student teaching group subjects, seventy-seven subjects were selected. A random numbering system was utilized in selection of the seventy-seven. At this point in the study the seventy-seven one-quarter, the twenty-two one-year student teaching subjects, and their respective principals were mailed the instruments (Appendixes A, B, C, and D) and were asked to participate in the study. One hundred ninety-eight packets of data collection instruments were mailed. All of the one-year student teaching subjects and their respective principals, a total of forty-four, completed the data collection requirements for the
study (100%). One hundred forty-three of the one-quarter student teaching subjects and their respective principals (a total of 154 were asked to complete the data) completed the data collection requirements for the study (93%).

Personality factor profiles were then developed from the IPAT 16 PF data collected from each student. The profile of a control group member was then matched as closely as possible with an experimental subject. Dr. Peter Johnson, Dr. Lowell Mortrude, and Ms. Mary Boltuck of the School of Education, St. Cloud State College, assisted the investigator in the analysis of the IPAT 16 PF profiles and the process of matching profiles of subjects. Dr. Johnson and Dr. Mortrude both had experience in utilization of the IPAT 16 PF instrument and profiles in teacher education research related to the personality characteristics of teachers. Mary Boltuck is a psychologist who served as consultant in the analysis of the IPAT 16 PF profiles for this study.

The final step in the matching process was the matching of subjects on quarter-hours of credit and involvement in inservice education programs during or after their first year of teaching. The information for this step in the matching process was obtained from the subject at the time of the data collection. Although it was impossible to match perfectly in this area, it was found that very little difference between subjects existed for this category in the final matching. With the final step in the matching process completed, twenty-two control group members were selected for the data analysis.
The total number of subjects for the study was forty-four. The number in the experimental one-year student teaching group was twenty-two, and for the control group the number was also twenty-two. The control and experimental subjects had been matched on all criteria for the study. The step-by-step procedure of the matching process is outlined below. These steps were essentially sequential in development, although it is to be noted that as the study progressed, a minimal amount of overlap in the procedures did occur.

**Steps in the Matching Process**

1. Secured names of interns for the 1969-70 and 1970-71 academic years (one-year student teaching group) from School of Education Office, St. Cloud State College.

2. Determined which interns had secured teaching contracts from the Placement Bureau records, St. Cloud State College.

3. Secured the names of students who had student taught for one quarter during the 1969-70 and 1970-71 academic years from the School of Education Office, St. Cloud State College.

4. Reviewed records of interns for the 1969-70 and 1970-71 academic years. (See item no. 1.) Pulled the following data and recorded.
   a. age--from student teaching file--Student Teaching Office.
   c. sex--from student teaching file--Student Teaching Office.
   d. experience with children prior to student teaching--from student file--Student Teaching Office.
5. Reviewed records of student teachers (one quarter) for the 1969-70 and 1970-71 academic years. (See item 3) Pulled the following data and recorded.

a. age--from student teaching file--Student Teaching Office.
c. sex--from student teaching file--Student Teaching Office.
d. experience with children prior to student teaching--from student file--Student Teaching Office.

6. Set up a numbering system by which to identify candidates for the remainder of the data collection process, as well as for the data analysis process.

a. 1969-70 interns (one year of student teaching) assigned numbers 1-15.
c. 1970-71 interns (one year of student teaching) assigned numbers 21-36.
d. 1970-71 one-quarter student teachers assigned numbers 501-878.

7. Established recording procedures and criteria for initial matching process.

a. age-range--one year + or - (example: a student age 23 could be matched with a student 22, 23, or 24 years of age).
b. G.P.A.--At St. Cloud State College an A is equal to a number rating of four (4). An interval scaling of .25 was set up for the matching process. (3.25-3.49, 3.5-3.74) (example: a student with a G.P.A. of 3.39 could be matched with any student who had a G.P.A. within the 3.25-3.49 range).
8. Matched candidates—see criteria in items no. 4 and no. 5.


All of the above could be matched on the criteria in item no. 4 when utilizing the age range and G.P.A. intervals outlined in item no. 7.

9. Secured selected subjects' teaching addresses from Placement Bureau Files, St. Cloud State College.

10. Secured names and school addresses of selected subjects' principals from State Department of Education, Education Directory (Minnesota, Wisconsin, Maine, and South Dakota).

11. Used random selection process to narrow matched subject (one-quarter student teachers) group to a maximum ratio of five to one.

Five one-quarter student teachers matched with one intern.

A college student was given the number listing and instructed to select a number such as 3, 5, 7, 9, etc., and then select five numbers from the one-quarter student teaching subjects by using a counting process.


a. printing
b. addressing
c. collating
d. color coding
e. envelope coding
13. Instruments mailed.

14. Data returned.

15. Matched subjects on quarter-hours of credit earned since B. S. Degree and on hours of inservice education programs participated in.

16. Matched subjects on 16 PF profiles—used total Sten Score and profile.

One intern—matched with one one-quarter student teacher.

(One-quarter student teacher profile and Sten Score which was most congruent with the profile and Sten Score of the Intern with which the one-quarter student teacher had been matched on the previous criteria. Assistance given the researcher during this step by Dr. Peter Johnson, Dr. Lowell Mortrude, and Ms. Mary Boltuck. When more than one one-quarter student teacher profile was highly congruent, a random selection process was utilized.

17. Conducted data analysis.

The data collection calendar is presented below:


2. February, 1972—Telephone request for returns followed one month after initial mail-out (85% return).

3. March, 1972—Second mail-out to all those who had not responded to first mailing. An additional letter was added to material requesting returns (see Appendix E) (91% return).

4. April, 1972—Telephone request for returns.

5. April, 1972—Third mail-out to those who indicated they had misplaced instruments.
6. May, 1972—Telephone request for returns to ten subjects (93% return).

**Instrumentation**

In this study twelve types of data were collected. Data types and collection methods for this study are shown in Table 10.

The Administrator Rating of Teacher Effectiveness instrument (Appendix A), the Teacher Rating of Training Effectiveness instrument (Appendix B), and the Teacher or Education Career Orientation Questionnaire (Appendix C) were developed by the investigator for use in this study. The Administrator Rating of Teacher Effectiveness instrument and the Teacher Rating of Training Effectiveness instrument contain identical item content and rating scales. The wording of the items for each instrument is different only in the context of administrators rating teachers and teachers rating their teacher education programs. The Administrator Rating of Teacher Effectiveness instrument and the Teacher Rating of Training Effectiveness instrument were developed following a review of various evaluation forms used by college and university student teaching departments and those used by public school districts. The Teacher or Career Education Orientation questionnaire was developed by the investigator with the assistance of five public school personnel directors from school districts within the Genesee Intermediate District, Flint, Michigan.

For the Administrator Rating of Teacher Effectiveness instrument, the Teacher Rating of Training Effectiveness instrument, and
Table 10
Data Collection

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Source of Data</th>
<th>Respondent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Administrator</td>
<td>1. The Teacher's Building Principal</td>
<td></td>
</tr>
<tr>
<td>Rating of Teacher Effectiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Teacher Rating of Training Effectiveness of Student Teaching Program</td>
<td>2. The Teacher</td>
<td></td>
</tr>
<tr>
<td>3. Teacher or Education Career Orientation Rating</td>
<td>3. The Teacher</td>
<td></td>
</tr>
<tr>
<td><strong>Independent Variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Type of Student Teaching Experience</td>
<td>1. From the School of Education, St. Cloud State College, St. Cloud, Minnesota</td>
<td></td>
</tr>
<tr>
<td>2. Years of Teaching Experience</td>
<td>2. The Teacher</td>
<td></td>
</tr>
<tr>
<td><strong>Data Base for Matching</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Grade Point Average</td>
<td>1. From the School of Education, St. Cloud State College, St. Cloud, Minnesota</td>
<td></td>
</tr>
<tr>
<td>2. Age</td>
<td>2. From the School of Education, St. Cloud State College, St. Cloud, Minnesota</td>
<td></td>
</tr>
<tr>
<td>3. Sex</td>
<td>3. From the School of Education, St. Cloud State College, St. Cloud, Minnesota</td>
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</tr>
</tbody>
</table>
### Table 10 (continued)

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Source of Data</th>
<th>Respondent</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. IPAT 16 PF Profile</td>
<td>4. The Teacher Responses to the IPAT 16 PF</td>
<td></td>
</tr>
<tr>
<td>5. Quarter Hours of Credit--earned during or after the first year of teaching</td>
<td>5. The Teacher</td>
<td></td>
</tr>
<tr>
<td>6. Involvement in Inservice Programs during or after the first year of teaching</td>
<td>6. The Teacher</td>
<td></td>
</tr>
<tr>
<td>7. Experience in Working with Children--prior to student teaching</td>
<td>7. From the Office of Student Teaching, School of Education, St. Cloud State College, St. Cloud, Minnesota</td>
<td></td>
</tr>
</tbody>
</table>

The Teacher or Career Education Orientation Questionnaire, face validity for content was determined by the use of feedback from:

1. Five Professors of Education
2. Sixteen Doctoral Students (ten had been principals as recently as 1970)
3. Ten Elementary School Teachers
4. Three Curriculum Consultants

Based on feedback from these educators, the instruments were revised several times, resulting in final drafts which were then field tested. The field testing of the instruments consisted of
administering the instruments to five elementary school principals, two beginning teachers and one second-year teacher from the Flint Public Schools, Flint, Michigan. The instruments in their final form were said to be comprehensive, relevant, and valid by those reviewing and field testing the instruments. It should be remembered that content validity is impermanent and, therefore, these instruments should be constantly revised to be relevant to a particular application.

Lyman (1963) indicated that reliability generally refers to the consistency of the measurement of an instrument. Reliability for the Administrator Rating of Teacher Effectiveness instrument, the Teacher Rating of Training Effectiveness instrument, and the Teacher or Career Education Questionnaire were determined by the split-half reliability method using the Spearman-Brown formula.

Application of the Spearman-Brown formula provided the following coefficients: (1) the Administrator Rating of Teacher Effectiveness instrument, \( r = .95 \) and \( r^2 = .90 \), (2) the Teacher Rating of Training Effectiveness instrument, \( r = .93 \) and \( r^2 = .86 \), and (3) the Teacher or Education Career Orientation instrument, \( r = .83 \) and \( r^2 = .69 \).

These correlations show that from 69 percent to 90 percent of the response variance is accounted for by the items, leaving only a chance error variance ranging from 7 percent to 31 percent. The reliability coefficients ranged from .83 to .95, indicating that individual responses to the instruments can be considered highly reliable.
The Sixteen Personality Factor Scale (Cattell and Eber, 1957) used in this study for the process of matching was developed primarily to test normal adults through factor analysis on sixteen personality traits in terms of polar opposites such as reserved versus outgoing (Appendix D). Results obtained from the questionnaire were sten scores plotted to establish 16 PF profiles. The consistency coefficients for each factor determined by the split-half reliability method using the Spearman-Brown formula are reported by Cattell and Eber (1957) to range from .71 to .93. The validity coefficients reported by Cattell and Eber ranged from .84 to .96. The authors assumed that the items have no specifics in common but only the common factor, therefore, validity was calculated as the square root of reliability.

Data Analysis

The Correlated t was used to test the differences in Hypothesis $1_1$ and $1_2$, Hypothesis $2_1$ and $2_2$, and Hypothesis $3_1$ and $3_2$ (see figure 10, pages 122-123). The .05 level of statistical significance was utilized to test the significance of the results for each hypothesis tested. The probability ratios and the strength of the indicated relationships were also utilized in the data analysis.

The mean scores of the one-year full-day student teaching group and the one-year half-day student teaching group were compared by use of the student's t. The strength of the indicated relationships were also utilized in the data analysis.
Further analysis of the data was made to determine whether the outcome measures differed with respect to (1) the length of the student teaching experience not considering the length of professional teaching experience, and (2) the interaction of these two factors. For this part of the data analysis the Two-Way Analysis of Variance model was utilized.

As an additional test of relationships the administrator rating of teacher effectiveness data and the teacher rating of effectiveness of their training programs were analyzed by use of correlational procedures. The correlation coefficients (r) and the coefficient of determination ($r^2$) and their levels of significance for this relationship are reported in the data analysis.

Chapter Four presents the analysis of the data and reports the results of the study.
CHAPTER IV

Data Presentation and Analysis

Introduction

The purpose of this chapter is to analyze the data collected by means of the procedures described in Chapter III. The data were analyzed by the following statistical models:

1. The Correlated $t$;
2. The Student's $t$;
3. The Strength of the Indicated Relationships;
4. The Two-Way Analysis of Variance Model; and
5. The Correlation ($r$).

The results of these analyses along with the appropriate tables and discussion are presented in this chapter.

Six questions were investigated. They were:

1. Are teacher education graduates who student taught full-days for one year more effective as beginning teachers than teacher education graduates who student taught for one quarter?

2. Are teacher education graduates who student taught half-days for one year more effective as beginning teachers than teacher education graduates who student taught for one quarter?

3. Do teacher education graduates of full-day one-year student teaching programs rate the training they received in student teaching as more effective than teacher education graduates of one-quarter student teaching programs?

4. Do teacher education graduates of half-day one-year student teaching programs rate the training they received in student teaching as
more effective than teacher education graduates of one-quarter student teaching programs?

5. Are teacher education graduates who student taught full-days for one year more teacher or education career oriented than teacher education graduates who student taught for one quarter?

6. Are teacher education graduates who student taught half-days for one year more teacher or education career oriented than teacher education graduates who student taught for one quarter?

In addition to the above six questions, the mean scores of the full-day one-year student teaching group were compared with the mean scores of the half-day one-year student teaching group. Further analysis of the data was made to determine whether the outcome measures differed with respect to (1) the length of the student teaching experience not considering the number of years of professional teaching experience, (2) the length of professional teaching experience not considering the length of the student teaching experience, and (3) the interaction of these two factors. Finally, the relationship of the administrator rating of teacher effectiveness data and the teacher rating of effectiveness of their training program data was analyzed.

The presentation of the data follows the sequence in which the questions above were posed. Data presentation consists of reporting: t scores, the significance of the results at the .05 confidence levels, the probability ratios, and the strength of the indicated relationships. For the two-way analysis of variance model the F scores and the probability ratios are reported. For the
correlation model the correlation coefficients $r$ and the coefficient of determination $r^2$ and their levels of significance for this relationship are reported. The raw score data which were analyzed for this study are shown in Table 11. Table 12 displays the two-way analysis of variance group relationships utilized for the raw score data comparisons.

Table 11

Raw Score Data

<table>
<thead>
<tr>
<th>Administrator Rating of Beginning Teacher Effectiveness</th>
<th>Group A One Quarter</th>
<th>Group B One Yr. Full Day</th>
<th>Group C One Quarter</th>
<th>Group D One Yr. Half Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.45</td>
<td>25.65</td>
<td>21.55</td>
<td>24.46</td>
<td></td>
</tr>
<tr>
<td>26.86</td>
<td>21.81</td>
<td>15.07</td>
<td>22.37</td>
<td></td>
</tr>
<tr>
<td>21.4</td>
<td>22.93</td>
<td>19.92</td>
<td>21.2</td>
<td></td>
</tr>
<tr>
<td>21.5</td>
<td>26.69</td>
<td>29.05</td>
<td>16.22</td>
<td></td>
</tr>
<tr>
<td>29.3</td>
<td>24.51</td>
<td>26.0</td>
<td>26.35</td>
<td></td>
</tr>
<tr>
<td>25.58</td>
<td>23.88</td>
<td>25.0</td>
<td>22.66</td>
<td></td>
</tr>
<tr>
<td>26.92</td>
<td>21.50</td>
<td>21.9</td>
<td>27.25</td>
<td></td>
</tr>
<tr>
<td>20.88</td>
<td>27.75</td>
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<td>25.29</td>
<td></td>
</tr>
<tr>
<td>12.4</td>
<td>29.65</td>
<td>23.96</td>
<td>22.67</td>
<td></td>
</tr>
<tr>
<td>17.65</td>
<td>27.00</td>
<td>19.55</td>
<td>28.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.17</td>
<td>24.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>22.85</td>
<td>25.17</td>
<td></td>
</tr>
</tbody>
</table>

Mean 22.894 Mean 25.137 Mean 21.855 Mean 23.8875

Teacher Rating of Training Effectiveness

<table>
<thead>
<tr>
<th>Group A One Quarter</th>
<th>Group B One Yr. Full Day</th>
<th>Group C One Quarter</th>
<th>Group D One Yr. Half Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.85</td>
<td>28.8</td>
<td>20.87</td>
<td>24.66</td>
</tr>
<tr>
<td>20.75</td>
<td>28.75</td>
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</tr>
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<td>14.73</td>
<td>23.5</td>
<td>14.16</td>
<td>22.77</td>
</tr>
<tr>
<td>24.8</td>
<td>25.9</td>
<td>24.05</td>
<td>19.83</td>
</tr>
<tr>
<td>16.47</td>
<td>29.15</td>
<td>20.18</td>
<td>24.71</td>
</tr>
<tr>
<td>22.75</td>
<td>29.26</td>
<td>21.83</td>
<td>27.82</td>
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</table>
Table 11 (continued)

<table>
<thead>
<tr>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Group D</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Quarter</td>
<td>One Yr. Full Day</td>
<td>One Quarter</td>
<td>One Yr. Half Day</td>
</tr>
<tr>
<td>20.39</td>
<td>27.56</td>
<td>12.00</td>
<td>24.6</td>
</tr>
<tr>
<td>24.51</td>
<td>27.70</td>
<td>15.83</td>
<td>22.09</td>
</tr>
<tr>
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<td>15.68</td>
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<td>22.05</td>
<td>20.03</td>
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<td></td>
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<td>24.92</td>
</tr>
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<td></td>
<td></td>
<td>13.59</td>
<td>24.21</td>
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</table>

Mean 20.255  Mean 26.575  Mean 17.33416  Mean 22.66333

Teacher/Education Career Orientation Rating

<table>
<thead>
<tr>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Group D</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Quarter</td>
<td>One Yr. Full Day</td>
<td>One Quarter</td>
<td>One Yr. Half Day</td>
</tr>
<tr>
<td>20</td>
<td>26</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>24</td>
<td>25</td>
<td>24</td>
<td>24</td>
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<tr>
<td>18</td>
<td>27</td>
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<td>23</td>
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<td>22</td>
<td>25</td>
</tr>
<tr>
<td>23</td>
<td>16</td>
<td>25</td>
<td>26</td>
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<td></td>
<td>22</td>
<td>26</td>
</tr>
</tbody>
</table>

Mean 22  Mean 24.3  Mean 21.8333  Mean 24
Table 11 (continued)

<table>
<thead>
<tr>
<th>Administrator Rating of Beginning Teacher Effectiveness</th>
<th>Teacher Rating of Training Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group B One Yr. Full Day</td>
<td>Group D One Yr. Half Day</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>25.65</td>
<td>24.46</td>
</tr>
<tr>
<td>21.81</td>
<td>22.37</td>
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<tr>
<td>22.93</td>
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<tr>
<td>26.69</td>
<td>16.22</td>
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<td>24.51</td>
<td>26.35</td>
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<td>23.88</td>
<td>22.66</td>
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<td>25.29</td>
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<tr>
<td>29.65</td>
<td>22.67</td>
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<td></td>
<td>24.51</td>
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<td></td>
<td>25.17</td>
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</table>

Mean 25.137 Mean 23.8875 Mean 26.575 Mean 22.66333

<table>
<thead>
<tr>
<th>Teacher/Education Career Orientation Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group B One Yr. Full Day</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>26</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>27</td>
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<tr>
<td>22</td>
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<td>27</td>
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<tr>
<td>16</td>
</tr>
<tr>
<td>22</td>
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<tr>
<td>26</td>
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</tbody>
</table>

Mean 24.3 Mean 24
Table 11 (continued)

<table>
<thead>
<tr>
<th>One Quarter</th>
<th>One Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A and C Administrator</td>
<td>Group B and D Administrator</td>
</tr>
<tr>
<td>Rating of Effectiveness Data</td>
<td>Rating of Effectiveness Data</td>
</tr>
<tr>
<td>26.45</td>
<td>25.65</td>
</tr>
<tr>
<td>26.86</td>
<td>21.81</td>
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<td>21.4</td>
<td>22.93</td>
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<td>21.5</td>
<td>26.69</td>
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<td>29.3</td>
<td>24.51</td>
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<tr>
<td>25.58</td>
<td>23.88</td>
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<tr>
<td>26.92</td>
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<td>20.88</td>
<td>27.75</td>
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<td>12.4</td>
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<td>23.96</td>
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</tr>
<tr>
<td>15.17</td>
<td>24.51</td>
</tr>
<tr>
<td>22.85</td>
<td>24.92</td>
</tr>
</tbody>
</table>

Mean 22.327

Table 12

Two-Way Analysis of Variance Group Relationships

<table>
<thead>
<tr>
<th>Length of Professional Teaching Experience</th>
<th>One Year</th>
<th>Two Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Student Teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Quarter Group A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Year Group B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Year Group C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Year Group D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Findings

A summary of the results of the data analysis for each of the hypotheses in this study is presented in Table 13.

Table 13
Summary Data
Data Analysis of Hypotheses Studied

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Correlated t</th>
<th>Probability</th>
<th>Significance</th>
<th>Strength of Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>1_1</td>
<td>.9588</td>
<td>.1814</td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td>1_2</td>
<td>1.186</td>
<td>.1303</td>
<td>.016</td>
<td></td>
</tr>
<tr>
<td>2_1</td>
<td>4.57</td>
<td>.0007</td>
<td>*</td>
<td>.50</td>
</tr>
<tr>
<td>2_2</td>
<td>3.563</td>
<td>.0028</td>
<td>*</td>
<td>.33</td>
</tr>
<tr>
<td>3_1</td>
<td>1.513</td>
<td>.0823</td>
<td>.06</td>
<td></td>
</tr>
<tr>
<td>3_2</td>
<td>3.026</td>
<td>.0058</td>
<td>*</td>
<td>.25</td>
</tr>
</tbody>
</table>

*Those hypotheses found significant at the .05 confidence level.

Hypothesis 1\_1. The first question of this study was to investigate whether teacher education graduates who student taught full-days for one year were more effective as beginning teachers than teacher education graduates who student taught for one quarter. Table 13 illustrated this relationship. No significant difference was found between the one-quarter student teaching group and the full-day one-year student teaching group regarding beginning teacher effectiveness. Results of the Correlated t indicated no significance at the .05 level of confidence.
**Hypothesis 1.** The second question of this investigation was to determine whether teacher education graduates who student taught half-days for one year were more effective as beginning teachers than teacher education graduates who student taught for one quarter. Table 13 illustrated this relationship. No significant difference was found between the one-quarter student teaching group and the half-day one-year student teaching group regarding beginning teacher effectiveness. Results of the Correlated t indicated no significance at the .05 level of confidence.

**Hypothesis 2.** The third question of the study was to investigate whether teacher education graduates who student taught full-days for one year would rate the training they received in student teaching as more effective according to the specific areas they were being rated on than would teacher education graduates who student taught for one quarter. Table 13 illustrated this relationship. A significant difference was found in the teacher rating of training effectiveness between the full-day one-year student teaching group and the one-quarter student teaching group. An examination of the teacher rating of training effectiveness scores in Tables 11 and 13 reveals that the full-day one-year student teaching group rated the effectiveness of their student teaching experience significantly higher than did the one-quarter student teaching group. Results of the Correlated t indicated a significant difference at the .05 level of confidence. The probability ratio was .0007. Strength of association was .50, indicating that
50 percent of the variance of the teacher rating of training effectiveness scores is accounted for by the different lengths of student teaching experience.

Hypothesis 2. The fourth question of this investigation was to determine whether teacher education graduates who student taught half-days for one year would rate the training they received in student teaching as more effective according to the specific areas they were being rated on than would teacher education graduates who student taught for one quarter. Table 13 illustrated this relationship. A significant difference was found in the teacher rating of training effectiveness between the half-day one-year student teaching group and the one-quarter student teaching group. An examination of the teacher rating of training effectiveness scores in Table 11 and 13 reveals that the half-day one-year student teaching group rated the effectiveness of their student teaching experience significantly higher than did the one-quarter student teaching group. Results of the Correlated t indicated a significant difference at the .05 level of confidence. The probability ratio was .0028. Strength of association was .33, indicating that 33 percent of the variance of the teacher rating of training effectiveness scores is accounted for by the different lengths of student teaching experience.

Hypothesis 3. The fifth question of this study was to investigate whether teacher education graduates who student taught full-
days for one year were more teacher or education career oriented than teacher education graduates who student taught for one quarter. Table 13 illustrated this relationship. No significant difference was found between the one-quarter student teaching group and the full-day one-year student teaching group regarding teacher or education career orientation. Results of the Correlated t indicated no significance at the .05 level of confidence.

Hypothesis 32. The sixth question of this investigation was to determine whether teacher education graduates who student taught half-days for one year were more teacher or education career oriented than teacher education graduates who student taught for one quarter. Table 13 illustrated this relationship. A significant difference was found in the teacher rating of teacher or education career orientation between the half-day one-year student teaching group and the one-quarter student teaching group. An examination of the teacher rating of teacher or education career orientation scores in Tables 11 and 13 reveals that the half-day one-year student teaching group indicated a higher career orientation in education score than did the one-quarter student teaching group. Results of the Correlated t indicated a significant difference at the .05 level of confidence. The probability ratio was .0058. Strength of association was .25, indicating that 25 percent of the variance of the teacher rating of teacher or education career orientation scores is accounted for by the different length of student teaching experience.
Analysis of the relationship between the full-day one-year student teaching group and the half-day one-year student teaching group regarding beginning teacher effectiveness revealed no significant relationship. Results of the Student's t indicated no significance at the .05 level of confidence. Table 14 illustrates the relationship.

Table 14
Summary Data—Student's t
Beginning Teacher Effectiveness

<table>
<thead>
<tr>
<th></th>
<th>Half-Day One-Year Student Teaching</th>
<th>Full-Day One-Year Student Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>12.0</td>
<td>10.0</td>
</tr>
<tr>
<td>M</td>
<td>23.8875</td>
<td>25.137</td>
</tr>
<tr>
<td>V</td>
<td>9.52312</td>
<td>6.44813</td>
</tr>
<tr>
<td>SD</td>
<td>2.53931</td>
<td>3.08593</td>
</tr>
<tr>
<td>SEₘ</td>
<td>.80293</td>
<td>.89083</td>
</tr>
</tbody>
</table>

SEₘ₁−ₘ₂ = 1.19927

N = 22.0

df = 20.0

t = 1.04188

t not significant at the .05 confidence level

Analysis of the relationship between the full-day one-year student teaching group and the half-day one-year student teaching group...
group regarding teacher rating of effectiveness of their student teaching experience revealed a significant relationship. Table 15 and Table 16 illustrate the relationship. Examination of the teacher rating of training effectiveness scores in Tables 15 and 16 reveals that the full-day one-year student teaching group rated the effectiveness of their student teaching experience significantly higher than did the half-day one-year student teaching group. Results of the Student's t indicated a significant difference at the .05 level of confidence. Strength of association was .29957, indicating that 30 percent of the variance of teacher rating of training effectiveness is accounted for by the different lengths of student teaching experience.

Table 15
Summary Data--Student's t
Teacher Rating of Training Effectiveness

<table>
<thead>
<tr>
<th></th>
<th>Half-Day One-Year Student Teaching</th>
<th>Full-Day One-Year Student Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>12.0</td>
<td>10.0</td>
</tr>
<tr>
<td>M</td>
<td>22.66333</td>
<td>26.575</td>
</tr>
<tr>
<td>V</td>
<td>9.53743</td>
<td>8.06808</td>
</tr>
<tr>
<td>SD</td>
<td>3.08827</td>
<td>2.840433</td>
</tr>
<tr>
<td>SE&lt;sub&gt;m&lt;/sub&gt;</td>
<td>.89150</td>
<td>.89822</td>
</tr>
</tbody>
</table>
Table 15 (continued)

\[\text{SE}_{m_1-m_2} = 1.26352\]

<table>
<thead>
<tr>
<th>N</th>
<th>22.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>df</td>
<td>20.0</td>
</tr>
<tr>
<td>(t)</td>
<td>3.09095</td>
</tr>
<tr>
<td>(t) significant at the .05 confidence level</td>
<td></td>
</tr>
</tbody>
</table>

Table 16

Summary Data—Strength of Association

Teacher Rating of Training Effectiveness

Half-Day One-Year Student Teaching and Full-Day One-Year Student Teaching

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>(E^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>1</td>
<td>83.46074</td>
<td>83.46074</td>
<td>8.55435</td>
<td>.29957</td>
</tr>
<tr>
<td>Within</td>
<td>20</td>
<td>195.13052</td>
<td>9.75652</td>
<td>. .</td>
<td>. .</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>278.59126</td>
<td></td>
<td>. .</td>
<td>. .</td>
</tr>
</tbody>
</table>

Analysis of the relationship between the full-day one-year student teaching group and the half-day one-year student teaching group regarding teacher or education career orientation revealed no significant relationship. Table 17 illustrates the relationship. Results of the Student's \(t\) indicated no significance at the .05 level of confidence.
The two-way analysis of variance data analysis which was utilized to determine whether the outcome measures differed with respect to (1) the length of the student teaching experience not considering the number of years of professional teaching experience, (2) the length of professional teaching experience not considering the length of student teaching experience, and (3) the interaction of those factors is shown in Tables 18, 19, and 20.

Table 18 indicates the following relationships for the outcome measure of Administrator Rating of Teacher Effectiveness:
Table 18

Two-Way Analysis of Variance

Administrator Rating of Teacher Effectiveness

Length of Student Teaching Experience and Number of Years of Professional Teaching Experience

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups A and C vs Groups B and D</td>
<td>1</td>
<td>49.82</td>
<td>49.82</td>
<td>3.31</td>
<td>.0763</td>
</tr>
<tr>
<td>Groups A and B vs Groups C and D</td>
<td>1</td>
<td>14.28</td>
<td>14.28</td>
<td>.95</td>
<td>.3357</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>.12</td>
<td>.12</td>
<td>.01</td>
<td>.9290</td>
</tr>
<tr>
<td>Within</td>
<td>40</td>
<td>601.74</td>
<td>15.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of Years of Professional Teaching Experience

<table>
<thead>
<tr>
<th>Length of Student Teaching</th>
<th>One Year</th>
<th>Two Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A</td>
<td>Group C</td>
</tr>
<tr>
<td>One Quarter</td>
<td>10.00</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>22.89</td>
<td>21.85</td>
</tr>
<tr>
<td></td>
<td>5.15</td>
<td>4.09</td>
</tr>
<tr>
<td></td>
<td>Group B</td>
<td>Group D</td>
</tr>
<tr>
<td>One Year</td>
<td>10.00</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>25.14</td>
<td>23.89</td>
</tr>
<tr>
<td></td>
<td>2.68</td>
<td>3.22</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
1. There was no significant difference at the .05 confidence level between the one-quarter student teaching groups (groups A and C) and the one-year student teaching groups (groups B and D) when these groups were compared not considering the number of years of professional teaching experience.

2. Grouping the subjects by number of years of professional teaching experience not considering the length of student teaching experience (groups A and B, one year vs. Groups C and D, two years) revealed no significant difference at the .05 confidence level.

3. The interaction between length of student teaching and number of years of professional teaching experience was found to be not significant at the .05 level of confidence.

Table 19 indicates the following relationships for the outcome measure of Teacher Rating of Training Effectiveness:

1. There was a significant difference at the .05 confidence level between the one-quarter student teaching groups (groups A and C) and the one-year student teaching groups (groups B and D) when these groups were compared not considering the number of years of professional teaching experience. The one-year student teaching group rated the effectiveness of their student teaching experience significantly higher than did the one-quarter student teaching group. The probability ratio was .0000 and the strength of the indicated relationship was .38, indicating that 38 percent of the variance of teacher rating of training effectiveness scores is accounted for by the different lengths of student teaching experience.

2. Grouping the subjects by number of years of professional teaching experience not considering the length of student teaching experience (groups A and B, one year vs groups C and D, two years) revealed a significant difference at the .05 confidence level. The teachers with one year of teaching experience rated the effectiveness of their student teaching
Table 19

Two-Way Analysis of Variance

Teacher Rating of Training Effectiveness

<table>
<thead>
<tr>
<th>Length of Student Teaching Experience and Number of</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of Professional Teaching Experience</td>
<td>Groups A and C vs Groups B and D</td>
<td>1</td>
<td>367.44</td>
<td>367.44</td>
<td>29.91</td>
<td>.0000</td>
</tr>
<tr>
<td></td>
<td>Groups A and B vs Groups C and D</td>
<td>1</td>
<td>127.32</td>
<td>127.32</td>
<td>10.36</td>
<td>.0026</td>
</tr>
<tr>
<td></td>
<td>Interaction</td>
<td>1</td>
<td>2.68</td>
<td>2.60</td>
<td>.22</td>
<td>.6432</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>40</td>
<td>491.40</td>
<td>12.28</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of Years of Professional Teaching Experience

<table>
<thead>
<tr>
<th>Length of Student Teaching</th>
<th>One Year</th>
<th>Two Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>10.00</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>20.25</td>
<td>17.33</td>
</tr>
<tr>
<td></td>
<td>3.40</td>
<td>4.18</td>
</tr>
<tr>
<td>Group B</td>
<td>10.00</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>26.58</td>
<td>22.66</td>
</tr>
<tr>
<td></td>
<td>2.99</td>
<td>3.23</td>
</tr>
<tr>
<td>Group C</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD</td>
</tr>
<tr>
<td>Group D</td>
<td>N</td>
<td>Mean</td>
</tr>
</tbody>
</table>

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experience significantly higher than did the teachers who had two years of teaching experience. The probability ratio was .0026 and the strength of the indicated relationship was .13, indicating that 13 percent of the variance of teacher rating of training effectiveness scores is accounted for by the difference in number of years of professional teaching experience.

3. The interaction between length of student teaching and number of years of professional teaching experience was found to be not significant at the .05 level of confidence.

Table 20 indicates the following relationships for the outcome measure of Teacher or Education Career Orientation rating:

1. There was a significant difference at the .05 confidence level between the one-quarter student teaching groups (groups A and C) and the one-year student teaching groups (groups B and D) when these groups were compared not considering the number of years of professional teaching experience. The one-year student teaching group rated their desire to make teaching or education a career significantly higher than did the one-quarter student teaching group. The probability ratio was .0123 and the strength of the indicated relationship was .15, indicating that 15 percent of the variance of teacher rating of teacher or education career orientation scores is accounted for by different lengths of student teaching experience.

2. Grouping the subjects by number of years of professional teaching experience not considering the length of student teaching experience (groups A and B, one year vs groups C and D, two years) revealed no significant difference at the .05 confidence level.
Table 20

Two-Way Analysis of Variance

Teacher/Education Career Orientation Rating

Length of Student Teaching Experience and Number of
Years of Professional Teaching Experience

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups A and C vs</td>
<td>1</td>
<td>54.57</td>
<td>54.57</td>
<td>6.87</td>
<td>.0123</td>
</tr>
<tr>
<td>Groups B and D</td>
<td>1</td>
<td>.59</td>
<td>.59</td>
<td>.07</td>
<td>.7859</td>
</tr>
<tr>
<td>Groups A and B vs</td>
<td>1</td>
<td>.05</td>
<td>.05</td>
<td>.01</td>
<td>.9381</td>
</tr>
<tr>
<td>Groups C and D</td>
<td>1</td>
<td>.05</td>
<td>.05</td>
<td>.01</td>
<td>.9381</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>.05</td>
<td>.05</td>
<td>.01</td>
<td>.9381</td>
</tr>
<tr>
<td>Within</td>
<td>40</td>
<td>317.77</td>
<td>7.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of Years of Professional Teaching Experience

<table>
<thead>
<tr>
<th>Length of Student Teaching</th>
<th>One Year</th>
<th>Two Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A</td>
<td>Group C</td>
</tr>
<tr>
<td>One Quarter</td>
<td>10.00</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>22.00</td>
<td>21.03</td>
</tr>
<tr>
<td></td>
<td>2.83</td>
<td>2.52</td>
</tr>
<tr>
<td>One Year</td>
<td>10.00</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>24.30</td>
<td>24.00</td>
</tr>
<tr>
<td></td>
<td>3.43</td>
<td>2.52</td>
</tr>
</tbody>
</table>

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3. The interaction between length of student teaching and number of years of professional teaching experience was found to be not significant at the .05 level of confidence.

Analysis of the relationship between the administrator ratings of teacher effectiveness data and the teacher ratings of the effectiveness of their training program revealed low correlations. Table 21 illustrates the relationships. The correlation coefficient between the administrator ratings of teacher effectiveness and the teacher ratings of training effectiveness for the one-quarter student teaching group was .23222 (r = .23222). The coefficient of determination indicates that 5 percent of the correlation is shared between the administrator ratings of teacher effectiveness and the teacher ratings of training effectiveness. Results of the t test indicated the correlation coefficient (r = .23222) was not significant at the .05 level of confidence.

The correlation coefficient between the administrator ratings of teacher effectiveness and the teacher ratings of training effectiveness for the full-year student teaching group was .15969 (r = .15969). The coefficient of determination indicates that 2.5 percent of the correlation is shared between the administrator rating of teacher effectiveness and the teacher ratings of training effectiveness. Results of the t test indicated the correlation coefficient (r = .15969) was not significant at the .05 level of confidence.

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Table 21

Summary Data--Correlation Analysis

Administrator Rating of Teacher Effectiveness Data and Teacher Rating of Training Effectiveness Data

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>r</th>
<th>$r^2$</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-Quarter Student</td>
<td>22</td>
<td>.2322</td>
<td>.0539</td>
<td>1.067</td>
</tr>
<tr>
<td>Teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Year Student</td>
<td>22</td>
<td>.1596</td>
<td>.0250</td>
<td>.7233</td>
</tr>
<tr>
<td>Teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Chapter Five the data analysis will be summarized and the conclusions and implications of the findings will be discussed.
CHAPTER V

Summary, Conclusions, and Implications

Summary

The primary goal of this investigation was to examine beginning teacher success by comparing the teaching effectiveness of:

1. Teachers who had student taught for one quarter during their teacher training program.

2. Teachers who had student taught for one year during their teacher training program.

The second goal of this investigation was to examine the effectiveness of the teacher training experience in student teaching as perceived by the teacher by comparing:

1. Teachers who had student taught for one quarter during their teacher training program.

2. Teachers who had student taught for one year during their teacher training program.

The third goal of this study was to investigate the difference between teacher or education career orientation when comparing:

1. Teachers who had student taught for one quarter during their teacher training program.

2. Teachers who had student taught for one year during their teacher training program.

The instruments used in the study were the Administrator Rating of Teacher Effectiveness instrument, the Teacher Rating of Training.
Effectiveness instrument, and the Teacher or Education Career Orientation Questionnaire. These three instruments were developed by the writer for this study. A teacher's building principal rated the effectiveness of the teacher utilizing the criteria and rating scale of the Administrator Rating of Teacher Effectiveness instrument. The teacher utilizing the same criteria and rating scale as that used by the principal rated the effectiveness of the teacher's training experience in student teaching. The teachers also responded to the Teacher or Education Career Orientation Questionnaire by providing data about themselves. A fourth instrument was used in this study and was included in the process of matching. The instrument was the Sixteen Personality Factor Scale (Cattell and Eber, 1957). Teachers responded to the items on this questionnaire. Results produced by the questionnaire were measured in terms of sten scores and then developed into 16 PF profiles which were utilized in the matching process.

The subjects for the study were 22 elementary teachers who had student taught for one year during their teacher training program and 22 elementary teachers who had student taught for one quarter during their teacher training program. The 22 teachers who student taught for one year were part of an experimental teacher education program and comprise the total population of that program. They were matched with 22 teachers who student taught for one quarter who were drawn from the population of all elementary education graduates who student taught during the same years as the
22 teachers who student taught for one year. The records of 734 one-quarter subjects were initially reviewed from which 205 subjects were drawn based on the initial matching criteria. From this group of 205 subjects, 77 subjects were randomly selected to complete the instruments selected for use in the study. From this group of 77 subjects, 22 one-quarter student teaching subjects were selected to be matched with the 22 full-year student teaching subjects. This final matching selection was completed by the use of the IPAT 16 PF data collected. The data collected on the 22 full-year student teaching subjects and the 22 one-quarter student teaching subjects with whom they were matched was then analyzed. Mean scores were determined and the Correlated t statistical model was used to investigate the relationships between the independent variable of length of student teaching and the dependent variables of teaching effectiveness, training effectiveness and teacher or education career orientation. Significances of the relationships and strength of association were also reported. Further analysis of the data was made by utilization of the Student's t, the Two-Way Analysis of Variance model, and by use of Correlation Coefficients.

Results of the various analyses are summarized below:

**Administrator Rating of Beginning Teacher Effectiveness.** No significant difference was found to exist in beginning teacher effectiveness as rated by building principals between teachers who student taught full-days for one year and teachers who student taught...
taught for one quarter.

No significant difference was found to exist in beginning teacher effectiveness as rated by building principals between teachers who student taught half-days for one year and teachers who student taught for one quarter.

**Teacher Rating of Training Effectiveness.** A significant relationship was found between length of student teaching experience and teacher ratings of the effectiveness of their student teaching experience.

Teachers who student taught full-days for one year rated their student teaching experience as more effective than did teachers who student taught for one quarter. The level of confidence was .05.

Teachers who student taught half-days for one year rated their student teaching experience as more effective than did teachers who student taught for one quarter. The level of confidence was .05.

**Teacher/Education Career Orientation Rating.** No significant difference was found to exist in teacher or education career orientation between teachers who student taught full-days for one year and teachers who student taught for one quarter.

A significant difference was found to exist in teacher or education career orientation between teachers who student taught half-days for one year and teachers who student taught for one quarter. Teachers who student taught half-days for one year rated higher on
teacher or education career orientation than did one-quarter student teachers. The level of confidence was .05.

An additional area of data analysis was conducted in this study to add insight to the questions of differences related to the lengths of student teaching experience. The data should only be considered in terms of adding possible insights to the major problem as the analysis of these data could not control for one variable, that variable being the number of years of teaching experience. This data analysis compares the one-year full-day student teaching group with the half-day one-year student teaching group. The full-day one-year group of student teachers were in their seventh month of teaching and the half-day one-year group of student teachers were in their sixteenth month of teaching. The variance introduced by the one additional year of teaching is not accounted for in this data analysis.

Administrator Rating of Beginning Teacher Effectiveness. No significant difference was found to exist in beginning teacher effectiveness as rated by building principals between teachers who student taught full-days for one year and teachers who student taught half-days for one year.

Teacher Rating of Training Effectiveness. A significant difference was found to exist between teachers who student taught full-days for one year and teachers who student taught half-days for one year regarding their perceptions of the effectiveness of
their student teaching experience. The full-day one-year student teaching group rated the effectiveness of their student teaching experience higher than did the half-day one-year student teaching group. The level of confidence was .05.

Teacher/Education Career Orientation Rating. No significant difference was found between teachers who student taught full-days for one year and teachers who student taught half-days for one year with respect to their teacher or career education orientation rating.

A two-way analysis of variance was conducted to determine whether the outcome measures differed with respect to (1) the length of the student teaching experience not considering the number of years of professional teaching experience, (2) the length of professional teaching experience not considering the length of student teaching experience, and (3) the interaction of these two factors. This analysis of the data should be reviewed considering the fact that the subjects were not paired according to the previous matching criteria used in this study. Thus, control of intervening variables should be considered as limited when reviewing these results.

Administrator Rating of Beginning Teacher Effectiveness. No significant difference was found to exist in beginning teacher effectiveness as rated by building principals in regard to (1) the length of the student teaching experience not considering the number
of years of professional teaching experience, (2) the length of professional teaching experience not considering the length of student teaching experience, and (3) the interaction of these two factors.

**Teacher Rating of Training Effectiveness.** A significant difference was found to exist between one-quarter student teachers and one-year student teachers when they were compared not considering the number of years of professional teaching experience. The one-year student teaching group rated the effectiveness of their student teaching group higher than did the one-quarter student teaching group. The level of confidence was .05.

A significant difference was also found to exist between teachers who had one year of professional teaching experience and those who had two years of professional teaching experience when they were compared not considering the length of their student teaching experience. The teachers with one year of teaching experience rated the effectiveness of their student teaching experience higher than the teachers with two years of teaching experience. The level of confidence was .05. The interaction effect between length of student teaching and number of years of professional teaching experience was found to be not significant.

**Teacher/Education Career Orientation Rating.** A significant difference was found to exist between one-quarter student teachers and one-year student teachers when they were compared not considering the number of years of professional teaching experience. The
one-year student teaching group rated their desire to make teaching or education a career higher than did the one-quarter student teaching group. The level of confidence was .05.

No significant difference was found with respect to the number of years of professional teaching experience or for the interaction effect.

An analysis of the relationship between the administrator ratings of teacher effectiveness and teacher ratings of the effectiveness of their training program was also conducted. A low correlation between administrator ratings of teacher effectiveness and teacher ratings of effectiveness of training programs was found in both the one-quarter and the full-year student teaching groups. The correlation was not significant at the .05 level of confidence.

Conclusions

The conclusions stated in this section are the investigator's personal observations which were based on the findings of the study and the related research. The conclusions are intended to be of some assistance to the educator in relating the investigation in a useful way to problems in developing more effective training components in teacher education programs.

It is apparent, according to the results of the administrator's rating of teacher effectiveness, that the length of student teaching experience was not a contributing factor to the teaching effectiveness of a beginning teacher. It could be concluded, then,
that time (length of student teaching experience) is a variant only in terms of individual needs and cannot be generalized into a standardized unit which could be considered as most beneficial to all preservice student teachers. The graduated conceptualization practice concept discussed by B. Othanel Smith (1971) in the book he edited, Research in Teacher Education, supports this conclusion. In summarizing a number of recent teacher education models, Smith pointed out the need for graduated exercises leading up to extended practice teaching experiences, teacher education students with the aid of faculty advisors choosing their own set and sequences of student contact learning experiences, and the need for teacher education students to work at their own pace through the various experience modules.

Teachers who student taught for longer periods of time than the usual ten- to fourteen-week student teaching experience perceived their student teaching experience to have been a more productive experience. It is highly probable that their extended student teaching experience provided these teachers with the opportunity to experience and re-experience, to conceptualize and re-conceptualize the teaching process to such a degree of difference from that of their one-quarter student teaching peers that they are more confident in solving daily teaching problems and, therefore, feel more comfortable in their beginning teaching experience. Hence, they perceive their student teaching experience as more effective.
Although teachers whose student teaching experience was for a longer period than the usual ten to fourteen weeks perceived the experience as more productive than did those whose student teaching experience was for the shorter period, principals did not rate those with longer experiences as more effective teachers. The highly controlled matching process of this study may have influenced this result to some extent. The matched pairs of one-quarter student teachers and full-year student teachers provided subjects who were very similar with respect to past experiences with children, educational achievement, age, sex, and personality characteristics. Hence, probability of beginning teacher success could be assumed to be similar for all subjects except for the one factor of length of student teaching experience.

However, it is apparent that extended student teaching experiences may be providing teachers who believe they are more effectively trained for teaching. If the belief that they are better trained for teaching results in greater self-confidence on the part of these teachers, then it is possible that, as Combs (1965) stated:

How a teacher behaves after he leaves the portals of his college will be very largely determined by how he has learned to see himself and his relationships to his students, his subject matter, and to the profession of teaching itself.

This fact alone may be a factor in increased teaching effectiveness as these beginning teachers gain further teaching experience.
That finding and the implications derived from the conclusions drawn from the finding could be of considerable importance to teacher education programs. Much of the current research about teaching seems to be based on a mechanistic rather than an organismic model of teacher behavior. The research of Anderson, Flanders, Hughes, and others (Gage, 1963) on classroom observation and analysis has produced descriptive analyses of primarily the verbal behavior of the teacher. The result has been a rather superficial labeling and categorizing of the teacher's verbal acts. Although these categories describe a limited dimension of the teaching act, they are not really pertinent to what the teacher thinks he is doing. Such research assumes that these categories when added together will characterize some significant difference among teachers. What appears to be a more realistic conclusion about differences in teachers is how the teacher perceives himself as a teacher and not the specific behavioral acts which he performs. Thus, according to Howes (1967), each teacher must develop his teaching behavior from personal interpretation and integration of his current knowledge and experience. Therefore, it is apparent that teacher education programs need to develop programs in which the teacher education student has the opportunity to develop the ability to make choices, including experiences in selecting alternatives and carrying the responsibility for the choices made. Thus, the student would be carrying considerable responsibility in determining both the type and length of field experiences, which
might include the concept of the graduated conceptualization--practice field experience which provides extended field experiences as investigated in this study. It is possible that each student would have a different pattern or configuration of field experience upon completion of his preservice teacher education program.

The number of years of professional teaching experience appears to have some effect on how teachers perceive the effectiveness of their training programs. The two-way analysis of variance data analyses revealed that when the length of professional teaching experience was considered not considering difference in the length of the student teaching experience that teachers in their first year of teaching rated their student teaching experience as more effective than did the second-year teachers. This information would indicate that regardless of the length of time of the student teaching experience, a teacher's rating of the effectiveness of his student teaching program would decrease as he gained experience as a professional teacher.

The results of the data analysis related to teacher or education career orientation indicates that length of student teaching experience is a contributing factor to the teacher's commitment to making teaching a professional career. The one-year half-day student teachers rated their student teaching experience significantly higher than did the one-quarter student teachers they were paired with. The one-year full-day student teachers' mean rating score was higher than the one-quarter student teachers' they were
paired with, however, the probability ratio was .0823 and the difference was not significant at the .05 level of confidence used in this study.

When the rating scores of the one-year full-day and the one-year half-day student teaching groups were combined in the two-way analysis of variance data analyses, the results indicated that the one-year student teaching group rated their desire to make teaching a career significantly higher than did the combined one-quarter student teaching groups. When the number of years of professional teaching experience was considered, not considering the length of the student teaching experience, no significant difference was found.

Cumulative length of experience appears to be a contributing factor in the differences between the conclusions related to the one-year student teaching groups and their commitment to making teaching a professional career. It is very likely that as each of the teachers in this study continues his career in the teaching profession, his commitment to the teaching profession will increase. Thus, the extended field experience or the concept of the graduated field experience at the preservice level of a teacher education program can provide the prospective teacher with a broader understanding of the role of the teacher and can provide further information and experience related to career selection in the field of education.
Implications

The results of this investigation indicate that a comprehensive evaluation of the student teaching experience component of teacher education programs needs to be completed. The study revealed that student teaching for longer periods of time than the traditional ten- to fourteen-week student teaching experience does not necessarily produce a more effective beginning teacher as perceived by school administrators. However, the study indicates that the teacher who student taught in an extended student teaching experience perceived his student teaching experience to be a more effective training experience than did the teacher who student taught in the traditional student teaching experience.

These two findings have important implications for student teaching experiences. Providing training experiences which produce teachers who feel they have had meaningful experiences, who are secure and confident and who feel good about their ability to teach as a result of their training experiences is an extremely important matter specifically related to student teaching experiences. Arthur Combs (1965) stated:

The most important perceptions an individual has are those about himself. The self-concept is the most important single influence affecting an individual's behavior.

The implication here is that the student should carry considerable responsibility in determining the length of his student teaching experience. This, then, leads to the implication that teacher education programs must become flexible enough to provide
the opportunity for varying lengths of student teaching experiences based on individual needs. It is at this point that one can also see the implications which result from the finding of no difference in teacher effectiveness as perceived by administrators when comparing teachers who student taught for varying lengths of time. The quality of the student teaching experience in training an effective beginning teacher may be such an individual matter when related to the variable of length of experience that standardized time units for the student teaching experience are educationally unsound. Thus, the need for teacher training programs to provide varying lengths of student teaching experiences based on individual needs grows in importance. This is the basic premise supported by the graduated conceptualization-practice field experience concept advocated in the nine model teacher training programs developed in cooperation with the United States Office of Education (Smith, 1971).

Another implication from this investigation is that selection of teaching as a professional career and a realistic commitment to that selection is related to the length of the student teaching experience. The cumulative length of teaching experience does seem to relate to this commitment. The number of years a teacher has intensively experienced the teaching profession does appear to relate to this commitment as revealed in the differences found in commitment to education as a profession between one-quarter and one-year student teaching groups and the differences between the
first- and second-year teachers in the one-year student teaching group.

A final implication is that this investigation indicates that a continuous study of teacher effectiveness as perceived by administrators and effectiveness of student teaching experiences as perceived by teachers may be helpful to teacher educators in designing programs of teacher education. Through continuous feedback denoting how effective teachers are and how effective teachers feel their student teaching programs were, educational leaders might be able to predict future difficulties and assist in the designing of teacher education programs which are more congruent with the daily work of teachers.

In summation, it is suggested that more research be done in the area of length of student teaching experiences and beginning teacher effectiveness. There is need to investigate the cause-and-effect relationship of a variety of types of student teaching experiences and teacher effectiveness. Finally, replication, simply for the purposes of verification, is needed.
REFERENCES


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APPENDIX A

ADMINISTRATOR RATING OF TEACHER EFFECTIVENESS
Dear

In cooperation with the School of Education, St. Cloud State College, St. Cloud, Minnesota, I am conducting a research oriented study on certain aspects of the teacher education program at St. Cloud State College. This study is being conducted under the direction of the School of Graduate Studies, Western Michigan University, as it is also my Doctoral Dissertation.

The primary purpose of this study is to attempt to determine what affect, if any, length of teacher education guided experiences with children has on the effective performance of a beginning teacher. Your cooperation in this study will be appreciated.

A graduate of the School of Education, St. Cloud State College, has been identified for us as being a member of your faculty. We would appreciate it if you would evaluate this person's teaching performance using the enclosed administrator rating of teacher effectiveness form and return it to us. You need not include your name or the name of the person being evaluated on this form since this information will in no way be individually identified.

A stamped self-addressed envelope is included for your use in returning the completed form. Thank you for your help and cooperation. Please return the completed form by February 29, 1972.

Sincerely,

Douglas H. Johnson

Dr. Irvamae Applegate
Dean, School of Education

Return to: Douglas H. Johnson
1536 10th Avenue South East
St. Cloud, Minnesota 56301
Dear

You may have already received, completed and returned a packet of materials identical to the attached material. If you have done so, please indicate so on this note and return the note in the enclosed stamped, self-addressed envelope.

If you did not receive this material previously, then we have made a mailing error and we would appreciate it if you would complete the enclosed materials as described in the attached letter. Should you have received the material and misplaced it or decided not to complete it, we would like to urge you to complete the attached set. To date, we have received 85% of the original materials we mailed out. The information we are receiving on the returns appears as if it is going to be very helpful to us. Each additional return we receive makes the study that much stronger. Your responses to the various criteria being analyzed in this study are very important to us.

Sincerely,

Douglas H. Johnson

Dr. Irvamae Applegate
Dean, School of Education

Return to: Douglas H. Johnson
1536 10th Avenue Southeast
St. Cloud, Minnesota 56301
Check each item below on the seven point scale to the right of the item. Superior performance by a teacher on an item should receive a rating score of 6. Unsatisfactory performance by a teacher on an item should receive a rating score of 1. If you have had no opportunity to evaluate a teacher on an item place a check in the column headed NOS.

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<td>3. How adequate is his skill development and subject matter knowledge</td>
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APPENDIX B

TEACHER RATING OF TRAINING EFFECTIVENESS
Dear

In cooperation with the School of Education, St. Cloud State College, St. Cloud, Minnesota, I am conducting a research oriented study on certain aspects of the teacher education program at St. Cloud State College. This study is being conducted under the direction of the School of Graduate Studies, Western Michigan University, as it is also my Doctoral Dissertation.

The primary purpose of this study is to attempt to determine what affect, if any, length of teacher education guided experiences with children has on the effective performance of a beginning teacher. Your cooperation in this study will be appreciated.

Please complete the enclosed rating scale, questionnaire and inventory forms and return them to me. It will probably take you about 60 minutes to complete the three enclosed forms. A stamped, self-addressed envelope is included for your use in returning the completed forms. You need not sign your name since your responses will in no way be individually identified.

Thank you for your help and cooperation. Please return the completed forms by February 29, 1972.

Sincerely,

Douglas H. Johnson

Dr. Irvamae Applegate
Dean, School of Education

Return to: Douglas H. Johnson
1536 10th Avenue South East
St. Cloud, Minnesota 56301
Dear

You may have already received, completed and returned a packet of materials identical to the attached material. If you have done so, please indicate so on this note and return the note in the enclosed stamped, self-addressed envelope.

If you did not receive this material previously, then we have made a mailing error and we would appreciate it if you would complete the enclosed materials as described in the attached letter. Should you have received the material and misplaced it or decided not to complete it, we would like to urge you to complete the attached set. To date, we have received 85% of the original materials we mailed out. The information we are receiving on the returns appears as if it is going to be very helpful to us. Each additional return we receive makes the study that much stronger. Your responses to the various criteria being analyzed in this study, are very important to us.

Sincerely,

Douglas H. Johnson

Dr. Irvamae Applegate
Dean, School of Education

Return to: Douglas H. Johnson
1536 10th Avenue South East
St. Cloud, Minnesota 56301
This instrument was color coded for data collection purposes.

Blue—1970-71 One Year Interns

Please rate the effectiveness of your student teaching experience according to the criteria listed below. Check each item on the six point scale to the right of the item. If you had an excellent experience and received excellent help on a particular item, the item should receive a rating score of 6. If you had very little or no experience and received very little or no assistance on a particular item, the item should receive a rating score of 1.

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Green--1970-71 One Quarter Student Teachers

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Canary—1969-70 One Year Interns

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<td>4. How much experience and help did you receive in the care for equipment and materials?</td>
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## D. The Relationship and Outcomes of Instruction

<table>
<thead>
<tr>
<th>Question</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much experience and help did you receive in the articulation of subject matter?</td>
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<td>3. How much experience and help did you receive in achieving pupil progress?</td>
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<td>4. How much experience and help did you receive in relating to parents?</td>
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## E. General

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<tr>
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<tr>
<td>4. To what extent did the student teaching experience help you to become more responsible?</td>
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<td>5. How much experience and help did you receive in making judgemental decisions?</td>
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<td>6. How much did the student teaching experience increase your ability to accept criticism?</td>
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<tr>
<td>7. How much experience and help did you receive in developing relationships with co-workers?</td>
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Sammon---1969-70 One Quarter Student Teachers

Please rate the effectiveness of your student teaching experience according to the criteria listed below. Check each item on the six point scale to the right of the item. If you had an excellent experience and received excellent help on a particular item, the item should receive a rating score of 6. If you had very little or no experience and received very little or no assistance on a particular item, the item should receive a rating score of 1.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much experience and help did you receive in diagnosing learning and behavior problems?</td>
<td>6 5 4 3 2 1</td>
</tr>
<tr>
<td>2. How much experience and help did you receive in providing for individual differences?</td>
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<tr>
<td>3. How much experience and help did you receive in knowledge of subject matter and skill development areas?</td>
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<tr>
<td>4. How much experience and help did you receive in evaluating student progress?</td>
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<tr>
<td>1. How much experience and help did you receive in instructional planning?</td>
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<td>2. How much experience and help did you receive in involving students in classroom activities?</td>
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<td>3. How much experience and help did you receive in making presentations?</td>
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<td>4. How much experience and help did you receive in utilizing teaching methodologies?</td>
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APPENDIX C

TEACHER OR EDUCATION CAREER ORIENTATION QUESTIONNAIRE

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Blue--1970-71 One Year Interns

Please check what you feel is the most appropriate response to the following questions.

1. Do you think you will be teaching next year?

2. Do you think you will be teaching five years from now?

3. Do you think you will be involved in education in some way during the next ten years? (example—public school teaching, administration or counseling; college teaching or administration)

4. If you leave teaching due to marriage or a family do you think you will return to teaching at a later time?

5. Do you think you will do graduate work towards an educationally related masters degree?

6. Do you plan to become or are you a member of a professional educational organization?

7. If you leave teaching do you think it will be due to the salary you are earning?

8. If you leave teaching do you think it will be due to loss of interest in teaching?

9. If you leave teaching do you think it will be due to lack of career opportunities in the profession?

10. How many quarter hours of credit have you completed since you received your B.S. Degree? __________

11. Have you participated in any education inservice programs since you began teaching? __________

12. If you answered number 11 yes—how many have you participated in? ______

13. If you answered number 11 yes—approximately how many hours did you participate in the program or programs? Total Hours ______

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Green--1970-71 One Quarter Student Teachers

Please check what you feel is the most appropriate response to the following questions.

<table>
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<th>Very Likely</th>
<th>Likely</th>
<th>Not Likely</th>
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<td>1. Do you think you will be teaching next year?</td>
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11. Have you participated in any education inservice programs since you began teaching? __________

12. If you answered number 11 yes--how many have you participated in? ________

13. If you answered number 11 yes--approximately how many hours did you participate in the program or programs? Total Hours __________
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Canary--1969-70 One Year Interns

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3. Do you think you will be involved in education in some way during the next ten years?
   (Example: public school teaching, administration or counseling; college teaching or administration)

4. If you leave teaching due to marriage or a family do you think you will return to teaching at a later time?

5. Do you think you will do graduate work towards an educationally related masters degree?

6. Do you plan to become or are you a member of a professional educational organization?

7. If you leave teaching do you think it will be due to the salary you are earning?

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Sammon--1969-70  One Quarter Student Teachers

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APPENDIX D

SIXTEEN PERSONALITY FACTOR SCALE