Three Experimental Approaches to Teaching Reading in Content Fields to Preservice Secondary Education Students

Joan Luverne Paul

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November 6, 1978
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THREE EXPERIMENTAL APPROACHES TO
TEACHING READING IN CONTENT FIELDS
TO PRESERVICE SECONDARY
EDUCATION STUDENTS

BY
JOAN LUVERNE PAUL

B.S., New Mexico State University, 1970.
M.Ed., Central State University, 1974.

DISSERTATION
Submitted in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy in Education
in the Graduate School of
The University of New Mexico
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ABSTRACT OF DISSERTATION

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THREE EXPERIMENTAL APPROACHES TO TEACHING READING IN CONTENT FIELDS TO PRESERVICE SECONDARY EDUCATION STUDENTS

Joan Luverne Paul, Ph.D.
Department of Secondary & Adult Education
The University of New Mexico, 1978

The importance of reading as a process of learning subject matter emphasizes the responsibility teachers have in teaching that process to their students. The training of secondary teachers to meet that responsibility is a recent development for teacher preparatory institutions. Such training must be effective in training teachers who will implement sound teaching practices that include teaching reading as a process of learning.

To train such teachers, it is necessary that factors which affect their learning be identified, to ensure that the outcome of instruction will be teachers with the knowledge of and ability to teach reading in their respective content areas.

Literature relevant to this topic was reviewed and nine variables thought to be influential in the acquisition of concepts of reading in content fields were identified. This research project was conducted to test the relationship of those variables with competency in teaching reading and to determine the effectiveness of three varied instructional
approaches to teaching reading in content areas.

The nine variables identified for study were attitude toward teaching reading in content fields, personal reading competency, sex of the teacher trainee, prior introduction to reading and related field experience, designated teaching level, semesters of education courses completed, college major, level of educational attainment, and number of reading courses taken.

Fifty-nine secondary education students at the University of New Mexico participated in one of three treatment groups. Group one received instruction for teaching of reading in content fields for 80 minutes each class period. The class met twice a week for fifteen weeks. Group two received instruction for teaching of reading in content fields for forty minutes each class period for the same number of weeks, and also received instruction for improvement of their personal reading skills for forty minutes each class period. Group three received a twelve hour introduction to reading.

The hypotheses tested were (1) that there is no significant differences in students' attitudes, reading competency, or competency to teach reading who are taught reading skills in conjunction with course content and students who are not taught such skills, and (2) that competency to teach reading in content fields is independent of the variables of attitude toward teaching reading in content fields, individual reading skill, related field experience and introduction to reading, sex, designated teaching level, number of education courses,
college major, educational attainment, and number of reading courses. The research also proposed to evaluate the effectiveness of each of the instructional approaches.

Instruments were used to assess attitude toward teaching reading in content fields, competency in teaching reading in content fields, and personal reading competency. The instruments used were the Vaughn Scale to Measure Attitudes toward Teaching Reading in Content Fields, Questionnaire - Teaching Reading in Content Fields, and the Nelson-Denny Reading Test. Statistical procedures used for data analysis were analysis of variance, multiple comparison tests, multiple classification analysis, and multiple regression.

A significant relationship at the .05 Alpha level was found in one group between competency in teaching reading in content fields and the variables of prior introduction to reading and attitude toward teaching reading in content fields. Analysis indicated no significant differences in the group who received instruction for personal reading skill and the group who did not receive that instruction. All groups made significant gains in competency to teach reading in content fields, justifying the inclusion of a course in reading in content areas at the preservice level.
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CHAPTER I

THE PROBLEM AND HYPOTHESES TO BE TESTED

Introduction

Secondary teacher training programs have typically included emphasis on the psychological and sociological aspects of teaching and provided the teacher trainee experience with students in his area of content specialization. Recently there has been an increase in pressure from state educational agencies throughout the United States emphasizing not only the desire to produce skilled content area teachers, but also teachers skilled in teaching reading skills within their specific areas as a part of a trend toward accountable teacher behavior preparing literate students.

Lucille Strain (1976) noted that "the most compelling factor that has given impetus to educational accountability is that the general public and persons engaged professionally in education have grown increasingly concerned about the extent and quality of results achieved through education." Such concerns have been directed toward those aspects of the school curriculum which are readily observable, especially toward reading.

The visibility of reading resulted from an increased awareness that large numbers of American school children and American adults demonstrate a high degree of reading difficulties and a high degree of functional
illiteracy. Ekwall (1976) noted evidence of severe reading disability ranging from 5-10% of the student population in high socio-economic classes to as much as 60% of the student population in low socio-economic classes. Research cited by Harris and Sipay (1975) indicated that at least 15% of the seventeen year old students enrolled in secondary schools had such severe reading problems that they had difficulty reading a television schedule or reading a newspaper. Research conducted in the state of New Mexico for compilation of The New Mexico School Profile (1976) estimated that at least 15% of students evidenced severe reading disabilities. In some districts, the percentages were higher. The average scores on achievement tests, of which reading was a part, was 6.9 at the eighth grade level, as compared to a national average of 8.1.

Research projects which evaluated adult literacy were reviewed by Harris and Sipay (1975). It was estimated that 18.5 million members of the adult population could not read at a survival level or function at a self-protective level in this society with the emphasis placed on printed matter in the form of taxation forms, employment applications, and consumer product information sheets.

State, national, and international reports of reading disability created concern in professionals in the reading field and educators in general. The belief was expressed that "a person who had not been given the opportunity to read cannot function in a proper way, cannot live a full human, individual, and social life." (Staiger and Andresen, 1968, p. 27). Equally important to the disabled reader is the inability to learn of technological advances and achieve an in-depth understanding
of elements of his own environment. Reading as a process of learning is not within the capabilities of a severely disabled reader.

The concern about reading disability accentuated the urgent need for special programs to facilitate learning for the disabled readers, and for school-wide, classroom programs for all children. Educators considered such instructional programs to be necessary for individualization and a human right for all students.

Reading professional and classroom specialists began to agree that reading in all school subjects involves a mental process by which the student attempts to acquire ideas. The concept of integrating reading skills in content classrooms became an acceptable, viable manner of teaching. Teachers, however, had never been exposed to such teaching concepts and were not trained to supply such a program for students in their classrooms. The recommendation that such training be provided was an outgrowth of that deficiency.

Umans (1963) noted that the need for teacher training was further brought about by the acceptance of research findings which indicated that (1) reading abilities of secondary students were highly varied and a large number of students were reading far below grade level; (2) learning of content subject matter is directly related to reading ability; (3) reading and learning content subject matter requires specific subject related reading skills unique to that subject; and (4) content area teachers were not adequately trained to teach those unique skills necessary for reading in their subject areas.

An investigation into teacher training yielded a report entitled, The Torch Lighters (1961), which attempted to determine how colleges and
universities were preparing teachers and to identify ways by which teacher preparation could be improved. At the time of that report, twenty-two recommendations were made for the improvement of teacher training. *The Torch Lighters Revisited* (1977) reported how those twenty-two recommendations were carried out. It is important to note recommendation #9 -- "That a course in basic reading instruction be required of all prospective secondary school teachers." (Morrison and Austin, 1977, p. 12). The responses to the questionnaire indicated that of the 220 institutions sampled, 24% required all secondary teacher trainees to take a course in basic reading instruction, but 48% had no such requirements. Additional responses indicated that many departments had considered or were planning for such a requirement. The authors indicated that in many of the states where universities were surveyed, state laws would make such a course mandatory. An analysis of comments received with the survey indicated that most universities agreed with the need. Common recommendations included integration of reading into student teaching, requirements that students work with a reading professional during a period of internship, and possible use of competency-based instruction.

In a nationwide survey, Bader (1975) found that eighteen state certification boards required a reading course for secondary graduates and another sixteen had the requirement under consideration.

By 1982, the state of New Mexico will require that all secondary teachers, in order to be certified, will have taken a course in Reading in Content Fields to prepare teachers skilled in teaching reading skills in their areas and thus provide to students the necessary reading skills to attack specific subject matter.
Statement of the Problem

In considering appropriate and beneficial approaches to a course for the teaching of reading skills, factors related to teachers' abilities to teach reading skills were identified, and from that identification, a viable mode of instruction constructed in consideration of those factors. It was the purpose of this research to investigate those factors, and evaluate instruction constructed in view of those factors as they related to pre-service teacher trainees.

The first objective of the research project was to identify factors believed to be related to teachers' abilities to teach reading. Factors were identified through a search of the literature. Evaluated was the relationship of competency to teach reading skills with the factors of attitude toward teaching reading in content areas, individual reading skill, introduction to teaching of reading skills and related field experiences, sex of teacher trainee, designated teaching level, number of education courses, college major, level of educational attainment, and number of reading courses.

The second objective of the research project was to construct a viable mode of instruction in view of identified influential factors. Two approaches to the course were tested, emphasizing the factor of the teacher trainees' personal reading levels, to determine if instruction directed toward improving personal reading levels prior to learning teaching of reading skills was more profitable than instruction directed only toward learning methods of teaching reading skills.

A third objective of the research project was to evaluate the effect on competency in teaching reading skills that an introduction to the
teaching of reading skills and a related field experience had on the teacher trainees.

Hypotheses

The following hypothesis ordered and provided direction for this research:

Competency in teaching reading skills in content fields is independent of attitudes toward teaching reading in content fields, individual reading skill, related field experience and introduction to teaching reading skills, sex of teacher trainee, designated teaching level, number of education courses, college major, level of educational attainment, and number of reading courses.

A breakdown of the general hypothesis yielded the following null hypotheses for three factors:

1. There is no significant difference in attitudes of students toward teaching reading in content areas who are taught personal reading skills in conjunction with course content and attitudes of students who are not taught personal reading skills in conjunction with course content.

2. There is no significant difference in students' personal reading skills who are taught reading skills in conjunction with course content and reading skills of students who are not taught reading skills in conjunction with course content.

3. There is no significant difference in students' competency to teach reading skills who are taught reading skills in
conjunction with course content and students' competency to teach reading skills who are not taught reading skills in conjunction with course content.

Importance of Study

This pilot study investigated the relationship of specified factors and the teacher trainees' ability to teach reading skill in content fields. It was designed to add to the knowledge base about teacher trainees by identifying specific characteristics of those students, in particular, attitudes held about teaching reading in their chosen fields, their personal reading levels, and their specific teaching competencies as they related to reading. Data was collected which permitted such an evaluation. All variables were then statistically manipulated through correlation and regression techniques to show the degree of relationship to other factors.

The study was intended to be used in decisions regarding appropriate instruction for teacher trainees and aid in course design and planning of teacher trainee programs. The identification of teacher trainees' personal reading levels and its relationship to teaching competency will be particularly useful in determining the future need for instruction prerequisite to learning teaching skills and may be instrumental in the establishment of relevant course content and improved course outcomes.

The study provided an assessment of the value of the alternatives of incorporating an introduction of course content and a related practicum within a teacher training format, the teaching of college level reading skills in conjunction with course content, and the teaching of
course content without the inclusion of college level reading skills.

The decisions made regarding alternate approaches to teaching Reading in Content Fields have impact at several levels. Because the purpose of requiring the course is to provide teachers competent in teaching reading skills, it is important to determine if such a teacher is being produced and by what process that was achieved. At the local level, the research results will be used to determine a portion of the components of the teacher training program and/or teaching of a specified course in reading. On a broader level, the results can be used by other universities and colleges for similar decisions regarding teacher training. It will yield a record of the teaching/learning processes that were a part of this study and will yield results generalizable to other teacher training programs.

**Assumptions**

This study was based on the following assumptions:

1. Competency in teaching reading can be measured.
2. Personal reading skill can be measured.
3. Attitudes toward teaching reading in content areas can be measured utilizing an instrument sampling a broad range of that attitude.
4. In the absence of a punitive situation, students will honestly disclose their attitudes.
5. Teaching competence can be influenced through attitude and the variables influencing that attitude, i.e., sex of person, experience, knowledge and related activities, opportunity to
practice skills and act on attitude.

Description of the Study

This study utilized an experimental treatment of thirty-seven subjects enrolled in an undergraduate Reading in the Content Fields class at the University of New Mexico and twenty-two subjects enrolled in a first semester teacher education class. A description of the treatment for each group follows:

Treatment Groups One and Two: These treatment groups consisted of thirty-seven subjects enrolled in Secondary Education 438, Reading in the Content Fields, at the University of New Mexico. The total number of students so enrolled were randomly assigned to one of two treatment groups.

The two treatment groups received instruction for the same specified teaching of reading skills. In addition, treatment group 2 received instruction condensed for presentation and also received instruction for development of their own personal, college level reading skills.

Teaching skills to be taught were selected by reading faculty at the University of New Mexico as representative of skills essential for effective teaching related to reading in content fields. These skills are listed in Questionnaire - Reading in Content Fields, (See Appendix A).

Treatment group one received instruction for a total of 80 minutes each class period. Instruction included presentation of concepts, demonstration of teaching methods, and, whenever possible, participation in lessons demonstrating these methods.

Treatment group two received instruction for teaching reading skills
for 40 minutes and instruction for improvement of their own personal reading skills for 40 minutes. Instruction for teaching reading skills included a condensed presentation of concepts and condensed demonstration of teaching methods. Instruction for development of personal reading skills included completion of exercises designed to develop college level reading skills. A large portion of these skills were the same skills subjects were learning to teach to middle school or secondary school students.

The objectives for instruction in teaching reading skills were identical for both groups. Both groups participated in similar learning activities; however, group one expanded upon those activities during the period of time group two received instruction in college reading skills. Homework assignments were identical for both groups.

The groups were physically separate except for introduction to class and assessment at the beginning and end of the semester. Two instructors were assigned and exchanged treatment groups to control for teacher effect.

Treatment group three was comprised of twenty-two students enrolled in a first semester teacher education course at the University of New Mexico. Subjects received a 12-hour introduction to teaching of reading skills as described by the operational definition (p. 15) and a reading field experience, also described by the operational definition.

Data were collected on a total of ten variables: (a) competency in teaching reading, (b) attitude toward teaching reading in content areas, (c) reading competency, (d) sex of teacher trainee, (e) prior introduction to reading and related field experience, (f) designated teaching
level, (g) number of education courses, (h) college major, (i) level of educational attainment, and (j) number of reading courses. Multiple regression techniques were used to determine the relationship of all variables and if these variables affected subjects' competency in teaching reading.

Limitations

The interpreted results of this study were used to determine appropriate approaches to incorporating reading into teacher training programs. The results are viewed as having the following limitations:

1. Generalizations to other populations will be limited due to the non-randomization of the sample used.
2. Control of personal variables may limit the generality of the inferences made from results.
3. Attitude of teacher trainees toward teaching reading in their content fields and competencies for teaching reading were measured by the symbolic act of completing a questionnaire, rather than through observation of behavior. This may decrease the strength of generalizations made from research results.

Operational Definitions

ATTITUDE (toward teaching reading in content fields) - the degree of agreement or disagreement with statements indicating feelings toward items contained in A Scale to Measure Attitudes Toward Teaching Reading in Content Classrooms as indicated by the total numerical score computed
from responses to those items.

COMPETENCY IN TEACHING READING (in content fields) - the degree of knowledge about and familiarity with teaching behaviors as described by items in Questionnaire - Teaching Reading in Content Fields as indicated by the total numerical score computed from responses to those items.

READING COMPETENCY - the correct responses as indicated by a total numerical score in response to items on the Nelson Denny Reading Test, Forms C and D. The numerical score may also be referred to in terms of grade equivalent or percentile ranking established through standardization procedures of the test. Reading competency will also be referred to as reading skill.

INTRODUCTION TO TEACHING OF READING SKILLS AND RELATED FIELD EXPERIENCES - a brief exposure to concepts of teaching reading which consists of less than a three semester hour course in reading. Used in reference to treatment in this study, the terms refer to a presentation and practice of the specified key concepts of readability, rewriting of material based on readability, informal assessment of student reading levels, frustration of reading incomprehensible reading material, and directed reading and thinking activities. Presentation and practice involved twelve hours of instructional time and was a part of the first semester block of the secondary teacher training program.

Related field experience refers to experience in the school setting with teaching reading skills under the supervision of reading personnel or university personnel. Used in reference to treatment in this study,
related field experience in reading is specified as being the assignment of individual teacher trainees to a secondary or middle school remedial reading lab for a period of two hours daily for thirteen weeks. Each teacher trainee was personally involved with at least one middle school or secondary student exhibiting moderate to severe reading disability and was responsible for tutoring that student.

**DESIGNATED TEACHING LEVEL** - the general level the teacher trainee has selected to each, i.e., middle school or secondary school.

**NUMBER OF EDUCATION COURSES** - the number of education hours completed by subjects prior to this study, specified in terms of semesters completed within the Secondary Teacher Training Program.

**COLLEGE MAJOR** - the subject field selected as a major teaching field by the subjects. Subject fields were grouped under the general headings of humanities, sciences, or occupational fields.

Humanities subjects included English, reading, English as a second language, history, foreign languages, music, art, and social studies.

Science subjects included science, math, and life science.

Occupational fields included business education, industrial education, and home economics.

**LEVEL OF EDUCATIONAL ATTAINMENT** - indicated to be graduate or undergraduate.

**NUMBER OF READING COURSES** - the number of reading courses completed prior to participation in this study, i.e., no prior reading courses, one reading course, or two or more reading courses.
Organization of the Remainder of the Study

Chapter I presents the background of the problem, the specific statement of the problem, the hypotheses, the importance of the study, the assumptions and limitations of the study, a general description of the research project, and operational definitions of terms used in the research.

Chapter II includes a review of the literature dealing with the relationship of reading and content area achievement, the factors influencing performance and knowledge of teacher trainees, the importance of influencing factors on the performance and knowledge of teacher trainees, and models of pre-service and in-service education programs.

Chapter III includes a description of the subjects, the design of the study, and a description of the procedures. Each of the treatments is described. The three instruments (the Nelson-Denny Reading Test, the Vaughn Scale to Measure Attitudes Toward Teaching Reading in Content Fields, and the Questionnaire - Teaching Reading in Content Fields) are described.

Chapter IV presents the general descriptive statistical summary and the data derived from analyses.

Chapter V summarizes the study and includes the conclusions and recommendations.
CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The rationale for this study was based in part on phenomenological theory and in part on behavioralistic theory. The phenomenological theory purports that behavior is a function of how a person perceives himself and his own ability. Self assessment of knowledge and attitude were accepted as valid sources of data for that reason. It was felt that later teaching behavior would be largely dependent on how competent the students participating in this study felt they were in relation to the teaching of reading in their field. It was further felt that competency in teaching reading was also a function of the social situation as perceived by the students. The reasons for choosing a given subject field, the value for reading learned through social contact, the expectations others have for persons in a given sex role, as well as numerous other social factors, may affect self perceptions - not only in terms of competency, but also in terms of attitude.

The phenomenological field, however, also purports that perceptions of self cannot be measured, except as a personal definition by that person. Definition (measurement) by other persons would be colored by separate, perhaps related, perceptions.

Although in part agreement with this theory, the researcher also believed that if the process of change in people is considered as being in social context, behavioral research methods can be used to assist in
the explanation of behavior. This research attempted to combine instrumentation with consideration that each individual acts in social context and, therefore, empirical data need not attempt to explain total observation. Although normally considered to be opposite approaches to research, the combination of behavioralistic procedures with phenomenological viewpoint is currently being encouraged (Deutscher, 1973) to counteract what may have been a weakness in research conducted and reported in the past.

Deutscher noted that much of the research conducted in the behavioral sciences relied on surveys of attitude, opinions, or behavior, which collect data in a behavioralistic manner without consideration of the social context that people act within. That is, researchers have tended to analyze phenomena in objective manners through instrumentation, believing that the "objective" results of their efforts represents "truth." Deutscher criticized such procedures from a phenomenological point of view and purported that such objectivity fails to account for individual influences which may not be accounted for through instrumentation.

The combination of the two approaches of phenomenology and behaviorism in this study was meant to strengthen the results reported rather than endangering conclusions by steadfastly adhering to "empirical data" or "perceptions of" the project being investigated.

Chapter II will first discuss the relationship of reading and content area achievement and the implications that relationship has for content area teachers. The chapter will then summarize literature relating to factors which influence the teaching of reading in content
areas and the importance of those factors in establishing performance and knowledge bases of teacher trainees. Models of teacher training and in-service programs will be reviewed.

The Relationship of Reading and Content Area Achievements

"Process - the cluster of diverse procedures which surround the acquisition and utilization of knowledge - is, in fact, the highest form of content and the most appropriate base for curriculum change." (Parker and Rubin, 1966, p. 1)

Parker and Rubin (1966) criticized the traditional teaching of knowledge "for knowledge sake" and offered a process oriented curriculum with instruction based on personal characteristics of the learner. By coordinating learner characteristics with the nature of knowledge, the authors proposed that students would have opportunity for cross-application, thus using processes and knowledge to acquire further knowledge.

Process, as defined by the above authors, refers to all the activities associated with knowledge and the human acts of acquiring it. Graphic models presented to clarify that definition indicate that reading is a major part of acquiring knowledge, in that it is an intake operation prerequisite to dealing with information in any higher manner. The ability to "read" mechanically is necessary to take in information independently.

Beyond this intake operation, the learner must deal with and manipulate knowledge to broaden it. Again, reading is a necessary skill to facilitate comparisons, evaluations, and contrasts of bodies of information. Finally, reading is a basic process by which information can be taken in, manipulated, and eventually applied by the learner.
The effectiveness of applying reading as a process to learn content material is evident. Research conducted to test such effectiveness has indicated that reading achievement is closely related to subject achievement. Research cited by Artley (1968) indicated that at the ninth grade level, reading vocabulary was more predictive of content area achievement scores than any other factor. At the eleventh grade level, reading comprehension was more predictive of content area achievement than any other factor. A composite of study skills was also predictive of content achievement at both ninth and eleventh grade levels, particularly when those skills were highly specific to a given field.

Ames (1971) reviewed research conducted in reading in content areas in the previous five years. He concluded from that review that instruction toward reading skills at the secondary school level strongly supported the contention that students gain significantly in content achievement when reading skills were taught, even though time was taken from the instruction of content for such skills. Teachers who provided reading process learning experiences for their students clearly produced a change in learning outcomes.

Dietrich (1970) noted that not only is reading necessary as a process of learning, but also as a vehicle for making information relevant to secondary students. And, although reading achievement is shown to be highly related to content achievement, she believed that in many cases, schools teach reading as though it were a subject within itself rather than as a process to be incorporated with the total curriculum.
Implications for Content Area Teachers

The importance of reading as a process of learning subject matter emphasizes the responsibility teachers have in teaching that process to their students. That importance is readily noted in reports of deficiencies of students who have apparently not acquired process skills of learning through reading and/or reading skills providing for later independence in learning. Such reports are typically summaries of the results of achievement tests administered on a national basis which indicate, first, lower achievement scores in reading ability, and second, a suspected lower achievement in content fields due to that reading disability.

Research reviewed by Harris (1969) indicated that as much as 25% of the target population entering secondary schools were under-achieving in reading. Harris and Sipay (1975) estimated that 10-15% of the school population are reading disabled. That estimate, however, had not accounted for students considered to be "slow learners." If those students were accounted for, the estimate of the number of students with serious reading problems would more than double. Studies of specific reading skills further indicated that although the basic literal level reading skills of students have stabilized over the past forty years, evidence of more mature reading skills was lacking (Harris, 1969). Mature reading skills were specified as critical thinking, study skills, and evaluation and analyzation skills. These skills were the same as those specified by Parker and Rubin as necessary to manipulate information as a process of learning. Without them, subject area achievement scores could be expected to drop.
The nationwide reaction to lower achievement scores and lower scores of reading ability have been, first, to expand reading programs in every school, and second, to make every content teacher a teacher of reading skills. Harris (1969) indicated that expansion of reading programs included provision of special services, provision of developmental programs at both elementary and secondary levels, and development of reading/study programs at the post-secondary level nationwide. Harris contended that such programs have not seriously affected the number of under-achieving readers over a considerable period of time.

To some degree, the lack of effect new programs have had on achievement scores has been due to the limited number of trained reading personnel (Artley, 1970). To a larger degree, however, the lack of effect is due to inadequate teacher pre-service education programs and teacher in-service programs to prepare and educate teachers in appropriate teaching of reading (Harris, 1969). These deficiencies in teacher training have served as the justification in the majority of state for reading course requirements for certification. This change in teacher training is expected to bring about educational changes which will eventually result in raising student achievement and reading scores.

Medley (1977) summarized such expectations as inter-related steps in the educational process. It is expected that (1) teacher training experiences will produce a change in (2) the performance of the teacher, which will results in (3) changes in learning experiences of students and in turn, (4) change pupil outcomes. The author noted that the present concept of teacher accountability centers around the fourth level of teacher effectiveness - pupil outcomes, and suggested that such a focus
may need to be reconsidered. He noted that teacher competence involves a knowledge base on the part of the teacher, providing awareness that pupil behavior and learning outcomes are related, and a performance base, which provides that the teacher have the ability to behave and act in such a way as to provide for those learning experiences. Such a focus clarifies that it is the activity of the learner, rather than the activity of the teacher, which produces learning. Evaluation of effective teaching should, then, be centered on the learning experiences provided by the teacher.

The act of teaching reading skills in content areas necessitates that the learner must engage in learning activities providing for that skill. Herber (1970) stated that incorporating the teaching of reading into the teaching of content material required modification of teacher behavior and changes in the roles of both teacher and learner. When the teacher teaches students how to acquire information, he is concerned with the process, rather than the skill itself. The learning experience provided is concerned with process. The outcome is increased information intake. If that skill were taught for the sake of learning a skill only, as might be the case in a reading class, the outcome would be further development of that skill only.

The goal of teaching pre-service teachers reading skills for content areas is to provide the knowledge of and ability to teach reading skills. An outcome of that ability is the construction of learning experiences for their students which would enable them to utilize reading as a process for acquiring information.

The implications reading has for content area teachers are (1) that
reading is a major process of learning subject matter knowledge; (2) that achievement scores and reading abilities of students are a reflection of those students' abilities to use reading as a process of learning; (3) that teaching reading as a process increases subject matter achievement; (4) that it is the responsibility of the content area teacher to teach reading as a process; and (5) it is the objective and responsibility of pre-service and in-service instruction to provide knowledge of and skill with reading to enable teachers to teach reading as a process.

Factors Influencing the Teaching of Reading in Content Areas

Emphasis on content specialization, as well as other factors, has influenced the effectiveness of teacher trainees and the transfer of effective behavior to actual teaching. Stratemeyer (1962) cited evidence that the feelings and perceptions a pre-teacher has may effect his work with students. The way he views himself and the role of teaching in society are two factors noted.

To produce teacher trainees capable of teaching reading as a process in content classrooms, factors effecting the performance and knowledge of those trainees must be identified. Once identified, appropriate instruction can be designed which will increase their effectiveness.

Attitude and Reading Ability

There are several known factors influencing the acquisition of knowledge and performance of teacher trainees and the extent to which those teacher trainees practice that knowledge once in the classroom. First, there is evidence that attitude toward and valuing of reading effects
the extent to which a teacher trainee will utilize the information presented.

Olson (1969) noted that a reading program established in a total school setting is largely dependent on the attitudes of content area teachers. A prevalent attitude among the members of the staffs of the Olson study was that there was not "time" to teach both content and reading skills. A second common attitude was that teachers believed they were already teaching reading skills and providing for variety of reading levels, which when tested through observation, could not be supported. It would appear that in this large sample (N = 585), teachers lacked both a knowledge and performance base to teach reading skills and portrayed a resistive attitude toward teaching reading in content areas.

Vaughn (1977) contended that the teacher's attitude may be the indicator of how much teachers will learn when taught a course in reading skills, and may also determine how much of that learning will be practiced in the classroom. Having authored a scale to measure attitudes toward teaching reading in content areas, Vaughn tested for and found significant differences in attitudes in groups after being familiarized with aspects of teaching reading in content area classrooms.

LaPiere (1973) stated that any measurement of attitudes by the questionnaire technique proceeds on the assumption that there is a relationship between the symbolic behavior of responding to items on a questionnaire, and the non-symbolic behavior of actual action when faced with the same choices in a real social situation. Even though it may not be possible to prove that such a relationship exists, it is not necessarily logical to assume that it does not. In research conducted
to study social attitudes vs. behavior, it was found that other factors may well play a much more important part in determining behavior than the attitude being "measured." Such factors include the type of person mutually involved in the social interactions, or the way that person speaks, dresses, or behaves. Even though a positive attitude may be expressed symbolically, such factors may influence the person acting to behave in a manner denoting negative attitudes. LaPiere stated that although the questionnaire technique of measuring attitudes yields accurate quantitative results, it is more important to gather qualitative data through actual observation.

The studies by Olson and Vaughn suggest that there is a relationship of symbolic and non-symbolic behavior when measuring attitudes toward teaching reading in content areas. Olson noted resistive attitudes toward teaching reading and through observation of teaching behavior, evidence that teaching of reading was not occurring. Vaughn noted that responses to an attitude questionnaire changed significantly following acquisition of a knowledge base of reading skills. These studies suggest that attitude toward reading is related to teaching behavior and that knowledge about teaching reading is related to attitude.

A study conducted by Mikulecky and Riboch (1977) provided data on the factor of attitude toward reading and other aspects influencing teacher trainees. The study dealt with undergraduate education students' reading competencies and attitudes toward reading and was based on previous studies indicating that teacher preparation students have low reading ability, reading habits which included little recreational reading, and a negative attitude toward reading. The study asked the questions:
(1) To what extent are college students who are attending reading methods classes as part of the training program competent readers? (2) To what extent do these students have a positive attitude toward reading? (3) Do the variables of sex and designated teaching level relate to reading competencies and attitudes toward reading? (4) To what extent are reading competency and attitude toward reading correlated? (5) What effect do other factors (i.e., grades in methods class) affect their attitude and reading competence?

The subjects of the above study were 141 students at the University of Wisconsin who were taking a reading methods course to meet a state requirement. The measurement instruments used were the Estes Scale to Measure Attitudes toward Reading, the Dulin-Chester Attitude Scale, the Mikulecky Behavioral Reading Attitude Measure, and the Nelson-Denny Reading Test. Other informal self-report data utilized were self-evaluations on reading ability, habits, attitudes, and course grades.

The test results indicated that the subjects scored at the 60th percentile or higher on the Nelson Denny. A 'z' test was used to determine significance of difference for means between groups for sex differences and designated teaching level. Results were not significant. Relationships between the variables of attitude toward reading and reading competence were tested using the Pearson product moment correlation procedure and found to be statistically significant. However, only a small percentage of the variance could be accounted for (14-19%) and, therefore, the authors considered the results to be less educationally significant.

The variable of attitude did not correlate significantly with reading rate except when the Mikulecky attitude test was used. The correlation
of final course grade and reading competence was significant, indicating that good readers tended to do better in the class. However, final grades did not correlate significantly with reading attitude. Self-report data tended to indicate accurate perceptions of ability and attitude.

The authors concluded that the majority of pre-teachers do have good reading competencies, but, due to the disagreement with previous research, encourage further study. A variable influencing results was high entrance requirements at the University of Wisconsin, also comparative measures of teacher attitudes were lacking.

Strang (1964) cited research indicating that 64-95% of college freshmen may exhibit reading deficiencies and that three-fourths of universities surveyed had a reading program or a course in reading improvement. Success with the reading act was not correlated with success or failure of any other performance.

Zais (1978) measured the reading skills of 387 senior secondary education students at Kent State and compared their scores with those of a norm group of 18,458 college freshmen. His conclusions were that the majority of the sample population read better than the norm population and exhibited a large range of reading skill, ranking from the first percentile to the ninety-ninth percentile. Approximately 15% of the sample population, however, read less well than three-fourths of the norming population. Zais suggested that for that 15%, the lack of reading proficiency could strongly affect teacher effectiveness and could contribute to an underdeveloped vocabulary, a shallow cultural background, and an inadequate knowledge of their subject matter.
Larsen, Tillman, and Cranney (1976) compiled a listing of reading scores for students entering the University of Florida from 1960 to 1970 to determine the trend for reading abilities of those students. These authors concluded that reading ability of university freshmen remained highly stable over a ten-year period. The entrance requirements for that university mandated a pre-requisite ranking at the 60th percentile on a state twelfth grade achievement test prior to admission to the university. Therefore, low ability students could not be expected to be a part of the sample.

Although there are few studies dealing with remedial readers at the upper college levels, it is postulated that the degree of success an individual has had with the reading act is influential in affecting the knowledge and performance base of those individuals. The teaching of reading in a content field could be expected to be more prevalent for those teachers who are successful readers (thus positive attitudes) than those who are not successful (thus negative attitudes). It is possible that before a teacher can or will teach a reading skill to students, he/she must first be comfortable and competent at that skill also. The research conducted by Mikulecky and Ribovich suspected such a dependency and did find a significant relationship between reading competence and attitude toward reading. The subjects used were all considered competent readers, therefore, a correlation between negative attitudes and low competency was not possible. If the relationship extends to include attitude toward teaching reading, it would suggest that reading competency of future teachers would be a priority before knowledge of teaching reading in content fields would even be possible.
Ehrlich (1973), in arguing that attitudes may predict behavior, stated that expressions of attitudes may be a predictor of behavior if that attitude is well formed or close in time to the attitude measurement. One variable in this prediction is the specificity of the object of the attitude. While an individual may react in one way to a specific object or person, he/she may react differently to a total situation. The expression of attitude may be considered to be a degree to which that attitude is developed. If the attitude measurement includes a broad sample of possible degrees of that attitude, it may be used as a predictor. One must further identify the conditions under which specified behavior could be expected to occur as a result of that attitude.

Ehrlich's theories provide support to the idea that attitudes can predict behavior and that attitude toward teaching reading in content fields can be used to predict later teaching behavior if the intervening variables of learning and competence imply the importance of personal reading skills and competency in teaching reading skills as well as the opportunity to act and knowledge of how to act. A solid knowledge and performance base in an opportunity to act would suggest that the individual would acquire a more well developed attitude, and the expected teaching behavior would be increasingly more consistent with that attitude.

Field Experience

In the late seventeenth century, the field of teacher training converted from the concept that teaching could be learned from observation and imitation to the concept that practice in teaching with guidance and supervision was necessary to produce competent teachers (Johnson, 1968).
"Student" or "practice" teaching has become so well accepted and standard in American education teacher training programs that few would question its inclusion. The opportunity to practice the teaching of reading skills in content areas has not been so evident, yet appears to be highly influential upon teacher behavior.

Baxley (1976) noted that a common criticism of teacher education programs is that they do not prepare their graduates to teach reading. Programs become so subject oriented that teachers must rely on teacher's manuals and/or guesswork if reading is to be taught. The author recommended a performance based, field oriented program as an alternative to that situation.

The need for related field experience was further identified by Morrison and Austin (1977). The evaluations received in response to their questionnaires included much support for student involvement with pupils, practicum experiences related to reading courses, and field experiences related to reading.

Further support for the effect and inclusion of field experiences in reading can be drawn from the justification for performance based and field oriented programs, as well as the results they purport to achieve.

The performance based program described at the University of Washington (Baxley, 1976) consists of four elements: (1) a clinic-field relationship; (2) performance based behavior; (3) strong peer relationships; and (4) length of a continuous program. Reading concepts commonly taught in the program include reading process, reading difficulties, word attack skills, comprehension and vocabulary skills, readiness,
informal and formal evaluation, reading programs, children's literature, and record keeping. Students enrolled in the program complete twenty weeks of intensive clinic and field based experiences, with five weeks of that time spent in full time field experience. The competencies of students completing the course are judged by instructor/peer evaluations, as well as by employability of graduates. Graduates of the program receive preference for hiring both locally, and in other districts. Tentative results of follow up studies also indicated superior performance as first year teachers.

Burnett and Schull (1976) described a secondary education program which included a field experience in reading and indicated that the field experience was included to maximize the possibility of parallel behavior in a real teaching situation with that of a theoretical situation. Field experience, or actual teaching experience, the authors believed, tends to develop a "need to know" for application to that experience.

Research reporting results of the effect of field experiences suggested the value of such experiences. Boehnlein and Gans (1975) conducted a study to determine if students in a field based program performed better in ability to assess and teach specific skills than students enrolled in an on-campus course using the same materials, but different amounts of field experience. Using the Wallen Competency in Teaching Reading Test, the authors determined that extensive field experience in a school setting did contribute to competency as measured by the Wallen test and determined significant differences using an analysis of variance procedure.

Guszak (1971) noted the weaknesses of reading methods courses for
pre-teachers and cited as causes the theoretical nature of the courses, lack of practical information, and lack of contact with real children in a school situation. Because reactions to student teaching were quite positive, he believed a major element of satisfaction to be teacher contact with children, and designed a tutorial practicum for pre-teachers to be conducted on campus. The program was in operation for four years and students responded to it with favorable attitudes. However, there did not appear to be any transfer of skills into student teaching or actual teaching.

Although students indicated that working with children was a positive aspect of the course, it was still not field experience in a school setting, nor did the tutorial sessions provide experience in working with large numbers of children as the actual class setting would. A change from on-campus tutorial sessions to a field experience approach was instigated and the author felt the change brought about a more concrete learning experience. Evaluation was by tutee and tutor growth, and although evaluation was not complete, both ages of students appeared to evidence a positive change in behavior.

Dauzat (1971) identified field-centered teacher education as a key concept in development of accountable teachers. He asserted that only through field experiences can students demonstrate the skills and abilities to perform a task necessary to teach reading in a real school setting and, consequently, tie theory to reality.

The research reviewed indicated that field experience in the teaching of reading should and does enhance teacher competency in a real teaching situation, and has, in fact, been a deficient element in the training of teachers.
Introduction to Reading Concepts

As the importance of reading instruction in content fields became more emphasized, it became a common practice to introduce major reading concepts to pre-service and practicing teachers in classes or in-service sessions, with the objective of motivating and interesting teachers in teaching reading. Morrison and Austin (1977) noted that in the original Torchlighter study conducted in 1961, approximately half of the universities surveyed provided only an introduction to reading for their pre-service teachers before they entered the practice. Such an introduction was incorporated into a language arts methods course, and included an average of eight hours of instructional time. Although such an introduction to reading was the only preparation received by many practicing teachers, universities and certification boards unanimously agreed that such a brief exposure was inadequate to properly prepare teachers and began to require course completions in reading before graduation or certification.

Such course completions often do not occur prior to teaching experience, as is the case with teachers practicing prior to such a requirement, or in the case of pre-service teachers who elect to take such a course following student teaching. The importance of an introduction to reading concepts is worthy of investigation to determine the impact such exposure has, assuming such an introduction is the only prior information available.

Reading specialists/teachers in the school setting traditionally were given the responsibility of informing fellow staff members regarding reading concepts, either through informal contacts, or through in-service
programs. Such a format has, in the past, been thought effective, but research results testing effectiveness indicated questionable impact.

Braam and Walker (1973) replicated a 1964 study to determine and update information regarding the extent to which content area teachers were aware of reading skills relevant to their subject field. In addition, they wished to determine the effect of having reading programs and/or reading personnel in the sampled schools. Their conclusions were that the majority of subject area teachers were unaware of the reading skills needed by their students, and that the influence of reading personnel was no greater than was indicated in the original study. The original study indicated that 28% of the staff had received instruction or in-service in reading, the latter study indicated that 27% had received instruction. A reduction of reading programs was noted: 68% of the schools had reading programs in the 1964 study; only 41% of the schools had reading personnel in 1973. Although the reduction in the number of reading personnel could excuse the lack of impact, interaction with content teachers did not appear to be influential in changing teacher knowledge about reading in either study.

Burnett (1966) indicated that reading personnel involved in staff instruction tend not to emphasize skills applicable to specific content fields, and, therefore, those teachers' attitudes toward reading tended to harden toward in-service staff instruction, thus, knowledge tends not to be advanced.

Osburn (1974) reported success with an in-service education program which introduced the concept of psycholinguistics in reading, followed by a brief opportunity to apply that concept. Although the in-service
involved only a few hours of instruction, the introduction was reported to be effective.

At the undergraduate pre-service level, reports on the impact of an introduction to reading tended to be general in nature and largely critical of past instruction due to the inadequacies of such an approach. Wolfe (1971) noted that past programs had been inflexible in providing instructional plans to the individual teacher, and tended to provide irrelevant and impractical preparatory experiences.

Studies cited by Marks (1971) summarized the inadequacy of the amount of time devoted to pre-service training in reading. Studies were cited which followed teachers through their first year of teaching. Indications were that administrators felt teachers were inadequately prepared in teacher training, specifically in the teaching of reading. Such shortcoming, Marks believed, were due to lack of proper instructional time allotted for reading instruction, lack of experiences with children, and insufficient classroom observation.

The negative aspects of an introduction to reading concepts have been reported to be inadequate knowledge about reading, teacher inability to apply knowledge, lack of teacher effectiveness in teaching reading, and possible general teacher effectiveness. One study reported positive feedback from teachers involved in an in-service introduction to reading. The research reported indicated that an introduction to reading, as the only instruction provided, was inadequate. The impact of such instruction was not evaluated in terms of positive outcomes it provided.
Sex Differences

Eighty-six percent of American primary teachers are women (Oakley, 1972). Although the proportion of women in secondary education is less, the majority of secondary teachers are also women. Oakley purported that women tend to go into teaching because of the female characteristics of gentleness, a superior ability to deal with children and understand them, and a natural tendency for relaying values and "teaching" those aspects of society believed to be worthy of preservation.

The possible influence that women teachers may have in education has only begun to be studied, however, Sears and Feldman (1972) noted that the feminine influence in the educational system drew complaints that male children received poor models for academic achievement. Research reviewed by Alexander and Filler (1976) indicated a belief that male students read less well and have less interest in reading than female students. Sears and Feldman and Oakley indicated similar perceptions in various academic subjects in regard to achievement according to sex differences (i.e., females tend to do well in certain "non-academic" subjects, while males tend to do well in "academic" subjects).

This would indicate that learning is, in part, role defined, and that teaching of and attitudes about teaching reading in content areas may also be role defined.

Olson (1970) found that female teachers felt more assured than male teachers that textbooks used with their students were appropriately suited to their reading levels. Female teachers, more than male teachers, felt they were teaching reading skills within their content fields. Supervising personnel evaluated their actual teaching performances less favorably.
Mikulecky and Ribovich (1977) also thought a relationship existed between sex of teacher trainee and reading competencies and attitudes toward reading. Statistical analysis revealed no significant relationships. The authors noted the highly select group of students evaluated in the study and suggest further research with subjects with more varied characteristics.

Studies reviewed reported conflicting findings regarding the relationship of sex and attitudes toward reading. Alexander and Filler (1976) suggested that, in general, females have more favorable attitudes about reading than males, although other studies reported no significant differences in attitude due to sex. If attitudes about reading are culturally learned attitudes, both student and teacher behavior may be effected.

**Designated Teaching Level**

The primary responsibility for teaching reading skills has traditionally been allotted to the primary teacher. It has been assumed that as students approach the higher levels of education, the more necessary it is to learn "pure" content in preparation for college or occupation.

Reading skills at the elementary level tend to be more specific in nature and are often taught as a part of the subject of "reading," with the idea that those skills can be transferred to other areas. As students approach the upper grade levels, they are then expected to apply those skills. Research cited above would indicate that this ability is not evidenced by all students, especially those with reading disability. It then becomes the responsibility of the teacher to teach reading as a
process of learning to those students. How much the student is taught reading application skills may, however, depend on how far he/she has progressed in the educational system, as there appears to be a difference in attitude of teachers at the different levels of education.

Research has shown (Gage, 1963) that there are significant differences in teaching attitudes of elementary and secondary teachers as measured by the Minnesota Teacher Attitude Inventory. Although the nature of those attitudes was not identified, elementary teachers exhibited more interest in student development than did secondary teachers.

One study dealing with undergraduate elementary and secondary education students indicated an interest in the relationship of designated teaching level (i.e., elementary or secondary) and attitudes toward reading and reading competency. In this study, Mikulecky and Ribovich (1977) believed there was a possible relationship between students' chosen teaching level and their attitudes toward reading, as well as their ability to read. Statistical analysis showed no significant differences, however, their subjects all exhibited a high degree of reading competence. Further research was recommended which might include subjects exhibiting varied reading levels.

**College Major**

A common comment of resistance to teaching reading in content fields is that such a responsibility belongs to the English or special reading teacher. Reading personnel dealing with staff in an in-service setting have noted the varied degrees of cooperation from teachers in separate content fields, and have noted that in-service can only be successful if
it meets the individual needs of those group members (Aaron, 1965).

The selected college major of undergraduates may also be influential in their learning experiences regarding the teaching of reading. Gage cited research indicating a significant difference in attitude and teacher-pupil rapport of three groups of education majors. The subjects were divided into three groups: early childhood majors, academic field majors, and special field majors consisting of art, home economics, industrial education, music, and physical education. Of the three groups, the early childhood group consistently scored highest in teaching attitude and teacher-pupil rapport, followed by the special field majors, with the academic field majors scoring lowest. Those significant differences were also found prior to and following professional training.

Olson (1970) found a widely varied response to questionnaire items based on seven content areas represented in his sample of 585 high school teachers. Self-assessment of classroom practices indicated that all content area teachers except foreign language teachers felt texts were suitable for their students. Vocational and social studies teachers felt least prepared to teach reading skills. Other questionnaire items received highly varied responses from the seven content areas represented. The responses indicated that the selected college/teaching major may be an important variable in the teaching of reading in content fields.

The Influence of Personal Variables on Behavior

The factors thought to influence the performance and knowledge of the teacher/teacher trainee effect both teaching behavior and student performance. Alexander and Filler (1976) noted that the teacher is such
a significant force in the performance of his students that techniques and materials may be only secondary. The teachers' non-verbal behaviors, the model he presents for students, the general classroom environment, and the attitudes and values he portrays to students are extremely influential in the development of students' self-concepts and the way he views learning in general.

Rieck (1977) surveyed content area teachers to determine if the attitudes and values they believed they were portraying about reading were perceived similarly by their students. Survey results showed that teachers believed they were placing prime importance on reading to gain information in their classes. Students' responses indicated, however, that in those same classes, reading to gain information was of very little importance. Although teachers believed themselves to be expressing high value of reading, non-verbally they were relaying low value of reading.

The factors believed to influence knowledge and performance of teachers may be reflected in behavior derived from those bases. Thus, influencing factors may be equally important in terms of behavioral outcomes of both teachers and students as a vital part of perceptions toward learning.

Models of Teacher Training Programs for Teaching Reading

Pre-service teacher training programs for the teaching of reading are relatively new in the field of education. Outlines of successful programs are included to summarize approaches that have been or are being implemented.
At Illinois State University, Kennedy and Getz (1972) reported that the Secondary Education Program incorporated reading into the teacher training program in 1972 for all undergraduates utilizing a competency based model. The program was a change from their previous procedure which taught Reading in Content Areas as a separate course. The design for the program utilized a portion of the 11-semester hour pre-service education block for a competency based reading skills program. The reading program utilized a sequential format with behavioral objectives for each step. Data was not reported on the success of the program.

Temple University began offering a course for content teachers in 1970. Emphasizing a psycholinguistic basis for the course, students were required to complete two hour tutorial sessions and film peer micro-teaching situations, as well as attend lectures for basic information. The instructors evaluated the impact of the course by use of a survey form which asked the students to indicate the degree of usefulness the information would provide. The survey responses indicated that the students found the course helpful, but data was not reported (Language & Reading Skills, 1977).

A pre-student teaching field based experience involving reading raised attitudes toward reading as surveyed in more than half of the students involved in the program at Tennessee State (Beach and Reinhartz, 1977). The students participating were involved in reading instruction and served as non-instructional activities in the school setting. Comparative group data was not reported.

Dauzat (1971) emphasized the need for a behavioral change in children
as the impetus for a parallel change in the training of teachers. The ultimate goal, he contends, is "to provide opportunities for graduate students to develop competencies, knowledge, and attitudes necessary to successfully modify the reading behavior of students." (p. 104) Preparation of teachers, he stated, has to involve more than a traditional cognitive understanding on the part of the teachers. Specific performance behaviors must be expected of and achieved by teachers, and opportunities to develop behaviors provided. The author justified a performance based instructional program by observing that knowledge about a subject does not predict the ability to apply such knowledge in a classroom situation. Such an approach necessitates the opportunity to behave accordingly in a field situation to integrate knowledge and skills realistically.

In agreement with Dauzat's argument for performance based instruction, a performance program implemented at the University of Texas at Austin is described in a previous section, Field Experience (Guszak, 1971).

Yarington and Boffey (1971) described a performance based curriculum at the University of Massachusetts. Students were allowed to choose from 152 performance objectives and required to complete 25 objectives. Assessment of students following completion of the objectives indicated that 468 students had completed the program. No further evaluation was reported.

Gallant (1969) described a program for elementary pre-service teachers which attempted to phase students into the classroom gradually and incorporate concepts of a reading methods class with classroom experience. Students began their school experiences with observation, progressed to
a tutoring experience, later to small group instruction, and finally
to classroom management. Interaction with university faculty provided
feedback and guidance. The author noted increased insight into reading
problems and learning in general.

Models of In-Service Education

Models of in-service programs were considered relevant to this
study in that participants receive initial reading instruction, yet bring
to that instruction the experiences of past teaching. The models of
such programs add practical and applicable instructional ideas.

Osburn (1974) reported a psycholinguistic approach to in-service
training with the goal of making teachers aware of the reading process
used by every individual. Nine teachers from varied disciplines were
released from classes for a two and one-half hour session until eventu-
ally 95% of the staff had participated in a session. Content of the
in-service included a reading frustration exercise, group discussions,
and an analysis of psycholinguistic factors affecting comprehension.
After the introduction of the above concepts, teachers were able to
analyze their textbooks in view of psycholinguistic factors.

Schleich (1971) identified three goals of an in-service practicum
for the two schools involved in her program. First, teachers were to be
made aware of students' reading needs in content courses. Second, teachers
were to be made aware of students' reading levels. Third, teachers were
to be made aware of the readability of their materials. A teacher
opinion survey was given to determine future needs. It was determined
that teachers felt adequately prepared to deal with the competent readers,
but felt frustrated and helpless in dealing with low-ability readers. Recommendations following the practicum requested consultants for elementary and secondary schools and a coordinated school reading program involving the total staff.

An in-service program entitled, *Operation READS* was reported by Dramer (1975) as successful due to its concise, short term, comprehensive nature. This program began as an effort to teach all students in the seventh grade one reading skill applicable to every subject. The skill selected was the survey, question, read, recite, review method of study (SQ3R) and required only a few hours of training for teachers to understand the concept and learn to teach it. Materials were written by selected staff members and were ready for use at the start of the project. All teachers in the school taught the SQ3R method for one week during every class period. Program assessment indicated that every student could use and apply the method after one week. The program has been expanded to include grades eight and nine, but continues to concentrate on the teaching of reading for only one week each year.

A one week in-service workshop was reported by Wright (1975). The purpose of the workshop was to prepare materials for the first two weeks of the school year, the first week's materials to be diagnostic, the second week's materials to be for instruction of reading skills. The workshop combined instruction, demonstration, independent study, involvement in activities, and an awareness of personal responsibility to teach reading. A variety of skills were presented and teachers demonstrated and collected materials for skills applicable to their own classes. Evaluation of the workshop indicated very positive attitudes and insights into the teaching of reading.
White (1977) described a program that combined in-service education for a number of staff members, as well as field experiences for pre-service teachers, student teaching experiences for students, intern experiences for graduate students in reading, and tutorial experiences for a number of education majors. The program revolved around a reading center housed in a large secondary school. Teachers involved in the in-service program learned basic reading concepts which they applied in their classes, but also took a number of their students to the reading center where they received special help. Students from the university served as aides, student teachers, and tutors under the supervision of interns and university supervisors.

Topics for in-service sessions included the reading process, the relationship of language and reading, diagnostic procedures, readability of materials and its application, and study methods. In conjunction with the in-service, an instructional plan was devised for students to develop reading skills and lessons and activities were planned for that development.

Evaluation of the program was by student and teacher growth. Secondary students exhibited a year's growth on the Comprehensive Test of Basic Skills and .98 year's growth on the Botel Word Opposites Test. Middle school students participating in the program exhibited a .8 year's gain on Comprehensive Basic Skills Test scores.

Indrisano (1969) outlined the program designed for New York City which employed a population of 20,000 professionals. The plan was centered around a task force of reading specialists to aid teachers. Each specialist functioned in one of several roles (i.e., as a reading consultant to administrators, as a resource person to new teachers, as
a corrective reading teacher, clinic reading consultant, or other related role). In some of these positions, the reading specialists were largely responsible for in-service.

In addition to the services provided by the reading specialists, television series on the teaching of reading were developed, joint projects with universities planned, and special materials developed for the teaching of reading. Evaluations were not reported.

McCracken (1969) described an in-service program for twenty teachers that was intensive and long-range. The program first involved a summer program, during which participants took four courses in reading for a total of 170 clock hours of instruction. Following course completion, teachers applied techniques in the classroom during the school year, met with a seminar group once a month, and met with supervisors who visited the classrooms and met with teachers individually. Participants reported frustration, pupil progress, and students who succeeded. McCracken readily conceded that teachers, like students, grow at varied rates. Some participants could be expected to grow a great deal, others, only a little. Teachers, he felt, would improve if they believed they could, and the program surrounding them allowed for that growth. In that sense, successful in-service is an interaction between teachers and the program plan.
Summary

The literature reviewed suggests a significant relationship between content area achievement and the teaching of reading as a process of learning. Research results also indicate that the degree of success a teacher has with teaching reading in content areas may be dependent on the knowledge that a teacher has about reading and the ability to perform teaching tasks commensurate with that knowledge. Studies suggest, further, a relationship between the knowledge and performance of teaching and the factors of attitude, field experiences, introductory knowledge of reading through in-service and course work, sex differences, college major, and a possible relationship with designated teaching level and reading ability of the teacher/teacher trainee. These factors are important, not only in the formulation of knowledge and performance, but also in behavioral consequences of those bases.

Varied approaches were used for structuring courses designed for acquisition of teaching reading skills. Approaches reported were competency and performance based instruction, the lecture format, micro-teaching, and combinations of these formats. All programs cited included some degree of field experience with actual teaching situations and evaluations pointed to the field experience as a necessary element.

In-service programs reported were highly varied to meet the needs of the individual staffs involved. The number of hours of instruction and the structure of the programs appeared to be dependent on staff needs and goals, although programs appeared consistently to emphasize practical aspects of teaching reading. Psycholinguistic theory was introduced in two programs cited and was followed by practical application of theory.
CHAPTER III

RESEARCH METHODS AND PROCEDURES

Introduction

It was the purpose of this research to investigate the factors relating to teachers' abilities to teach reading skills in content areas, construct a viable mode of instruction based on relevant factors, and evaluate that instructional plan by measuring growth of competency in teaching reading skills as exhibited by teacher trainees. An additional purpose of this research was to evaluate the effect of an introduction to the teaching of reading skills and a related field experience on teacher trainees' competencies to teach reading skills in content areas.

Chapter III will describe the subjects of the investigation, the design of the study explained, and the procedures presented. Each of the treatments, course content in isolation, course content incorporated with college level reading skills, and introduction to reading and related field experiences, will be explained and related activities and concepts detailed. The selection of test instruments will be described and a description of each instrument provided. The instruments used were the Nelson-Denny Reading Test, Questionnaire - Teaching Reading in Content Fields, and the Vaughn Scale to Measure Attitudes Toward Teaching Reading in Content Fields.
Subjects

The subjects for this study were undergraduate students enrolled in the secondary education program at the University of New Mexico during the spring semester of 1978. The program at the University consisted of a two-semester sequence of 6 credit hour blocks each prior to student teaching. The first semester block, SE 361/EF 300, Pre-Student Teaching Module I, presents concepts of educational philosophy, developmental psychology, school characteristics, cultural aspects of schools and students, and includes a field experience in the Albuquerque Public Schools. In the fall of 1977, an experimental approach to include basic concepts of reading, as well as a field experience in reading, was attempted. Rather than place students in content classrooms in their major fields, all students were placed in reading labs or classrooms for the purpose of assisting and tutoring students who were experiencing academic and/or reading difficulties. The reading supervisors in the various schools assisted the university students in applying concepts about teaching reading received through instruction at the university. In addition, graduate interns supervised and assisted students and provided feedback about working with students with reading disabilities.

During the spring semester, 1974, the experimental approach described above was repeated, and, in addition, an experimental undergraduate class for Reading in Content Fields was designed (SE 438). With the exception of three students, all enrollees in that course had completed the Module I format above.

The second semester six-hour block in Secondary Education presented the concepts of learning theory, classroom discipline, curriculum
development, and teaching methods and included a field experience. The field experience in that class included observation, development of a three week unit plan, and practice in classroom teaching with supervision. The students enrolled in SE 438 described above were concurrently enrolled in the second semester block course.

The students that were a part of this study were, for the most part, juniors in college and enrolled in one semester of the two semester blocks. For clarification, the course numbers for that block were: SE 361/EF 300 and SE 362/EF 310, Pre-Student Teaching Module I and Module II.

Initially, SE 361 (Treatment Group Three) had an enrollment of 35 students, 29 of whom completed the course. Of those 29 students, 22 elected to participate in this study and allow test results to be used for evaluation. SE 438 (Treatment Groups One and Two) had an initial enrollment of 40 students, 37 of whom completed the course. All the students who completed the course elected to participate in this study. A total population of 59 persons participated in the three treatment groups.

The subjects were informed that they were to be a part of a study to evaluate the effects of the reading instruction they were to receive. They were also informed that all test scores were to be held confidential and would not be a determinant of course grades.

Design of Study

This study was based on a randomized block, pre- and post-test design. Thirty-seven subjects were randomly assigned to an experimental and control group and given a pre-test on the dependent variable, competency
in teaching reading, as well as assessed for attitude toward teaching reading in content fields and for personal reading level. The subjects in the control group received instruction and related activites for the teaching of reading skills to middle and secondary school students. The subjects in the experimental group received the same instruction in a condensed form and instruction for improvement of their own reading abilities.

The subjects of the above groups had received a prior introduction to the teaching of reading skills as a part of their experiences in the first semester block the previous semester. It was, therefore, necessary to add a third experimental group, made up of subjects who would receive a similar experience to determine the effect that such an experience had on competency in teaching reading. The enrollees of SE 361 who were willing to participate comprised the third experimental group and were given the same pre- and post-tests. Those subjects received an introduction to the teaching of reading skills and a related field experience.

Ary, Jacobs, and Razavich (1972) pointed out the weakness of external validity in the randomized block design, especially when dealing with attitude change. Due to subject sensitization to pre-tests of attitude, the authors suggested that a group receiving treatment be post-tested only to determine if sensitization was a determinant of change. The enrollees of SE 361 in the fall semester, 1977, were post-tested using the same attitude scale (N = 49). Thirty-seven of those enrollees later enrolled in the SE 438 class which was a part of this study. In addition, enrollees of the graduate equivalent of SE 438 were post-tested for attitude and competency in teaching reading (N = 17). Enrollees of SE 362, Pre-Student Teaching, Module II, were post-tested using the same attitude
scale to determine propensity of attitudes without treatment (N = 48).
A summary of subjects tested follows:

FIGURE 1: Summary of Tested Groups

<table>
<thead>
<tr>
<th>GROUP</th>
<th>TEST ADMINISTERED</th>
<th>TREATMENT</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tr. 1</td>
<td>All pre- &amp; post-tests</td>
<td>SE 438 Reading/Content Fields</td>
<td>20</td>
</tr>
<tr>
<td>Tr. 2</td>
<td>All pre- &amp; post-tests</td>
<td>SE 438 Condensed Reading/Content Fields + College Reading Skills</td>
<td>17</td>
</tr>
<tr>
<td>Tr. 3</td>
<td>All pre- &amp; post-tests</td>
<td>Introduction to Reading Skills + Field Experience</td>
<td>22</td>
</tr>
<tr>
<td>SE 362</td>
<td>Post - attitude only</td>
<td>No treatment</td>
<td>48</td>
</tr>
<tr>
<td>SE 361</td>
<td>Post - attitude only</td>
<td>Introduction to Reading Skills + Field Experience</td>
<td>49</td>
</tr>
<tr>
<td>SE 538</td>
<td>Post - attitude &amp; competency</td>
<td>Graduate course similar to SE 438</td>
<td>17</td>
</tr>
</tbody>
</table>

Based on previous studies, there were variables thought to influence the internal validity of this study which were controlled by randomization, experimental design, and statistical manipulation. These variables were attitude toward teaching reading, reading ability of subjects, field experiences, prior introduction to reading concepts, sex differences of subjects, designated teaching level, and selected subject major of subjects.

Random assignment to groups provided that these personal characteristics occurred randomly within the groups. In addition, these variables were handled statistically by using principles of correlation and regression via multiple regression analysis. Thus, the relationships of all
variables to competency in teaching reading skills were identified through statistical manipulation.

In addition, the factors of course content, teacher effect, homework, and instructional materials were considered influential on the experimental results and were controlled by the design of the study.

Course content for treatment groups one and two was identical, however, treatment group one received instruction in that content for 80 minutes in each class period, while treatment group two received instruction in that content for 40 minutes. The class met twice each week for a total of 15 weeks. The instruction was the same except for length of presentation time. Homework for both groups was identical. The text used for the teaching of reading skills was Teaching Content Area Reading Skills by Forgan and Mangrum (1976).

Treatment group two received instruction for their own personal reading skills for 40 minutes. Instruction for development of those skills included completion of exercises designed to develop college level reading skills using the text, College Reading Skills, by K. Blake (1973).

Teacher effect was controlled by the assignment of two staff members to the class who taught the groups on an alternate basis. Instructional time with each instructor was held equal.

With the exception of the Blake text used by Treatment Group Two, instructional materials were identical, including all handouts and reading assignments.
Procedures

During the first class session, the subjects of this study were pre-tested using the Questionnaire — Teaching Reading in Content Fields, the Vaughn Scale to Measure Attitudes Toward Teaching Reading in Content Fields (Vaughn, 1977), and the Nelson-Denny Reading Test, Form C (Brown, Nelson, and Denny, 1973). Copies of all tests are included in Appendix A.

Following pre-testing, Treatment Group Three received an introduction to teaching reading skills incorporated with other concepts related to teaching that were normally presented in that course. Subjects received approximately 12 hours of reading instruction in the concepts of readability of materials, altering readability of materials, assessment of student reading levels, frustration exercises of reading incomprehensible reading materials, and directed reading and thinking.

In addition to university instruction, each student participated in a field experience which involved being assigned to an individual or small group of middle or secondary school students who were experiencing reading and/or academic difficulty. This assignment involved a tutor/tutee relationship and included practice of key concepts presented in class. Students received assistance and guidance from a reading coordinator in each of the three schools where assignments were made. In addition, a graduate intern made school visitations to provide feedback and assistance.

Initially, the enrollment of SE 438 totaled 40 students. During the first class periods, all enrollees were pre-tested with the same
test instruments as the group described above. The students were then randomly assigned to one of two treatment groups.

Treatment Groups One and Two received initial instruction as a large group, followed by instruction in small groups to which they were randomly assigned. Key concepts and activities were presented to both groups. College level reading skills were presented to both groups. College level reading skills were presented only to Treatment Group Two.

Because the students had had only a brief opportunity to teach reading in the school setting, it was considered essential that the teaching skills be demonstrated with highly varied approaches and with as much class involvement as possible. By observing and experiencing activities that ranged from highly successful to less than successful, it was felt that students would have a more thorough understanding of the factors involved in a successful activity, and thus feel more comfortable in using that activity. Therefore, class presentations and demonstration lessons were presented in conjunction with or as a learning activity. A complete outline of activities is included in the Appendix with each lesson format. Activities included small group work, debate, lecture, discussions, whole class activities, individual work in class, paired assignments, gaming, oral reading, silent reading, group reports to class, role playing, completion of dittoed assignments, demonstrations, chalkboard exercises, and participation in demonstration lessons developed by peers which included a wide variety of activities.
Treatment Group Two participated in activities above for 40 minutes and in addition, participated in 40 minutes of instruction for development of their own college level reading skills. The text for skill development was *College Reading Skills* by Blake (1973). The text was structured by skill to include an illustration of the skill, followed by a description of the skill and its importance, and practice exercises for its development.

The descriptive passage of each skill was brief and students were able to read the section in class. For variety and example, this was accomplished through a variety of techniques, including "round robin reading," individual oral reading, or group silent reading. The material was sometimes presented through lecture by the instructor or, in some cases, by a student volunteer.

The practice sets presented in the text were of the "fill in the blank" type and were also completed in a variety of manners. After the description of the skill was read or explained, students practiced that skill. Descriptions of the types of activities used for their completion is included in the Appendix with each lesson format.

Only one major assignment was required other than daily or weekly exercises. Each student selected a skill relevant to his/her content field, designed a lesson to teach that skill, and taught the lesson to peers in that content field during the last three class sessions.

A brief outline of concepts and skills presented to the two groups follows. A complete description is included in Appendix B as lesson formats.
<table>
<thead>
<tr>
<th>SESSION NUMBER</th>
<th>READING CONCEPT PRESENTED (Treatment Groups One &amp; Two)</th>
<th>COLLEGE LEVEL SKILL - (TREATMENT GROUP TWO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Assessment of Attitudes Explanation of Course</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Assessment of Reading Level &amp; Scoring</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Assessment of Teaching Competencies Explanation of Standardized Terms</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The Cloze Procedure &amp; Application Activity: Take a Cloze &amp; Score It</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The Cloze Procedure Activity: Construct, Administer, Score &amp; Interpret a Cloze</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Relate Reading to Content Activity: Read, Summarize &amp; Present Three Articles Showing Relationship</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Suitability of Materials Activity: Complete a Suitability Survey</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Attitudes/Interests Activity: Take an Interest Inventory Discuss &amp; Contrast Surveys</td>
<td>Homonyms</td>
</tr>
<tr>
<td>9</td>
<td>Comprehension Questions Activity: Write Different Comprehension Questions</td>
<td>Synonyms &amp; Ananoyms</td>
</tr>
<tr>
<td>10</td>
<td>Teaching Word Meanings Activity: Identify Levels of Word Meanings</td>
<td>Synonyms &amp; Ananoyms</td>
</tr>
<tr>
<td>11</td>
<td>Teaching Word Meanings Activity: Write Strategies to Teach Word Meanings</td>
<td>Figurative Language</td>
</tr>
<tr>
<td>12</td>
<td>Teaching Word Meanings Activity: Categorize Teaching Strategies According to Levels of Word Meanings</td>
<td>Verbal Analogies</td>
</tr>
<tr>
<td>13</td>
<td>Diagnosing Reading Skills Activity: Identify Reading Skills Needed in Content Area</td>
<td>Context Analysis</td>
</tr>
<tr>
<td>SESSION NUMBER</td>
<td>READING CONCEPT PRESENTED (Treatment Groups One &amp; Two)</td>
<td>COLLEGE LEVEL SKILL - (TREATMENT GROUP TWO)</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>Diagnosing Reading Needs Activity: Construction of Skills Test</td>
<td>Main Ideas</td>
</tr>
<tr>
<td>15</td>
<td>Teaching Comprehension Skills Activity: Write &amp; Identify Types of Questions</td>
<td>Supporting Ideas</td>
</tr>
<tr>
<td>16</td>
<td>Teaching Comprehension Skills Activity: Demonstration of Comprehension Skill Lesson</td>
<td>Main &amp; Supporting Ideas</td>
</tr>
<tr>
<td>17</td>
<td>Teaching Comprehension Skills Activity: Demonstration of Skills Lesson at Higher Levels of Questioning</td>
<td>Synthesizing</td>
</tr>
<tr>
<td>18</td>
<td>Teaching Study Strategies Activity: Demonstration of SQ3R</td>
<td>Fact &amp; Opinion</td>
</tr>
<tr>
<td>19</td>
<td>Study Strategies Discussion</td>
<td>Summarizing</td>
</tr>
<tr>
<td>20</td>
<td>Pronunciation of Words Activity: Word Pronunciation Lesson</td>
<td>Previewing</td>
</tr>
<tr>
<td>21</td>
<td>Readability &amp; Rewriting Activity: Rewrite a Lesson</td>
<td>None</td>
</tr>
<tr>
<td>22</td>
<td>Pronunciation of Words Activity: Construct a Skills Lesson</td>
<td>Skimming &amp; Scanning</td>
</tr>
<tr>
<td>23</td>
<td>Motivating Students Activity: Demonstration of Motivation Lesson</td>
<td>Book Structure</td>
</tr>
<tr>
<td>24</td>
<td>Motivation Activity: Construct a Motivation Lesson</td>
<td>Faulty Reasoning</td>
</tr>
<tr>
<td>25</td>
<td>Assessment of Student Reading Levels Activity: Evaluate Informal Instruments</td>
<td>Relevance</td>
</tr>
<tr>
<td>26</td>
<td>Assessment of Reading Levels Activity: Score &amp; Evaluate an Informal Test</td>
<td>Analyzing &amp; Note Taking</td>
</tr>
</tbody>
</table>
SESSION NUMBER      READING CONCEPT PRESENTED (Treatment Groups One & Two)                              COLLEGE LEVEL SKILL - (TREATMENT GROUP TWO)
27, 28               Presentation of Skill Lessons to Class Peers
29                   Post-Testing
30                   

A complete description of class activities and assignments is included in the Appendix.

Subjects were post-tested with the same test instruments, with the exception that Form D of the Nelson-Denny was used.

Selection of Test Instruments

A review of available test instruments for the specified variables indicated no standardized instruments available to measure attitudes toward teaching reading in content fields or to measure competency in teaching those skills. A non-standardized instrument developed by Vaughn (1977) for measuring attitudes toward teaching reading in content fields was found to be reliable and valid through two years of testing. Vaughn tested for internal consistency and stability relative to the scale and convergent validity to establish construct validity. Due to the established validity of the instrument, it was considered appropriate for use in this study.

Instruments to test for competency in teaching reading skills in content areas were not available. An informal questionnaire had been designed at the University of New Mexico (Corbin, Waggoner & White, 1976) to measure the degree which students in graduate Reading in the Content
Field classes actually implemented skills taught as objectives of that course. Using the above questionnaire as a model, a second questionnaire was designed for participants of this study, who did not have classrooms available for implementation of concepts (See Appendix A). Reading specialists and members of the faculty of Secondary and Adult Education studied the questionnaire to ensure that the skills listed were representative of all skills considered essential for teaching reading in content areas. Items were randomly ordered within the test.

The Nelson-Denny Reading Test, Forms C and D was selected for assessment of reading competency. The test was considered to be a valid and reliable test instrument, was normed in part with populations from the Southwest, and was the most recently normed test of college level reading ability.

Description of Test Instruments

The Vaughn Scale to Measure Attitudes Toward Teaching Reading in Content Fields consists of 15 items regarding teaching reading skills in content classrooms. Of the total, 9 items are positive in nature, 6 are negative. Subjects respond to the items by selecting from seven possible responses, ranging from strongly agree to strongly disagree. The corresponding numbers are then added to obtain a total score. The degree of positive or negative attitude may further be indicated by the following interpretation:
### Range of Raw Score

<table>
<thead>
<tr>
<th>Raw Score</th>
<th>Attitude Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>91 or higher</td>
<td>High</td>
</tr>
<tr>
<td>81-90</td>
<td>Above Average</td>
</tr>
<tr>
<td>71-80</td>
<td>Average</td>
</tr>
<tr>
<td>61-70</td>
<td>Below Average</td>
</tr>
<tr>
<td>60 or lower</td>
<td>Low</td>
</tr>
</tbody>
</table>

The Questionnaire - Teaching Reading in Content Fields is a 50-item listing of skills and/or concepts. The items were randomly ordered and vary in complexity. Subjects respond to the items according to the following scale:

1. I can do this with skill
2. I can do this, but need practice
3. I am familiar with this, but haven't tried it
4. I am not familiar with this

The corresponding numbers are then added for a total score. The lower scores represent subjects more skilled or familiar with concepts, with a minimum score of 50 possible. Higher scores indicate subjects less skilled or familiar with concepts, with a maximum score of 200 possible.

The Nelson-Denny Reading Test consists of three sections: vocabulary, reading comprehension, and reading rate. All sections of the test are timed and yield a total raw score, which can be equated to a grade level and percentile ranking.

Samples of the test instruments are included in the Appendix.
Statistical Procedures

The general hypothesis for this research was: Competency in teaching reading skills in content fields is independent of attitudes toward teaching reading in content fields, individual reading skill, related field experiences and introduction to teaching reading skills, sex of teacher trainee, designated teaching level, number of education courses, college major, level of educational attainment, and number of reading courses.

To test this hypothesis, several statistical procedures were employed. First, descriptive statistics were obtained on all groups. These statistics included for each group a mean, mode, media, the standard deviation, standard error, the variance, the range, and a numerical representation of kurtosis and skewedness. This afforded the researcher a description and summary of the group characteristics, and aided in organization of data.

Descriptive data was followed by an analysis of variance to determine if there was a treatment effect on any of the groups. This procedure was employed due to the presence of more than two means and to obtain both between group and within group variance. A multiple classification procedure was also employed to determine how much of the variance was accounted for due to treatment.

Due to the large number of treatment groups, a multiple comparison test was conducted to provide all possible comparisons among means and determine if significant differences occurred and, if so, to pinpoint where those differences occurred. The Tukey B multiple comparison test was selected due to the presence of unequal numbers in the treatment
groups. Results were accepted as significant at the .05 Alpha level.

A multiple regression procedure allowed the researcher to establish a linear equation to predict the dependent variable, competency in teaching reading, as well as to explain variance accounted for.

Summary

Fifty-nine students enrolled in two secondary education classes at the University of New Mexico participated in a study involving three treatment groups. Treatment group one (control) received instruction for the teaching of reading skills in content area classrooms. Treatment group two (experimental) received condensed instruction for teaching reading skills in content area classrooms and instruction for improving college level reading skills. Treatment group three received an introduction to teaching reading skills and a reading related field experience.

All subjects were pre- and post-tested with three instruments. These instruments were the Vaughn Scale to Measure Attitudes Toward Teaching Reading in the Content Field, Questionnaire - Teaching Reading in Content Fields, and the Nelson-Denny Reading Test.

Statistical procedures employed for analysis of data included descriptive statistics, analysis of variance, the Tukey multiple comparison test, and multiple regression.
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this study was to identify the factors related to teachers' abilities to teach reading in content fields, to construct and implement an instructional plan in view of those factors, to evaluate instruction and determine the relationship of identified personal factors to the dependent variable, competency in teaching reading in content fields.

Chapter Organization

Chapter IV will include the general descriptive statistics derived from the analysis of group responses. These statistics included the mean, mode, median, the standard deviation, standard error, the variance, the range, and a numerical representation of kurtosis and skewedness. Descriptive data was obtained for each group using the "Statistical Package for the Social Sciences," a program available at the University of New Mexico for the IBM 360 computer. The descriptive statistics were used by the experimenter for initial review of group characteristics, to examine the groups for extreme scores or characteristics which might make inference or interpretation difficult, and as a basis for analysis of variance. These statistics were also used in drawing conclusions from group analysis as they provided additional information about the groups.
Descriptive statistics were followed by analysis of variance for three groups to determine if treatment effected scores on tests measuring competency in teaching reading, attitude toward teaching reading, or personal reading competency. Analysis of variance was also used to compare group gains to test the null hypotheses as a part of evaluation of instruction. This analysis included tests for interactions between variables to determine if interacting factors accounted for significance of variance, as well as a multiple classification analysis, necessary to determine how much variance was accounted for due to treatment effect, rather than due to uncontrolled, randomly occurring factors.

The significance found in the analysis of variance indicated that there was a treatment effect that had little probability of happening by chance. To determine the source of treatment effects, a multiple comparison test was conducted. The Tukey B multiple comparison test was selected due to the presence of unequal group sizes, and due to its conservatism in detecting honestly significant differences.

A multiple regression analysis was conducted to test the general hypothesis that questioned the relationship of all variables to the dependent variable, competency in teaching reading in content fields, and to test the amount of variance accounted for due to the relationships of variables to the dependent variable.
General Descriptive Statistical Summary

Figure 2 describes the variable labels and their coding as they appear in summary tables of variables and as they will be used throughout the remainder of the study.

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Description</th>
<th>Category Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Competency in Teaching Reading in Content Fields</td>
<td>Raw score</td>
</tr>
<tr>
<td>2</td>
<td>Attitude Toward Teaching Reading in Content Fields</td>
<td>Raw score</td>
</tr>
<tr>
<td>3</td>
<td>Reading Competency</td>
<td>Raw score</td>
</tr>
</tbody>
</table>
| 4               | Sex of Teacher Trainee | (1) Male  
(2) Female |
| 5               | Prior Introduction to Reading | (1) Yes  
(2) No |
| 6               | Designated Teaching Level | (1) Middle School  
(2) Secondary School |
| 7               | Semesters of Education Blocks | (1) None  
(2) 1 Semester  
(3) 2 + Semesters |
| 8               | College Major | (1) Humanities  
(2) Sciences  
(3) Occupational Fields |
| 9               | Level of Education Attainment | (1) Graduate  
(2) Undergraduate |
| 10              | Number of Reading Courses Taken | (1) None  
(2) One course  
(3) 2 + courses |
The Null Hypotheses

There were three null hypotheses to be tested by this research. They were:

1. There is no significant difference in attitudes of students toward teaching reading in content areas who are taught personal reading skills in conjunction with course content and attitudes of students who are not taught personal reading skills in conjunction with course content.

2. There is no significant difference in students' personal reading skills who are taught reading skills in conjunction with course content and reading skills of students who are not taught reading skills in conjunction with course content.

3. There is no significant difference in students' competency to teach reading skills who are taught reading skills in conjunction with course content and students' competency to teach reading skills who are taught reading skills in conjunction with course content.

To test these hypotheses, a preliminary analysis of variance was completed including Group 1, Control, Group 2, Experimental, and Group 4, Experimental, Mod I, to determine if significant differences occurred in all groups between pre and post test scores on the three measurement instruments.

A multiple classification analysis following analysis of variance determined the amount of variance accounted for due to treatment. Table 2 summarizes the data.
Figure 3 describes the group labels as they will be used throughout the remainder of the study.

<table>
<thead>
<tr>
<th>Group Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control Group, SE 438, Teaching Skills Only</td>
</tr>
<tr>
<td>2</td>
<td>Experimental Group, SE 438, Teaching and Reading Skills</td>
</tr>
<tr>
<td>3</td>
<td>Control Group, Mod I, Fall, 1977, Introduction to Reading Posttest for Validity</td>
</tr>
<tr>
<td>4</td>
<td>Experimental Group, Mod I, Spring, 1978 Introduction to Reading</td>
</tr>
<tr>
<td>5</td>
<td>Control Group, Graduate 538 class, Spring, 1978, Teaching Skills Only, Posttest Only</td>
</tr>
<tr>
<td>6</td>
<td>Control Group, Mod II, Fall, 1977, No Treatment, Posttest Only</td>
</tr>
</tbody>
</table>

Figure 3. Group Labels

Table 1 provides the mean scores for each of the six groups for the ten variables. The group means for variables 4 - 10 are not appropriate for statistical manipulation. They have no numerical meaning and are provided only as additional information about the subjects within each group.
Table 2
Summary of Preliminary Analysis of Variance and Multiple Classification Analysis

<table>
<thead>
<tr>
<th>Group(s)</th>
<th>Variable Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Competency In Teaching Reading</td>
</tr>
<tr>
<td>****</td>
<td></td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>F 32.8*</td>
</tr>
<tr>
<td></td>
<td>LS** 0.00</td>
</tr>
<tr>
<td></td>
<td>ETA** .59</td>
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<tr>
<td>1, 2</td>
<td>F 35.3*</td>
</tr>
<tr>
<td></td>
<td>LS 0.00</td>
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<tr>
<td></td>
<td>ETA .60</td>
</tr>
<tr>
<td>1</td>
<td>F 43.4*</td>
</tr>
<tr>
<td></td>
<td>LS , 0.00</td>
</tr>
<tr>
<td></td>
<td>ETA .53</td>
</tr>
<tr>
<td>2</td>
<td>F .67.03*</td>
</tr>
<tr>
<td></td>
<td>LS 0.00</td>
</tr>
<tr>
<td></td>
<td>ETA .67</td>
</tr>
<tr>
<td>4</td>
<td>F 33.87*</td>
</tr>
<tr>
<td></td>
<td>LS 0.00</td>
</tr>
<tr>
<td></td>
<td>ETA .44</td>
</tr>
</tbody>
</table>

* P < .01  
** LS = Level of Significance  
*** All ETAs are squared, representing percentage of variance explained  
**** Group 1 = Control Group, 438  
         Group 2 = Experimental Group, 438  
         Group 4 = Experimental Mod I, Spring, 1978
The multiple classification analysis is reported as ETA, which has been squared for ease of reading. That figure represents the percentage of variance accounted for due to treatment effect.

The analysis of variance revealed a significant difference in pre and post test scores for only the variable of competency in teaching reading. Null hypotheses one and two were, therefore, retained. There was no significant difference in group pre and post test scores due to treatment. That is, attitude and reading competency did not change significantly due to treatment. The analysis of the combination of Groups 1 and 2 test scores for competency in teaching reading revealed an $F = 35.3$, significant at the .00 level. The analysis of Group 1 and Group 2 separately revealed an $F = 43.4$ and $67.0$, both significant at the .00 level.

A Tukey B multiple comparison test was conducted to determine if Groups 1 and 2 differed significantly in competency to teach reading skills. Test results are summarized in Table 3. The test results indicated a significant difference between means for all groups except between groups 2 and 8, indicating these two groups concluded the course with similar competencies in teaching reading. Null hypothesis three; that there was no significant difference in students' competency to teach reading skills who are taught personal reading skills and students' who are not taught such skills, was tested by this procedure. A significant difference at the .01 level was found ($F = 12.7$) for the groups' posttest scores, however, a significant difference
at the .01 level was also found for the groups' pretest scores
\( F = 10.8 \), indicating a significant difference existed between
the groups prior to treatment. The mean gain for the two groups
was 57 and 59 points. Null hypothesis three was, therefore, re-
tained.

Analysis of variance included preliminary tests to inves-
tigate the possibility that interacting variables had a partial
influence in differences between pre and post test scores on the
measurement instrument for the dependent variable, competency in
teaching reading. Analysis of interactions is summarized in
Table 4. One significant interaction was found to exist between
variables 1 and 10, competency in teaching reading skills and
number of reading courses taken prior to the treatment. The
ETA indicated that this accounted for 10 percent of the variance.
Some of the independent variables were constants and it was,
therefore, impossible to process the interaction analysis for
all variables. Those variables were treated in the multiple
regression analysis.

In summary, an analysis of variance was used to test the
three null hypotheses. The results of this analysis revealed no
significant differences in the control and experimental groups
in reading competency or attitude toward teaching reading.
Null hypotheses one and two were retained.

A significant difference was found in the groups for com-
petency in teaching reading.
To ensure that the differences in the groups was due to treatment, an analysis of interaction of variables was conducted. This analysis indicated that ten percent of the variance was accounted for due to the interaction between the variable of number of reading courses and competency to teach reading.

A test to determine significance of differences among means was then conducted to determine where the difference in the groups occurred. This analysis revealed that the Experimental Mod I group, as well as both 438 groups, made significant gains in teaching competency. There was not a significant difference in gains made by the control and experimental 438 groups. Null hypothesis three was retained.
Table 3
Summary of Differences Among Means
Dependent Variable: Competency in Teaching Reading

<table>
<thead>
<tr>
<th></th>
<th>X_8</th>
<th>X_2</th>
<th>X_7</th>
<th>X_3</th>
<th>X_1</th>
<th>X_6</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_4**</td>
<td>9.23*</td>
<td>12.7*</td>
<td>37.0*</td>
<td>59.0*</td>
<td>-</td>
<td>79.3*</td>
</tr>
<tr>
<td>X_8</td>
<td>-</td>
<td>3.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>X_2</td>
<td>-</td>
<td>-</td>
<td>24.4*</td>
<td>-</td>
<td>57.1*</td>
<td>66.6*</td>
</tr>
<tr>
<td>X_7</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>21.9*</td>
<td>32.7*</td>
<td>-</td>
</tr>
<tr>
<td>X_3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10.8*</td>
<td>20.3*</td>
</tr>
<tr>
<td>X_1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9.5*</td>
</tr>
</tbody>
</table>

*P > .01 (df = N-K = 122)

**X_1 = Control Group, 438, Pretest
X_2 = Control Group, 438, Posttest
X_3 = Experimental Group, 438, Pretest
X_4 = Experimental Group, 438, Posttest
X_6 = Experimental Mod I, Pretest
X_7 = Experimental Mod I, Posttest
X_8 = Graduate 538 Group, Posttest
### Table 4

Summary of Analysis of Interaction of Variables

<table>
<thead>
<tr>
<th>Variables Compared</th>
<th>F Value</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 4*</td>
<td>.28</td>
<td>.83</td>
</tr>
<tr>
<td>1, 5</td>
<td>.23</td>
<td>.30</td>
</tr>
<tr>
<td>4, 5</td>
<td>.61</td>
<td>.43</td>
</tr>
<tr>
<td>1, 6</td>
<td>.58</td>
<td>.44</td>
</tr>
<tr>
<td>1, 8</td>
<td>.52</td>
<td>.78</td>
</tr>
<tr>
<td>1, 9</td>
<td>.24</td>
<td>.86</td>
</tr>
<tr>
<td>6, 8</td>
<td>.40</td>
<td>.67</td>
</tr>
<tr>
<td>1, 10</td>
<td>3.40</td>
<td>.00ETA = .10</td>
</tr>
<tr>
<td>1, 4, 5</td>
<td>.48</td>
<td>.69</td>
</tr>
<tr>
<td>1, 6, 8</td>
<td>.25</td>
<td>.77</td>
</tr>
<tr>
<td>1, 6, 9</td>
<td>.07</td>
<td>.78</td>
</tr>
<tr>
<td>6, 9</td>
<td>.04</td>
<td>.84</td>
</tr>
</tbody>
</table>

* 1 = Competency in Teaching Reading  
4 = Sex  
5 = Prior Introduction to Reading  
6 = Designated Teaching Level  
8 = College Major  
9 = Level of Educational Attainment  
10 = Number of reading courses
The General Hypothesis

The general hypothesis to be tested by this research concerned the independence of competency in teaching reading in content areas from other variables identified as possibly influential. The general hypothesis was:

Competency in teaching reading skills in content fields is independent of attitudes toward teaching reading in content fields, individual reading skill, related field experience and introduction to teaching reading skills, sex of teacher trainee, designated teaching level, number of education courses, college major, level of educational attainment, and number of reading courses.

Multiple regression analysis was selected to determine the relationship of competency in teaching reading to the other variables listed above. A stepwise regression program statistically sorted the variables in such a way that the variable that explained the greatest amount of variance in the dependent variable was entered first in the regression summary, followed by the variable that explained the greatest amount of variance in conjunction with the first, etc., until correlation was no longer significant. A stepwise regression was conducted for each separate data set; that is, Group 1, pretest, Group 1, posttest, etc. A regression was not possible for Groups 5 and 6 due to insufficient data for the process. A regression was not possible for groups 5 and 6 due to insufficient data for the process.
Data for those groups included only post test scores for Variable 1 and 2. Regression for all other groups is reported in Table 5.

Multiple regression analysis for Group 1 pretest showed a significant relationship at the .05 level between the dependent variable, competency in teaching reading, and the variables of attitude toward teaching reading, prior introduction to reading, sex, and level of educational attainment. 47 percent of the variance was accounted for by the relationship of these variables, however, attitude toward reading and prior introduction to reading accounted for 24 and 17 percent of that variance and were the only relationships thought to be of any magnitude.

Analysis of Group 1 posttest indicated a significant relationship between competency in teaching reading and the variables of level of educational attainment, sex, designated teaching level, and reading competency. 45 percent of the variance was accounted for by the relationship of those variables. Level of educational attainment accounted for 24 percent of that variance, and was the only relationship thought to be of magnitude.

Analysis of Group 2, experimental pretest revealed no significant relationships. Significant relationships were not found in any other group.
In testing the general hypothesis, the significance of relationships of independent variables with the dependent variable justify the rejection of the hypothesis, for competency in teaching reading does not appear to be independent of other variables. The most educationally significant relationship was that found between attitude toward teaching reading and prior introduction to reading in the pretest scores for Group 1, and level of educational attainment for the Group 1 posttest.
### Table 5
MULTIPLE REGRESSION SUMMARY TABLE FOR INDIVIDUAL GROUPS
DEPENDENT VARIABLE-COMPETENCY IN TEACHING READING

<table>
<thead>
<tr>
<th>Group 1 - Control, 438, Pretest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable 2 Attitude Toward Teaching Reading</td>
</tr>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>F = 5.80*</td>
</tr>
<tr>
<td>Variable 5 Prior Introduction to Reading</td>
</tr>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>F = 6.00*</td>
</tr>
<tr>
<td>Variable 4 Sex of Teacher Trainee</td>
</tr>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>F = 4.65*</td>
</tr>
<tr>
<td>Variable 9 Level of Educational Attainment</td>
</tr>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>F = 3.44*</td>
</tr>
<tr>
<td>Variable 3 Reading Competency</td>
</tr>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>F = 2.72</td>
</tr>
<tr>
<td>Variable 7 Number of Education Courses</td>
</tr>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>F = 2.12</td>
</tr>
</tbody>
</table>

* Significant at the .05 Alpha level
### Summary Group 1 - Pretest

<table>
<thead>
<tr>
<th>Variable</th>
<th>Multiple R</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Attitude Toward Teaching Reading</td>
<td>0.49</td>
<td>0.24</td>
</tr>
<tr>
<td>5 Prior Introduction/Reading</td>
<td>0.64</td>
<td>0.41</td>
</tr>
<tr>
<td>4 Sex</td>
<td>0.68</td>
<td>0.46</td>
</tr>
<tr>
<td>9 Level of Education Attainment</td>
<td>0.69</td>
<td>0.47</td>
</tr>
<tr>
<td>3 Reading Competency</td>
<td>0.70</td>
<td>0.49</td>
</tr>
<tr>
<td>7 Number of Education Courses</td>
<td>0.70</td>
<td>0.49</td>
</tr>
</tbody>
</table>

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### Group 1 - Control, 438, Posttest

#### Variable 9 Level of Education Attainment

<table>
<thead>
<tr>
<th></th>
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<th>R Square</th>
<th>DF</th>
<th>F = 5.93*</th>
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</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.49</td>
<td>0.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.56</td>
<td>0.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>18.98</td>
<td>18.14</td>
<td></td>
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</table>

#### Variable 4 Sex

<table>
<thead>
<tr>
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<th>R Square</th>
<th>DF</th>
<th>F = 4.07*</th>
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</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.56</td>
<td>0.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.63</td>
<td>0.39</td>
<td></td>
<td></td>
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<tr>
<td>Standard Error</td>
<td>18.98</td>
<td>18.14</td>
<td></td>
<td></td>
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</table>

#### Variable 6 Teaching Level Designated

<table>
<thead>
<tr>
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<th>R Square</th>
<th>DF</th>
<th>F = 3.54*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.63</td>
<td>0.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.67</td>
<td>0.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>18.98</td>
<td>18.14</td>
<td></td>
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</table>

#### Variable 3 Reading Competency

<table>
<thead>
<tr>
<th></th>
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<th>R Square</th>
<th>DF</th>
<th>F = 3.13*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.67</td>
<td>0.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.70</td>
<td>0.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>18.98</td>
<td>18.02</td>
<td></td>
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</tr>
</tbody>
</table>

#### Variable 5 Prior Introduction to Reading

<table>
<thead>
<tr>
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<th>R Square</th>
<th>DF</th>
<th>F = 2.77</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.70</td>
<td>0.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.70</td>
<td>0.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>18.98</td>
<td>18.02</td>
<td></td>
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</table>
### Summary Group 1-Posttest

<table>
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<tr>
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<th>Multiple R</th>
<th>R Square</th>
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</thead>
<tbody>
<tr>
<td>Level of Education Attainment</td>
<td>0.49</td>
<td>0.24</td>
</tr>
<tr>
<td>Sex</td>
<td>0.56</td>
<td>0.32</td>
</tr>
<tr>
<td>Teaching Level</td>
<td>0.63</td>
<td>0.39</td>
</tr>
<tr>
<td>Reading Competency</td>
<td>0.67</td>
<td>0.45</td>
</tr>
<tr>
<td>Prior Introduction/Reading</td>
<td>0.70</td>
<td>0.49</td>
</tr>
</tbody>
</table>

### Group 2 - Experimental, 438, Pretest

#### Variable 2 Attitude Toward Teaching Reading

<table>
<thead>
<tr>
<th>Multiple R</th>
<th>R Square</th>
<th>DF</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.41</td>
<td>0.16</td>
<td>1</td>
<td>3.06</td>
</tr>
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</table>

#### Variable 9 Level of Education Attainment

<table>
<thead>
<tr>
<th>Multiple R</th>
<th>DF</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.49</td>
<td>2</td>
<td>2.30</td>
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</tbody>
</table>

#### Variable 3 Reading Competency

<table>
<thead>
<tr>
<th>Multiple R</th>
<th>DF</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.54</td>
<td>3</td>
<td>1.78</td>
</tr>
</tbody>
</table>

#### Variable 5 Prior Introduction to Reading

<table>
<thead>
<tr>
<th>Multiple R</th>
<th>DF</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.54</td>
<td>4</td>
<td>1.29</td>
</tr>
</tbody>
</table>

### Summary Group 2-Pretest

<table>
<thead>
<tr>
<th>Variable</th>
<th>Multiple R</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude Toward Teaching Reading</td>
<td>0.41</td>
<td>0.16</td>
</tr>
<tr>
<td>Level of Educational Attainment</td>
<td>0.49</td>
<td>0.24</td>
</tr>
<tr>
<td>Reading Competency</td>
<td>0.54</td>
<td>0.29</td>
</tr>
<tr>
<td>Prior Introduction/Reading</td>
<td>0.54</td>
<td>0.30</td>
</tr>
</tbody>
</table>
### Group 2 - Experimental, 438, Posttest

**Variable 3 Reading Competency**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.13</td>
<td>DF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.10</td>
<td>1</td>
<td></td>
<td>F = 0.26</td>
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<tr>
<td>Standard Error</td>
<td>13.81</td>
<td>15</td>
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</table>

**Variable 9 Level of Education Attainment**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.24</td>
<td>DF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.06</td>
<td>2</td>
<td></td>
<td>F = 0.44</td>
</tr>
<tr>
<td>Standard Error</td>
<td>13.98</td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significance and variance accounted for is not of magnitude to warrant further computation.

### Group 4 - Experimental, Mod I, Pretest

**Variable 2 Attitude Toward Teaching Reading**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.41</td>
<td>DF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.17</td>
<td>1</td>
<td></td>
<td>F = 4.19</td>
</tr>
<tr>
<td>Standard Error</td>
<td>20.17</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Variable 4 Sex**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.48</td>
<td>DF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
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<td>2</td>
<td></td>
<td>F = 2.94</td>
</tr>
<tr>
<td>Standard Error</td>
<td>19.89</td>
<td>19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Variable 6 Teaching Level**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.56</td>
<td>DF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.31</td>
<td>3</td>
<td></td>
<td>F = 2.78</td>
</tr>
<tr>
<td>Standard Error</td>
<td>19.33</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
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**Variable 3 Reading Competency**

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**Group 4 - Experimental, Mod I, Posttest**

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Aspects of Validity

There were three groups which participated in this research in order to establish validity. Ary, Jacobs, and Razavich (1972) suggested that when an attitude scale is used, a group receiving treatment be posttested only to determine if sensitization to the test instrument was a determinant of test scores. Group 3, Mod I, Fall, 1977, was selected to test for sensitization. The group scores on the attitude scale were compared to post test scores for Group 4 to determine if a significant difference occurred. Group 3 had a mean score on that scale of 78.2, while Group 4 had a mean score on that scale of 85.0. The calculated F was 9.071, significant at the .01 level. Sensitization to the test instrument is suggested, however, the numbers involved in Group 3 was small.

Two additional groups were tested with the attitude scale. Group 6, Mod II, Fall, 1977, was tested to determine propensity of attitude without treatment, that is, without any reading instruction. The mean of that group on attitude scores was 74.6. The descriptive scale outlined by Vaughn (1977) indicated such a score to be an average attitude toward the teaching of reading. That is, not connotating particularly positive or negative attitudes.

The second group tested was Group 5, a graduate Reading in Content Fields class. The mean score for that group, following the completion of a class similar to the 438 class described in this study was 79.5. There was only a 4.9 point difference between this group and the group receiving no reading instruction (Group 6) following approximately 48 hours of instruction in the teaching of reading.
This mean score also is within the average range. Although the three experimental groups exhibited gain in attitude scores, only one group gained significantly (See Table 2). Group 4, Experimental Mod I, gained 6.8 points on that scale, yielding an F of 8.172, significant at the .01 level. If sensitization to the test instrument existed, it is questionable that the instrument is testing only attitude change, and interpretation should, therefore, be cautious.
Summary

Chapter IV included the objectives of the research: to identify the factors related to teacher's abilities to teach reading in content fields, to construct and implement an instructional plan in view of those factors, to evaluate instruction and determine the relationship of identified personal factors to the dependent variable, competency in teaching reading in content fields.

The chapter also included tables summarizing statistical processes, the hypothesis tested and the decisions of the researcher regarding those hypotheses following analysis. Statistical procedures used were descriptive statistics, analysis of variance, multiple classification analysis, multiple comparison tests, analysis of interaction, and multiple regression.
CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

Chapter V will include a summary of the study, conclusions of the analysis of the statistical data, and recommendations based on the results of the statistical analysis.

Summary

This research was conducted to identify the factors related to teachers' abilities to teach reading in content fields, to construct and implement an instructional plan in view of those factors, to evaluate instruction and determine the relationship of identified personal factors to the dependent variable, competency in teaching reading in content fields.

The Participants and Methodology

Data was collected from fifty-nine students who were enrolled in two secondary education classes at the University of New Mexico. The study involved three treatment groups.

Treatment Group One (control) received instruction for the teaching of reading skills in content area classrooms. Treatment Group Two (experimental) received condensed instruction for teaching reading skills in content area classrooms and instruction for improving college level reading
skills. Treatment Group Three received an introduction to the teaching of reading skills and a reading related field experience.

All subjects were pre- and post-tested with three instruments. These instruments were the Vaughn Scale to Measure Attitudes Toward Teaching Reading in the Content Fields, Questionnaire - Teaching Reading in Content Fields, and the Nelson-Denny Reading Test.

Statistical procedures employed for analysis of data included descriptive statistics, analysis of variance, multiple classification analysis, multiple comparison tests, and multiple regression.

The study was viewed as having certain limitations. First, generalizations to other populations were known to be limited due to the lack of randomization of the sample used. Second, control of personal variables was confined to only certain specified characteristics thus, inference from results were known to be limited. Third, attitude and teaching competence were measured by the symbolic act of completing a questionnaire, rather than through observation. Literature reviewed (Chapter II) pertinent to this aspect of the study, supported the use of such measurement, if other intervening variables were also considered.

The Findings

The following hypotheses were tested using analysis of variance, multiple classification analysis, and multiple comparison tests:

1. There is no significant difference in attitudes of students toward teaching reading in content areas who are taught personal reading skills in conjunction with course content and attitudes of students who are not taught reading skills in conjunction with course content.
2. There is no significant difference in students' personal reading skills who are taught reading skills in conjunction with course content and reading skills of students who are not taught reading skills in conjunction with course content.

3. There is no significant difference in students' competency to teach reading skills who are taught reading skills in conjunction with course content and students' competency to teach reading skills who are not taught reading skills in conjunction with course content.

These hypotheses were retained. Although there was a significant gain in competency to teach reading, there was not a significant difference between groups due to treatment effect.

The following general hypothesis was tested using multiple regression analysis:

Competency in teaching reading skills in content fields is independent of attitudes toward teaching reading in content fields, individual reading skill, related field experience and introduction to teaching reading skills, sex of teacher trainee, designated teaching level, number of education courses, college major, level of educational attainment, and number of reading courses.

Although several significant relationships were identified, only two variables were considered to be educationally significant due to the amount of variance explained, which equaled slightly less than 50%. The remaining percentage must be accounted for by other, non-controlled variables.

Variables considered educationally significant included attitude
toward teaching reading and prior introduction to the teaching of reading, related significantly in the control group pre-test scores. Level of educational attainment was significant in the control group post-test scores. These relationships imply that the prior introduction to reading had impact on some students, that attitude toward teaching reading is a factor in increased competency scores, and that graduates and undergraduates may differ in their self-assessed competency to teach reading.

Implications and Recommendations

The null hypotheses tested in this study and the design of this study implied the belief that personal reading skills effect teaching competency related to reading and attitude toward teaching reading in selected content fields. A number of variables were controlled statistically through multiple regression analysis. The variable of personal reading competency was controlled through research design and became a treatment effect, that is, the experimental group received direct instruction for improvement of personal reading skills at the college level.

Although difference between and within groups was not significant for the control and experimental groups, the analysis did yield some useful information. First, mean scores of personal reading competency did not differ significantly due to instruction directed toward improving skills. Second, personal reading competency was not significantly related to competency to teach reading in content fields, or to attitudes regarding
that teaching. Interpretation of data also necessitates a review of the characteristics of those students in terms of their personal reading competencies.

Scores on the Nelson-Denny Reading Test were reported as raw scores. The mean raw score for each group can be converted to a grade level equivalent. These mean pre-test scores indicated that the participants of this study scored between the range of 100.6 and 104.6. The mean post-test scores indicated that the participants scored between the range of 107.4 and 124.0. The growth indicated by these test scores was not significant, however, these scores also gave a representation of the students' abilities.

Although there was not statistical significance for personal reading competency, informal evaluations of the course (Appendix 3) indicated that many students appreciated the instruction as a model for teaching behavior, for the sample lessons provided, and for the personal feedback instruction provided. The grade equivalents of raw test scores, which were given to the participants in class, gave many students a current view of their adult reading abilities. In some cases, students had been labeled as "remedial readers" in elementary and secondary school and feedback on their adult reading abilities was a needed reinforcer to their own attitudes about reading. The lowest score of all groups tested (100.6) certainly did not indicate reading ability which would predict failure in college courses or difficulty with dealing with reading matter in this society.

The above feedback, modeling and examples may be justification for
including college level reading instruction in this course. The mean gain noted in this study, however, would not support the inclusion of such instruction if the expected outcome is increased reading ability.

Experimental Group Four received an introduction to the teaching of reading and a reading related field experience to determine the impact that experience had at a pre-service level. Analysis of test results indicated that this experience produced a significant change in both competency to teach reading and in attitude toward teaching reading. It was noted that the majority of students in the two groups completing the entire course had already completed a similar introduction. The mean gain for those groups was 58 points. The mean gain for group four was 33 points; more than half the gain made by students completing an entire course. The value of the introduction to reading and related field experience in a pre-service education program is strongly suggested. Further concepts and practice with those concepts can further be expected to produce and advance competency in teaching reading in content areas.

Multiple regression analysis revealed a linear relationship between several variables and competency to teach reading. Introduction to reading was identified as related to competency test scores, indicating the impact that introduction had on those students' competencies. Relationships were also found in some groups between attitude toward teaching reading and level of educational attainment. Although sex was identified as related, only 8% of the variance was accounted for and that relationship was found in only one group. Sex was found to be related only to
the post-test scores which suggests that females may have more gains as a result of the treatment than males. Further study with a larger number of students is recommended.

The variable relationships found significant suggested that attention to the development of positive attitudes may enhance competency to teach reading. The introduction to reading provided to Group four included such attention and did have significant impact in changing attitude. The strategy for increasing positive attitudes was almost solely directed toward exercises and problems showing the problems of instruction related to reading and practical diagnostic teaching strategies to meet those problems. Increased positive attitudes and increased competencies were a result of those strategies.

The groups included in this research for validity purposes added a comparative measure for the test instruments. There did appear to be a sensitivity to the test instrument for measuring attitudes and, therefore, generalizations made from those test results should be cautious. Further study, however, is recommended to determine the relationship of attitude and competency.

Interpretations of data support the recommendation that an introduction to reading for secondary pre-service teachers be a regular part of the secondary education program. Such an introduction should include practical exercises demonstrating the value of reading instruction as well as diagnostic and teaching strategies for the content area classroom. Such an introduction prior to the three-hour reading course for content area teachers provides significant gains in competencies and attitudes and reduces the number of concepts to be taught in the class, thus
allowing more time for practice of more extensive concepts in that class.

The only observed benefits of teaching personal reading skills in the content area class in conjunction with course content are indirect. The teaching models, lesson samples and feedback on personal reading abilities were reported to be helpful by many enrollees.

Analysis of gains made in pre- and post-test results for competency in teaching reading revealed that every experimental group gained significantly in their self assessed ability to teach reading. Even those students who had an introduction to reading prior to this course showed significant gains. This gain would suggest that these pre-service teachers are much more prepared to teach reading as a process of learning than they were previous to this course. Literature reviewed indicated that such preparation is essential for teaching reading in content areas. If teaching behavior reflecting such preparation can eventually be expected, student ability to use reading as a process skill will follow. The outcomes justify the inclusion of a course in reading in the content areas at the pre-service level. Such preparation prior to a student teaching experience might also enrich the total teaching preparation of pre-service teachers.

Recommendations for Future Study

For the purposes of this study, variables were treated in a general manner. That is, as overall reading level or overall attitude. The results were analyzed to test only the specific hypotheses of this study.
This project, however, indicated the need for more thorough, in-depth analysis of students enrolled in the pre-service secondary education program at the University of New Mexico. As the data sets on variables were analyzed, questions regarding the subjects' characteristics arose which could not be answered due to lack of data. The variable of reading competency was particularly intriguing. The research results would have been strengthened had information been available for analyzing the students' strengths and weaknesses in vocabulary, comprehension and reading rate, as well as general reading level. A research question that was an outgrowth of the need for that information was: Would reading competency have changed significantly had the specific reading strengths and weaknesses of the subjects been identified and instruction directed toward those specific areas? This study measured only the general reading level and presented instruction of a general nature. Instruction for only one aspect of reading, such as vocabulary, was so brief that change could hardly have been expected in one area. It is recommended that research be conducted to determine the effect of diagnostic instruction.

A second question resulting from this study concerned the impact of the course on pre-service teachers in relation to their future student teaching experience.

The informal evaluations of the course (Appendix B) indicated the concepts included to be of high value and influential in changing attitudes toward teaching in general. Due to the fact that student teaching is a terminal practice semester, it may be justified to require that pre-service teachers take the reading in content areas course prior to student
teaching, thus allowing a semester of application of concepts prior to entering the profession. This practice could be instrumental in reducing first year frustration and enhance success in teaching without much of the trial and error behavior of that first year. Research is recommended to determine if such a requirement is justified.

A limitation noted in this study was that attitude and competency to teacher reading in content fields was measured by the symbolic act of completing a questionnaire rather than through observation of behavior. Research measuring these variables through observational techniques is, therefore, recommended.
APPENDIX A

THE MEASUREMENT INSTRUMENTS
Directions: On the separate answer sheet, indicate your feeling toward each of the following items.

1. A content area teacher is obliged to help students improve their reading ability.

2. Technical vocabulary should be introduced to students in content classes before they meet those terms in a reading passage.

3. The primary responsibility of a content teacher should be to impart subject matter knowledge.

4. Few students can learn all they need to know about how to read in six years of schooling.

5. The sole responsibility for teaching students how to study should lie with reading teachers.

6. Knowing how to teach reading in content areas should be required for secondary teaching certification.

7. Only English teachers should be responsible for teaching reading in secondary schools.

8. A teacher who wants to improve students' interest in reading should show them that he or she likes to read.

9. Content teachers should teach content and leave reading instruction to reading teachers.

0. A content area teacher should be responsible for helping students think on an interpretive level as well as a literal level when they read.

1. Content area teachers should feel a greater responsibility to the content they teach than to any reading instruction they may be able to provide.

2. Content area teachers should help students learn to set purposes for reading.

3. Every content area teacher should teach students how to read material in his or her content specialty.

4. Reading instruction in secondary schools is a waste of time.

5. Content area teachers should be familiar with theoretical concepts of the reading process.
### Answer Sheet

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*(Please circle)*
UNIVERSITY OF NEW MEXICO
Department of Secondary Education

QUESTIONNAIRE

SCTIONS:

Please indicate which practices you are familiar with. Draw a circle around the number which indicates your response from the following:

1. I can do this with skill.
2. I can do this, but need practice.
3. I am familiar with this, but haven't tried it.
4. I am not familiar with this

1 4 1. Determine the readability of materials.
1 4 2. Teach flexibility of reading rate.
1 4 3. Select materials at varied reading levels for classroom use.
1 4 4. Teach students how to use book structure to increase comprehension.
1 4 5. Increase positive student attitudes toward reading.
1 4 6. Provide for student reading objectives in an assignment.
1 4 7. Use the Fry Graph
1 4 8. Use questioning strategies that enhance comprehension.
1 4 9. Use an interest inventory.
1 4 10. Match materials to needs & interests of students.
1 4 11. Teach skimming & skanning in subject area.
1 4 12. Teach critical thinking skills.
1 4 13. Teach students how to locate subject information.
1 4 14. Use Estes Attitude Toward Reading Scale.
1 4 15. Use San Diego Quick Assessment.
1 4 16. Use standardized test results.
1 4 17. Identify students' strengths & weaknesses in reading.
1 4 18. Teach students how to preview materials.
19. Give small group instruction for specific reading skill.
20. Identify problem readers in a classroom.
21. Construct a lesson teaching the SQ3R study method.
22. Provide purpose for specific reading assignment.
23. Use the SMOG Index.
24. Use Slossen Test
25. Write vocabulary exercise for literal level word meanings.
26. Instruct the student in the specific content area reading skills.
27. Identify the reading skills most needed in my subject.
28. Use publishers notations for readability.
29. Write vocabulary exercise for functional level word meanings.
30. Construct concept extension activities.
31. Use informal suitability techniques.
32. Write comprehension questions at varied comprehension levels.
33. Determine the readability of test questions.
34. Teach a lessons using Directed Reading Thinking format
35. Teach students to find main ideas in a subject textbook.
36. Construct a study guide to accompany reading material.
37. Assess students' reading levels.
38. Provide background experiences for vocabulary development.
39. Write a lesson using synonyms & antonyms in subject area.
40. Write a lesson using figurative language in subject area.
41. Write a lesson to teach context clues.
42. Write a vocabulary exercise for general level word meanings.
43. Identify students who have difficulty in word pronunciation.
44. Use Botel Word Opposite Test
45. Use cloze procedure to determine suitability.
46. Rewrite materials at varied reading levels.

47. Write a lesson to teach word pronunciation.

48. Select materials appropriate for specific reading levels.

49. Write a lesson to teach prefixes and suffixes.

50. Select appropriate text books to teach a class of students whose reading levels range 8 grades.
NOTE: Due to revision of copyright laws (Title 17 U.S. Code), it was not possible to include copies of the Nelson-Denny Reading Test. Copies are available from the publisher.
APPENDIX B

INFORMAL EVALUATIONS
INFORMAL EVALUATION OF COURSE

1. "I understand this is a relatively new course and I see many advantages in having it for school teachers. It is a well known fact that a lot of students are way behind in reading skills whatever level they are at. Many of the concepts and Ideas presented in this course should help teacher deal with this problem"

2. "This has probably been the most useful education course I've taken. How I could have gotten thru Mod II w/out this course is beyond me. I hope y'all teach another course I have to take. I learned a great deal in here."

3. "I enjoyed the reading class and learned a lot about the subject that I didn't know previously. The textbook was hard to follow at first and became very technical in a lot of places and was boring but it pointed out a lot of good points about reading."

4. "When I started the course I felt the whole concept was pointless. However, after going through it I have come to the conclusion that it was worthwhile and provides me with tools to become a better teacher. The Blake book I think will provide a lot of help in making lesson plans. I enjoyed using it, because it helped me and my teaching. Teachers were pretty good. Good luck."

5. "I feel that I have learned a great deal about reading. But I feel that the same course could have been taught in a 6 week course. I also feel that the two texts were just a waste of $. The things I will remember most about this class were things handed out by you. I also feel that there might have been a little too much busy work. But on the whole a pretty good class."

6. "I thoroughly enjoyed this class. Linka and Jo are two enthusiastic teachers, and they take an interest in the course. I learned, most of all, the responsibility a content teacher should have in the teaching of reading. I also learned how to prepare lessons in content area which so many teachers probably have never done."

7. "As of this time I have yet to decide how I feel about this class. I am sure that I did learn a good deal. However, I was not happy about everything in the class. I know you can improve though. Good job."
8. "Negative: The course on the average was not cohesive. We went from skill to skill with no tying of the material together and no real purpose.

Also, instructions on assignments between teachers were vague, contradictory and confusing.

Most of the time we were told to do something, not taught to do something. You need a more structured lecture period. We learned mostly through trial and error. You presumed we knew a lot of things you were teaching when in actuality it was totally new unfamiliar stuff. You should teach from that angle.

Forgan was a fair textbook, and the other book was worthless.

I did retain some things that would benefit me in my own teaching however."

9. "Forgan - worthless, boring
Blake - applicable, less-boring

Class - bad time in afternoon - one tends to feel aking to a sluggard.
- but good in class content - i.e., more applicable than theoretical, which @ this point in my career, I'm more receptive to.

Assignments - good, especially when one is able to tie them in w/ actual teaching as I was

I got some good stuff out of this class. I was able to get applicable jive for relating to the masses."

10. "Liked the way the class was run: small groups
    grades on projects & not tests
    low keyed; ie, no unnecessary pressure
    teacher flexibility

The only objection I had was to splitting the class without giving the students any choice as to which group they were in."

11. "I thought the class was quite productive - out of the ordinary. It was quite a change from the regular lecture class.

I must admit I learned quite a few things about reading that I wouldn't of ever picked up otherwise.

The instructors were at times unorganized."

12. "I think this class helped me to understand the problems that teachers are confronted with in content areas. I do think that this class will be useful once I start teaching. Many of the different Reading Exercises are practical and can easily be applied to any content area."
13. "This course is a definite must for secondary ed. school teachers.
   Good Pts. I feel the Interest surveys were very important. Also the
   selection of materials at a suitable level."

14. "Excellent Teaching Techniques. A good evaluation of entering competencees
   & good design of teaching the material.

   The course was realistic, valid and very well done - more interesting than
   most other courses, and much easier to handle. No doubt, an excellently
done job."

15. "In general, I think the class was worthwhile. The lessons we constructed
   were very useful and I feel more competent to help my students who might
   have reading problems. We probably could have been exposed to more tech-
   niques for determining the presence of reading problems in certain students.
   We also could have constructed more exercises without hitting the upper
   limits of required work for a 400 level course. Also, we should have
   on time and used the full amount of time for the class in order to be
   exposed to more diagnostic techniques."

16. "Good pts: 1. This is a much needed course requirement for secondary ed.
   students.
   2. Course provided much practical experience.
   3. A wide spectrum of items were covered.
   4. Teachers showed vitality & initiative.

   Bad pts: 1. Course needs a more regimented structure.
   2. Time needs to be better "timed"

17. "I think the testing or study strategies that are beneficial are the Cloze
    Test, Interest Survey, SQ3R, Pronunciation exercise and the motivation
    exercise. All of these items can be used in my teaching. They can help me
    become familiar with my students and their needs. Dividing the class into
    two groups help for people to be more open in a small group. I think you
    learn more in small groups."

18. " - I enjoyed this class very much.
    - One problem was the time at which this class was offered.
    - Did not think we should have spent class time working on assignments.
    - Really enjoyed the newspaper exercises.
    - Enjoyed the variety of different exercises, perhaps have more variety
      in exercises
    - Enjoyed participating in exercises."
19. "First of all, the bad. At times the class split seemed to divide us and all was vague, at times. But I can see all the reasoning and objectives that we did meet in class. I learned good teaching techniques not specifically in reading area but just in good classroom teaching methods. Both you ladies teach with a completely different "air" but its successful. and that's worth seeing. I enjoyed the class and both of you. Thanks --

20. "The course was very helpful. Although many areas had previously been covered in S.E. 442, I appreciated & benefited from repeating the exercises. For those who have not had any experience with teaching reading the course must have been extremely useful & informative. The Jo/Linka team is great. They have past experience they can sit to bring relativity to the course; their enthusiasm, cooperative & helpful attitude, & thorough knowledge of the subject matter have made the course very pleasant."

21. "What I found particularly useful were the simulation-type exercises that allowed us to work with material we were asked to accept and use in classes to aid reading. In other words: theory became concrete. This gave us the added, instant benefit of discriminating between those methods or techniques we liked and those we did not."

22. "For the students who have no background in reading the class was fine. However for the students with a background in reading it was too repetitious of too many past classes.

In future classes I think it would be beneficial to use the scale(?) we filled out indicating what we were familiar with, and during the semester assign other activities for those familiar with the ones done. Perhaps instead of skill lessons for reading people, learning stations or projects dealing with how reading teachers should deal—help with content area teachers."

23. "The one negative comment that I have is that both Jo and Linka need to get together more on assignments, due dates and grading. There was a large gap between Jo & Linka in this area and at times confused the two groups.

Lots of positive feelings, material, insights and knowledge came from taking this course. Felt reinforced by both instructors — really came across with attitude of caring about class and individuals."

24. "This course was interesting most of the time. I learned a lot about teaching reading that I know will be valuable even before I become a teacher. I wish I would have learned some of this material earlier — it would have been a help to me.

Both teachers did a good job. My only objection is that I didn't find much use from the extra book we had to buy."
25. "Basically I enjoyed the course. At first I thought that it was going to be a waste of my time, but as the semester progressed the course became more fun. I enjoyed preparing and administering the lesson, particularly the last one. I must confess, however, I don't really know how much of this stuff I'm going to remember to use when I teach. I doubt if I'll recommend much of it. I thought that the instructors were fair and that, although the class was run loosely, it was adequately taught. I strongly agree that the course should be left as it is (at least in the way it is structured) and that it shouldn't be considered a "make or break" class. All in all, its been fun and, I feel that the course was worth my time, at least to introduce me to these things."

26. "This was a very valuable course for me. It follows right along the lines of Course 442, Teaching of Reading, taught by Dr. White.

I liked the informal way in which the class was held; of course Linka and Jo were responsible for that. They never taught "above our heads." They were always "at our level", thus enabling us to identify with them.

The SQ3R was new and interesting to me. I enjoyed the Skills Lesson, also.

Thanks, Linka & Jo!"

27. "I enjoyed this course very much. The atmosphere was always friendly and understanding, which made all the assignments easier to do. I learned a lot of ways to improve my teaching methods. I am sure the notebook will come in handy for future reference. Also, I am glad this course is now needed for certification because I think many teachers need it to better understand & help problem students.

Have a good summer and I'll probably see you in the fall."

28. "Overall, this class was probably one of the more enjoyable classes. I didn't think I'd be saying that when we began the class. The reason that it was, I suppose, was that it was informal and I felt comfortable in it. I honestly learned from this class. This is due to the assignments - short, but many and very useful - I LEARN BY DOING! And when we learned something new, we had practice at it. Nice class ---"

29. "The class was designed for students without a background in reading, and it was too repetitious for those of us who have a background in reading.

The textbook was also a poor choice in my opinion, I didn't like the format at all."
30. "I really enjoyed this class.

Most of all I enjoyed constructing all the tests & exercises that will be of value to me, in my content field.

Also, I liked having the tests tried on us, & giving us an idea of how they worked, before we had to go home & construct our own.

The instructions on the final skills lesson were sort of foggy for a while, but it was cleared up after a while.

I'm glad I took this class with you all & feel I have learned a great deal that will help me become a better teacher."

31. "This class was really an experience. I liked the class structure because we were all learning at the same time. At times the class assignments were difficult to understand but all in all, this class was fun and helpful. Both instructors were easy to talk to."
APPENDIX C

COMPLETE COURSE DESCRIPTION
January 17

0 - 3:15

ECTIVE: Assessment of present attitudes of students toward teaching reading in content fields.

Awareness of testing rationale and purpose of course.

ERIALS: Consent form

Vaughn Attitude Test

IVITIES: Group testing and signing of consent form

Lecture - explanation of course objectives, requirements, expected activities

SIGNMENT: None

January 19

00 - 3:15

ECTIVE: Assessment of individual reading level.

ERIALS: Nelson-Denny Reading Test,

Form C

Manual - Nelson-Denny Reading Test

Key - Form C

IVITIES: Group testing

Score Nelson-Denny. Oral recitation of correct answers. Computations of total raw scores, recitation of grade equivalent according to raw scores.

SIGNMENT: None
OCTIVE: Assessment of individual competencies in teaching reading in content field.

Knowledge of meanings of terms related to standardized tests: percentile, raw score, grade equivalent, standard scores.

Questionnaire - Teaching Reading in Content Fields

IVITIES:
Group testing - responses to questionnaire

Lecture - elements of standardized tests, how they are scored and varied use of scores as they relate to percentile, grade equivalent, standard scores

Question and answer, discussion of scores

Make up tests to new adds.

IGNMENT: None
GROUP 1

January 26

0 - 3:15

SON: The Cloze Procedure

ECTIVE: Completion of a college level cloze test

Awareness of procedure to construct and score a cloze test

Awareness of elements measured by cloze and alternate use of results

ERIALS: College level cloze test constructed by Paul

Handout: "Instructional Guide," from Real World, Dr. Edward Fry

Instructions for constructing and scoring a cloze adapted from J.H. Bormuth by Robert White

IVITIES: Complete a cloze test, comparing answers with key and scoring according to directions.

Discussion of use of results of cloze, aspects of suitability the tests measure, alternate construction methods and teaching techniques possible with cloze.

IGNMENT: Construct a cloze test and administer it to a student. Score the test results in terms of material's suitability and write evaluative remarks about the procedure.
January 30

30 - 3:15

SESSION: The Cloze Procedure

OBJECTIVE: Students will demonstrate their knowledge of the cloze procedure by constructing, administering and scoring a cloze test.

Students will demonstrate their knowledge of suitability of material by evaluating the suitability of the material according to the results of the cloze and evaluating the procedure for its limitations.

REQUIREMENTS: Individually constructed by students

ACTIVITIES: Construct, administer, score, and evaluate a cloze test.

SIGNMENT: None
February 2

9:00 - 3:15

SESSION: Relating Reading to Content Classrooms

OBJECTIVE: Demonstration of knowledge of techniques for teaching reading and ability to relate possible ways these techniques could be applied to individual's classroom.

ERIALS: Reading journals or articles relating to reading

IVITES: Read three articles and summarize. Indicate how the ideas contained in them might be applied to individual's field in at least one way. Do not exceed 3-4 pages.

IGNMENT: None
GROUP 1

February 9

00 - 3:15

OBJECTIVE: To design an informal suitability survey to determine the suitability of content area materials.

MATERIALS: Forgan, pp. 66-69

ACTIVITIES: Complete exercise, pp. 79-82, and example of a suitability survey. Identify the types of questions used according to explanation, pp. 66-75.

Group discussion - What are the responsibilities of a teacher if material proves suitable or not suitable? Group reports back to class.

ASSIGNMENT: Select material from content field and construct an informal suitability survey for that material.
GROUP 1
February 14
00 - 3:15
LESSON: Attitudes/Interests

OBJECTIVE: Identify significant attitudes/interests affecting teaching effectiveness in own field.
Familiarization with types of attitude/interest inventories.
Comparison/contrast of informal suitability vs cloze & evaluate

ACTIVITIES: Group discussion to compare & contrast informal suitability and cloze.
Discussion of interest and attitude surveys.

MATERIALS: Sidney-Simon Interest Inventory
Miller Interest Inventory

IGNMENT: None

GROUP 2

2:00 - 2:40
LESSON: Homonyms

OBJECTIVE: Identify specific homonyms and their meanings and construct sentences with these words.

MATERIAL: Chapter 15, Blake

ACTIVITIES: Independently complete exercise in Chapter 15.
Discuss personal reaction to independent work and retention of word meanings.

2:40 - 3:15
LESSON: Attitudes/Interests

OBJECTIVE: Objective 1 and 2 of Group 1

MATERIALS: Estes Attitude Survey
Miller Interest Survey
DeVargas Attitude Survey

ACTIVITIES: Answer and score Estes scale
Group activity: with peers from own content field, identify significant attitudes and interests applicable to field. Write survey items to access those attitudes and interests.
GROUP 1

February 16

10:00 - 3:15

LESSON: Different Types of Comprehension Questions

OBJECTIVE: Develop the ability to write different types of comprehension questions for the Informal Suit Survey. Identification of significant attitudes/interests affecting teaching in content field.

MATERIALS:

ACTIVITIES: Group work: identify significant attitudes and interests affecting teaching in content field.

ASSIGNMENT: See below*

GROUP 2

2:00 - 2:40

LESSON: Synonyms and Antonyms

OBJECTIVE: Reinforcement of word meanings from Chapter 15. Identify synonyms and antonyms for key vocabulary words.

MATERIALS: Exercise 1, Chapter 16

ACTIVITIES: Group activity: 2 volunteers to tell a brief story which will include usage of 3 words from Chapter 15. Other students identify the word and correct/incorrect usage. (10 min.)

Chapter 16, Blake. Without the use of glossary or dictionary, complete the exercise in Exercise 1. Utilize only knowledge from peers.

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Attitudes/Interests

OBJECTIVE: Identification of significant attitudes/interests affecting teaching in content field.

MATERIALS:

ACTIVITIES: Role playing: teach a 5-minute lesson to students (peers) role playing various assigned attitudes and interests. Analyze.

Problem: Identification of important attitudes/interests as they apply to own subject field.

ASSIGNMENT: See below*

ASSIGNMENT: Design a 15-item attitude/interest survey for your subject field. Due Tuesday, February 21. For reference, see Forgan, pp. 344-355.
GROUP 1

February 21

00 - 3:15

LESSON: Attitudes/Interests
Teaching Word Meanings

OBJECTIVE: Identification of important attitudes/interests affecting teaching in content field.
Demonstrate knowledge of levels of word meanings by completing enabling activities, p. 140

MATERIALS: Forgan, pp. 136-146

ACTIVITIES: Lecture/Discussion
Group work: to identify attitudes/interest applicable to content field. Report to others.
Individual and group work to complete enabling activities.

ASSIGNMENT: See below*

GROUP 2

2:00 - 2:40

LESSON: Synonyms and Antonyms

OBJECTIVE: Identify meanings of key vocabulary by supplying appropriate synonyms and antonyms in context.

MATERIALS: Exercise 2-4, pp. 269-275

ACTIVITIES: Team work: to complete exercise. Class divided in two sections to write a story/paragraph containing key vocabulary. Group retelling in synonyms and antonyms.

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Teaching Word Meanings

OBJECTIVE: Demonstrate knowledge of levels of word meanings by completing core enabling activities 1-3, p. 140.

MATERIALS: Forgan, pp. 136-146

ACTIVITIES: Lecture to complete Activity 1 question/answer, Activity 2

ASSIGNMENT: See below*

ASSIGNMENT: Identify five words from your subject area and define them at each of the three levels of word meaning.
February 23

0 - 3:15

SON: Teaching Word Meanings

ECTIVE: List major guidelines for teaching word meanings in own content area.

Exemplify these guidelines with a practice or strategy to be used.

ERIALS: Forgan, pp. 147-151

IVITIES: Volunteers to teach words at 3 levels to group.

Content area groups: share words selected for homework and define at 3 levels.

As a group, write a statement to share with the class describing how understanding of what a student hears and reads is improved as words move through the 3 levels of word meanings in the students' vocabulary. (Act. #5)

Read guidelines for teaching word meanings (pp. 148-149). Discuss guidelines and add anything left out. Select key words from each generalization. For each guideline, write at least one specific practice or strategy you as content teachers would use.

How can you put into effect these guidelines with the words you have chosen? How would you go about providing a direct experience to accompany the word selected?

IGNMENT: See below*


2:00 - 2:40

LESSON: Figurative Language

OBJECTIVE: Identify types of figurative language and the meaning of given examples.

MATERIALS: Chapter 17, Blake

ACTIVITIES: Group leader assigned to lead rest of class in group solving of each exercise item. Further activity: Make a list of common figurative language you grew up with.

2:40-3:15

LESSON: Teaching Word Meanings

OBJECTIVE: List major guidelines for teaching word meanings in own content area.

Identify strategies or practices to be used exemplifying these guidelines.

MATERIALS: Forgan, pp. 147-151

ACTIVITIES: Read guidelines for teaching word meanings offered by Forgan. Identify further guidelines you feel are important.

Identify a strategy or practice you feel exemplifies these guidelines.

ASSIGNMENT: See below*
GROUP 1

February 28

2:00 - 3:15

LESSON: Teaching Word Meanings

OBJECTIVE: Categorize a list of instructional activities into 3 levels of word meanings. Indicate which activities develop fullest meanings.

Identify a list of instructional activities most appropriate to own content field.

MATERIALS: Forgan, pp. 152-161

Instructional strategies list from A Resource Guide for Secondary School Teaching, p. 79

ACTIVITIES: Small group work: Given a list of instructional activities, categorize the list into the 3 levels of word meanings. Indicate which activities develop fullest meanings.

In content grouping: Identify a list of instructional activities most appropriate to own content field.

ASSIGNMENT: See below*

ASSIGNMENT: Construct a lesson or game for teaching word meanings of 10 content area words from your subject. Select the manner you wish to teach it from Module 5, Forgan. Describe what level of meaning you believe you are teaching. Consider those students who cannot function at that level of meaning and what you would do to provide for their needs. Read pp. 105-115, Forgan.

GROUP 2

2:00 - 2:40

LESSON: Verbal Analogies

OBJECTIVE: Identify word meanings of key vocabulary through use of verbal analogies.

MATERIALS: Chapter 18, Blake

ACTIVITIES: Complete the exercises without looking at key. Discuss answers and difficulties with the analogies after completion.

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Teaching Word Meanings

OBJECTIVE: Categorize a list of instructional activities into 3 levels of word meanings. Indicate which activities develop fullest meanings.

Identify a list of instructional activities most appropriate to own content field.

MATERIALS: Forgan, pp. 152-161

Instructional strategies list from A Resource Guide for Secondary School Teaching, p. 79

ACTIVITIES: Small group work: Given a list of instructional activities, categorize the list into the 3 levels of word meanings. Indicate which activities develop fullest meanings.

In content grouping: Identify a list of instructional activities most appropriate to own content field.

ASSIGNMENT: See below*
GROUP 1

March 2

00 - 3:15

LESSON: Diagnosing Reading Skills in Content Area

OBJECTIVE: State the reading skills necessary to read materials in own content area.

MATERIALS: Forgan, pp. 105-115

ACTIVITIES: Debate the topic. It is possible/not possible for students to learn necessary reading skills during elementary school (Enabling Activity #3).

Debate to include:
- 10-15 minute prep time
- Introduction
- Affirmative statement
- Body: Arguments for/against
  1.
  2.
  3.
- Conclusions
- Rebuttals

ASSIGNMENT: See below*

ASSIGNMENT: Read pp. 116-133, Forgan

GROUP 2

2:00 - 2:40

LESSON: Contest Analysis

OBJECTIVE: Identify meanings of key vocabulary using context analysis.

MATERIALS: Chapter 19, Blake

ACTIVITIES: Complete the exercises in Chapter 19.

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Diagnosing Reading Skills in Content Areas

OBJECTIVE: State the reading skills necessary to read materials in own content field.

MATERIALS: Forgan, pp. 105-115

ACTIVITIES: Group work: Utilizing the listing given in Forgan, identifying the reading skills needed most in your content field. Be prepared to justify why you feel these are the more important/needed skills.

ASSIGNMENT: See below*
March 7

2:00 - 2:40

LESSON: Finding Main Ideas in Paragraphs

OBJECTIVE: Identify the main idea in paragraph selections.

MATERIALS: Chapter 2, Blake

ACTIVITIES:

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Diagnosing Reading Needs in Content Areas

OBJECTIVE: Construct a reading skills test to determine students' reading needs in content fields.

MATERIALS: Forgan, pp. 116-133

ACTIVITIES: Small groups of 3: Construct a skills test to measure one specified reading skill using Forgan as a guideline.

ASSIGNMENT: See below*

Finish construction and give the skills test you have begun. Read pp. 174-183, Forgan.
GROUP 1

March 9

3:00 - 3:15

LESSON: Teaching Comprehension Skills

OBJECTIVE: List, describe and write six categories of questions.

MATERIALS: Forgan, pp. 174-183

Handouts for questions and paragraph

ACTIVITIES: Identify the types of questions presented on handout.

Write questions for each type as identified by Forgan for the selection on handout.

ASSIGNMENT: None

GROUP 2

2:00 - 2:40

LESSON: Supporting Ideas in Paragraph

OBJECTIVE: Identify the supporting ideas of a paragraph.

MATERIALS: Blake, Chapter 3

ACTIVITIES: Read the introduction to the chapter.

Complete exercises.

ASSIGNMENT: None

2:40 - 3:15

LESSON: Teaching Comprehension Skills

OBJECTIVE: List, describe and write the six major categories of comprehension questions.

MATERIALS: Forgan, pp. 174-183

Handouts for questions and a paragraph

ACTIVITIES: Identify the types of questions presented on handout.

Using material from your content area, write questions for each type as identified by Forgan.

ASSIGNMENT: None
GROUP 1

Lesson 21

LESSON: Teaching Comprehension Skills

OBJECTIVE: List and describe alternate strategies for teaching comprehension

MATERIALS: Handout - Format of skill lesson
Sample skill lesson on outlining

ACTIVITIES: Demonstration of skill lesson for a comprehension skill at multiple levels - outlining.
Discussion - Elements of skill lessons at easy level - teaching the lesson, practicing the skill at multiple levels.

ASSIGNMENT: See below*

GROUP 2

2:00 - 2:40

LESSON: Main and Supporting Ideas in Long Selections

OBJECTIVE: Identify the main and supporting ideas in a long selection.

MATERIALS: Blake, Chapter 4
May need to substitute material, as this chapter is very long

ACTIVITIES:

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Teaching Comprehension Skills

OBJECTIVE: List and describe alternate strategies for teaching comprehension.

MATERIALS: Handout - Format of skill lesson
Sample skill lesson on outlining

ACTIVITIES: Demonstration of skill lesson for comprehension skill at multiple levels.
Go over handout on format.

ASSIGNMENT: See below*

ASSIGNMENT: Read Forgan, pp. 191-204. Design an exercise to teach a comprehension skill in your content area at an easy level.
GROUP 1

March 23

ON: Teaching Comprehension Skills

OBJECTIVE: Identify and write questions and activities for higher level comprehension.

MATERIALS: Forgan, pp. 191-204

ACTIVITIES: Demonstration of 2 skill lessons at higher levels of questioning - fact and opinion.

Lecture to make a transition from Forgan's leveling to "critical thinking" concept.

ASSIGNMENT: See below*

GROUP 2

2:00 - 2:40

LESSON: Synthesizing

OBJECTIVE: To synthesize information in a selected fashion.

MATERIALS: Blake, Chapter 13

ACTIVITIES: Read section on explaining the skill of synthesis. Using Forgan and Blake book, synthesize information about reading skill.

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Teaching Comprehension Skills

OBJECTIVE:

MATERIALS: Handout - Fact and Opinion Reading Skills

Forgan, pp. 191-204

ACTIVITIES: Same as for Group 1

ASSIGNMENT: See below*

SIGNMENT: Read pp. 222-251, Forgan. Design an exercise to teach a higher level comprehension skill in your content area at lower readability level.
GROUP 1

March 28

LESSON: Teaching Study Strategies

OBJECTIVE: Write the key words for the SQ3R study method and a paragraph describing each step.

MATERIALS: Forgan, pp. 222-251

Exercise for SQ3R

ACTIVITIES: Explain an SQ3R exercise.

Describe the parts of an exercise. Rationale.

Write the key words for the method and a paragraph describing each step and why each step is important.

ASSIGNMENT: See below*

GROUP 2

2:00 - 2:40

LESSON: Fact and Opinion

OBJECTIVE: Distinguish between fact and opinion in written material.

MATERIALS: Blake, Chapter 7

ACTIVITIES: Complete the exercises in Blake as a group exercise.

Round Robin reading.

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Study Strategies

OBJECTIVE: Write key words for the SQ3R study method and a paragraph describing each step.

MATERIALS: Forgan, pp. 222-251

Exercise for Sq3R at college level

ACTIVITIES: Demonstration and completion of and SQ3R exercise at college level.

Write the key words for the method and a paragraph describing each step.

ASSIGNMENT: See below*

SIGNMENT: Construct a lesson at the 7-8 grade level for the SQ3R method for a chapter not yet mastered by student.
GROUP 1

- 3:15

ON: Study Strategies

CTIVE: Evaluate and discuss lessons constructed at the 7-8 grade level for the SQ3R method.

RIALS: Forgan, pp. 222-251 and individually selected content material.

VITY: Discussion of SQ3R method.

GNMENT: See below*

GROUP 2

2:00 - 2:40

LESSON: Summarizing

OBJECTIVE: Summarize a selection by condensing information.

MATERIALS: Blake, Chapter 12

ACTIVITIES: Complete exercise in Set 3

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Study Strategies

OBJECTIVE: Evaluate and discuss lesson constructed at the 7-8 grade level for the SQ3R method.

MATERIALS: Forgan, pp. 222-251 and individually selected content material.

ACTIVITY: Discussion of SQ3R method.

ASSIGNMENT: See below*

SIGNMENT: Teach the lesson constructed. Read Forgan, pp. 252-292 to at least one student and evaluate. Was the student able to answer the questions using the method? What are the implications for teaching based on the results of your lesson?
GROUP 1

April 4

100 - 3:15

LESSON: Pronouncing Words

OBJECTIVE: List the strategies for word pronunciation skill and recording information.

MATERIALS: Forgan, pp. 252-292

Assessment instrument as described for Forgan

ACTIVITIES: Given a list of low level words, pronounce a number of words, then identify the word pronunciation strategies used and list them.

Small group assessment exercise. Students assess each other's pronunciation abilities and record it on master sheet. Assign some role playing to practice assessment of deficiencies.

Word pronunciation lesson, open and closed syllables.

ASSIGNMENT: See below*

GROUP 2

2:00 - 2:40

LESSON: Previewing

OBJECTIVE: Preview material to gain information rapidly.

MATERIALS: Chapter 5, Blake

ACTIVITIES: Preview Sets 1 and 2

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Pronouncing Words

OBJECTIVE: List the strategies used for word pronunciation.

MATERIALS: Handout: Word Analysis Skills, Prefixes, Suffixes, Greek Roots

Forgan, pp. 152-192

ACTIVITIES: Given a list of low-level words, pronounce a number of words, then identify the word pronunciation techniques used and list them.

ASSIGNMENT: See below*

SIGNMENT: Bring selected content area material to class.
GROUP 1

11 6

0 - 3:15

Son: Readability and Rewriting Materials

Objective: Rewrite a lesson to teach at a reading skill in at least two different grade levels.

Materials: Forgan, Mod I and II

Activities: Rewrite a lesson to teach at reading skill at two different grade levels. May be group work or individual.

Discussion of lessons. Individual help in problems encountered in lessons.

Assignment: Teach the above lesson at the lower level. Have the same student practice that lesson at a higher level.

Read pp. 293-329, Forgan
GROUP 1

2:00 - 2:40

LESSON: Skimming and Skanning

OBJECTIVE: Skim and skan for rapid information.

MATERIALS: Substitute for Blake

ACTIVITIES:

ASSIGNMENT: Read Mod I and II of Forgan.
Bring this lesson to class.

GROUP 2

2:40 - 3:15

LESSON: Pronouncing words

OBJECTIVE: Construct a skill lesson for word pronunciation.

MATERIALS: Forgan, pp. 252-292

ACTIVITIES: Skim and skan lesson with the Forgan book.

ASSIGNMENT: Read Mod I and II of Forgan.
Bring this lesson to class.
GROUP 1

113

0 - 3:15

LESSON: Motivating Students

OBJECTIVE: Identify cognitive and affective determinants of motivation.

Identify effective instructional strategies to provide for motivation.

MATERIALS: Forgan, pp. 293-329

Sample lessons

ACTIVITIES: Demonstration of motivational strategies, both affective and cognitive.

Identify effective activities appropriate for the factors identified by Forgan as they are appropriate to your field.

Vaughn questionnaire.
Blackboard work of model.

ASSIGNMENT: See below*

GROUP 2

2:00 - 2:40

LESSON: Book Structure

OBJECTIVE: Use book structure to locate information.

MATERIALS: Blake, Chapter 14

ACTIVITIES: Complete exercises within chapter.

ASSIGNMENT: See below*

2:40 - 3:15

LESSON: Motivating Students

OBJECTIVE: Identify cognitive and affective determinants of motivation.

List instructional strategies to provide for motivation.

MATERIALS: Forgan, pp. 293-329

ACTIVITIES: List activities appropriate for the factors identified by Forgan as they are appropriate to own field.

Complete Vaughn questionnaire
Blackboard work with model.

ASSIGNMENT: See below*

ASSIGNMENT: Construct a motivational exercise for the skill lesson you wish to present to class.
GROUP 1

11 18

00 - 3:15

LESSON: Motivation

OBJECTIVE: Evaluate a motivational exercise for a specific skill lesson.

MATERIALS:

ACTIVITIES: Discuss the exercises constructed and why that technique was selected. What provisions were made for cognitive and affective motivation factors?

Were all students considered in this exercise? Why or why not?

ASSIGNMENT: Read Mod 10, pp. 330-371, Forgan.

GROUP 2

2:00 - 2:40

LESSON: Faulty Reasoning

OBJECTIVE: Identify faulty reasoning in printed matter.

MATERIALS: Blake, Chapter 9

ACTIVITIES: Read introduction. Complete exercises.

ASSIGNMENT: Read Mod 10, pp. 330-371, Forgan.

2:40 - 3:15

LESSON: Motivation

OBJECTIVE: Evaluate motivational exercise for a specific skill lesson.

MATERIALS: Student constructed exercises.

ACTIVITIES: Discuss the exercises constructed and why that technique was selected. What provisions were made for cognitive and affective motivation factors?

Were all students considered in this exercise? Why or why not?

ASSIGNMENT: Read Mod 10, pp. 330-371, Forgan.
GROUP 1

April 20

9:00 - 3:15

LESSON: Assessment

OBJECTIVE: Identify appropriate assessment techniques for content area.

Evaluate the informal instruments used in Forgan.

MATERIALS: Forgan, pp. 330-371

ACTIVITIES: Class problem:

1. List the strengths and weaknesses of informal assessment instruments.
2. How can you use the results? List specific uses?
3. List specific ways you would try to help problem readers.
4. What instruments are appropriate for your content field?

GROUP 2

2:00 - 2:40

LESSON: Relevance

OBJECTIVE: Determine if information fits a given topic.

MATERIALS: Blake, Chapter 10

ACTIVITIES: Read introduction. Complete Set 2 - studying.

2:40 - 3:15

LESSON: Assessment

OBJECTIVE: Identify appropriate assessment techniques for content area.

Evaluate the informal instruments used in Forgan.

MATERIALS: Forgan, pp. 330-371

ACTIVITIES: Class problem as described for Group 1.
GROUP 1

2:00 - 2:40
LESSON: Analyzing and Note-Taking

OBJECTIVE: Analyze and outline specified material.

MATERIALS: Blake, Chapter 11

ACTIVITIES: Read introduction.
Complete Set 1.

2:40 - 3:15
LESSON: Assessment

OBJECTIVE: Familiarization with reading assessments.

MATERIALS: Botel Word Opposite
Slossen Reading Test
San Diego Quick Assessment
Tape

ACTIVITIES: Lecture identifying characteristics tested by each test.

Play a portion of a test being completed by a student. Students will score.
GROUP 1

April 27

2:00 - 3:15

SESSION: Presentation of Model Skill Lessons

OBJECTIVE: Participate in model skill lesson and evaluate.

MATERIALS: Student constructed lessons.

ACTIVITIES: Participate in model skill lessons and evaluate according to format criteria.

ASSIGNMENT: Make copies for your content area group.

GROUP 2

2:00 - 3:15

SAME
GROUP 1

2 - May 4

2:00 - 3:15

LESSON: Presentation of skill lessons to content area group.

OBJECTIVE: Participate in skill lessons and evaluate.

MATERIALS: Student constructed lessons

ACTIVITIES: In content area groups, participate in completing skill lessons constructed by peers and evaluate according to format criteria.

ASSIGNMENT:
GROUP 1

Day 10

00 - 3:15

SESSION: Assigned final day

OBJECTIVE: Post assignment

MATERIALS: Vaughn Attitude Scale
              Nelson Denny Form D
              Questionnaire

ACTIVITIES: Complete the three assessment instruments.
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REFERENCE NOTES