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CONTENT AND FOCUS OF DISSERTATIONS IN THE COLLEGE  
OF EDUCATION AT NORTH TEXAS STATE UNIVERSITY  
FROM 1975 THROUGH 1986

DISSERTATION

Presented to the Graduate Council of the  
North Texas State University in Partial  
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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The problem of this study was to determine the degree and level of research activity in the College of Education at North Texas State University through an examination of the doctoral dissertations produced by its graduates.

The study had three basic purposes. One purpose was to analyze the dissertations in terms of types of study, focus of each study, subject headings of each study, design characteristics, statistical treatment of data, general results of experimental studies and data collection techniques. The second purpose was to synthesize the data of the present study with that obtained by Novak in her study, in order to provide an overall description of the characteristics of dissertation research in the College of Education from 1953 through 1986. The third purpose was to examine the research activity taking place in the College of Education in terms of the quality of dissertations produced by its graduates.

Seven hundred and ninety-five dissertations were the sources of data for this study. The format developed and

validated by Novak in her study of dissertation research from 1953 through 1974 was used in the analysis of the dissertations completed from 1975 through 1986.

Based on the findings of this study, the following conclusions were drawn.

The format developed by Novak in 1975 can be used to analyze dissertations completed during the years from 1975 through 1986.

The degree and level of research activity in the College of Education can be assessed through an analysis of the dissertations produced by its graduates.

Doctoral candidates are using statistical methods and computers to analyze and manipulate data more often.

There is an indication that doctoral candidates are beginning to use a wider variety of data-gathering techniques.

Four recommendations are drawn from the study.

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## CHAPTER I

### INTRODUCTION

One of the ways in which the growth and development of a field is measured is through an assessment of the level and type of research activity taking place. According to Stroud (8), a discipline is considered to be scholarly and scientific if, for example, research efforts are massive and institutionalized, if research is cumulative and if research is experimental. If one accepts these as valid criteria upon which to judge a field or discipline then one can determine whether or not progress is being made in that field.

The bulk of existing research in any field is dissertation research. To evaluate the degree and level of research activity taking place in the College of Education at North Texas State University, Denton, Texas, a study of the dissertations of doctoral graduates at that university was undertaken. According to Avery (2), by focusing on one aspect of a department's operation, such as the dissertations its graduate majors produced, "much of the department would of course come to light, if only by implication and in this sense many of the same ends of a self study of the department as a whole inevitably would be served" (2, p. 3).

Boyer (4) defines the dissertation as the capstone to a formal academic training process which begins with the doctoral recipient's entrance into elementary school or kindergarten. To White (11), a dissertation is a rich source of "usable" knowledge. Dossick (5), however, defines it aptly when he wrote that a dissertation is "a 'frozen asset' of data ready to be tapped like a rich vein in a mine." He comments further,

[They] contribute much to knowledge because of the highly specialized character of the data, the results of minute research under expert guidance and because of the wide use of primary sources, experimental investigations, statistical information, etc. (5, p. 2).

The first doctoral degree awarded the College of Education at North Texas State University was in 1953. Since that first degree, 1,436 more doctoral degrees were earned in the college through December, 1986, 664 of which were Doctor of Philosophy degrees (9). During the early 1980s there were 483 doctoral degrees conferred as compared to only 87 in the first 10 years of the program. This shows clearly that, over the past three decades, the annual production of doctorates has doubled.

With each degree conferred, another research project has been completed and the results reported in a dissertation. Each year, hundreds and hundreds of dissertations have been written. An examination of the dissertations, however, revealed only one study was conducted on the



dissertations themselves. Novak (7), who undertook the study for her dissertation, stated that dissertations are an under-utilized source of knowledge.

The dearth of empirically derived data about dissertations is not only true in the College of Education. Boyer (4), who investigated the dissertation as an information source, decried the fact that there is an almost total void of knowledge about the dissertation as a vehicle for the dissemination of research results.

This study was conducted to provide an updated view of the content and focus of dissertation research in the College of Education at North Texas State University. After the content and focus of dissertation research has been determined, the level and type of research activity taking place in the College of Education is assessed. What areas of education were being studied? What methodology was utilized? What is the overall direction of future research concerns of graduate students in the College of Education? This paper attempts to answer these questions.

#### Statement of the Problem

The problem of this study was to determine the degree and level of research activity in the College of Education at North Texas State University through an examination of the doctoral dissertations produced by its graduates.

### Purposes of the Study

The purposes of this study were three-fold. The first purpose was to analyze the dissertations in the College of Education from 1975 to 1986 in terms of types of study, focus of each study, subject headings(s) of each study, design characteristics, data collection techniques, statistical treatment of data and general results of experimental studies.

The second purpose was to synthesize the data of the present study with those of Novak in order to provide an overall description of the characteristics of dissertation research in the College of Education from 1953 to 1986.

The third purpose was to examine the research activity taking place in the College of Education in terms of the quality of dissertations produced by its graduates.

### Research Questions

In order to fulfill the purposes of the study, answers to the following questions were sought:

1. What were the descriptive characteristics of the dissertations in terms of (1) type of study, (2) focus of each study, (3) subject headings of each study, (4) design characteristics, (5) data collection techniques, and (6) data analysis techniques?

2. If the study were experimental, how many of the findings showed statistically significant differences?

3. How many dissertations have been completed and how many doctoral degrees of each type were awarded from 1975 through 1986?

4. How many of the authors were of each sex?

5. How similar or different were the dissertations completed during the period 1953 through 1974 from those completed during the period 1975 through 1986?

6. What was the status of dissertation research in the College of Education from 1953 through 1986?

#### Hypotheses

To achieve the purposes of the study, the following hypotheses were tested.

1. There will be no significant difference between the types of study conducted in 1953 through 1974 and in 1975 through 1986.

2. There will be no significant difference between the focus of study conducted in 1953 through 1974 and in 1975 through 1986.

#### Delimitations and Assumptions

The study was limited to the content analysis of 795 dissertations completed in the College of Education at North Texas State University from 1975 through 1986. The analysis was based on the format for classifying dissertations that was developed and validated by Novak in 1975.

Abstracts of the dissertations were the sources of information. In cases where the abstracts did not give adequate information on the categories required, the appropriate sections of the dissertations were consulted. The study assumed that the information found in the abstracts and the card catalog in the Willis Library of North Texas State University was correct and representative of the dissertations.

#### Definition of Terms

The following terms are defined according to their use in the study.

Content analysis.--This is any research technique for making inferences by systematically and objectively identifying specified characteristics within text (3, p. 313).

Simulation studies.--This is an operating model which shows not only the structure of the system (how each variable or component is related or converted) but also the way change in one variable or component affects changes in the values of the other variables or components (3, p. 330).

Ex post facto research.--This research is a systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable (1, p. 271).

Historical research.--This type of research attempts to establish facts and arrive at conclusions concerning the past (1, p. 312).

Correlational studies.--This type of descriptive research is concerned with determining the extent of relationships existing between variables (1, p. 305).

#### Significance of the Study

Over the past three decades, graduate programs in American universities have doubled in number. Enrollments in degree programs grew by a factor of 2.2 and the annual production of doctorates almost tripled (10, p. 43). With the emergence of new programs with various models of preparation and types of degrees, there has been an increasing interest in the number of doctoral degrees, topics investigated and in the types of research design used by students (8).

In the College of Education at North Texas State University, the number of doctoral degrees awarded has been increasing in number every year. From the first degree earned in 1953, the number of doctoral degrees granted increased to 87 in 1963 and rose to 571 in 1973. As of 1986, there were 1,437 doctoral degrees conferred in the College of Education alone. The most prolific years in the production of doctoral degree holders were during the

five-year period from 1982 through 1986, accounting for 354. This was three more than the total of 351 produced during the years from 1970 through 1974.

Although there have been a total of 1,437 doctoral degrees awarded in the College of Education, out of 2,596 doctoral degrees granted by the university, interest in the dissertations associated with the degrees was limited to a bibliographic listing of the thirty-eight which were produced in the first eight years of the doctoral program (1953-1960). It was only in 1975 that a study was undertaken to determine the characteristics of dissertations produced in the College of Education. In her study, Novak developed a format for classifying and analyzing dissertations. The study was a pioneering effort which provided a detailed description of dissertation research in the College of Education from 1953 to 1974. This study continues the previous efforts of Novak and provides an analysis of dissertation research from 1975 through 1986.

Dossick (5) underscores the need for a study of dissertations. He points out that the information collected could help to,

avoid duplication, provide new leads and be the means for pointing the way for future research, for example, by indicating the need of extending to the present surveys completed years ago or in perceiving the value of transferring research problems conducted and completed in a particular region to another; by encouraging the re-examination of controversial issues or experiments; by designating the areas that have been explored adequately from historical, descriptive and

statistical points of view and that now call for a swing to the analytical and to a search for patterns and meaning; and by indicating gaps in our knowledge; and to remind students that much of what is being treated as innovative is merely new terminology and had been known and used in the past (5, p. 2).

Novak likewise enumerates the advantages one can derive from a study of dissertations. She writes that the faculty of the Department of Education could use the study of dissertations as a guide in advising candidates who are preparing to write dissertations. Furthermore, she believes that the findings of such a study could be used by other colleges and departments in the university to give them data for comparison with their dissertations. Finally, she states that the information obtained from a study of dissertations could be used by administrators for public relations purposes and as background for their decisions related to the role and scope of the doctoral program in the College of Education.

This study is significant because its main output is a source material which can be used as reference by students and faculty in formulating guidelines in selecting problems for research. The results of the study could be utilized by the administrators and faculty in the College of Education in identifying deficiencies in their programs. Finally, an analysis of the dissertations will help professionals and doctoral students identify areas where

research activity is limited and, as a result, help identify possible directions for future research.



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## CHAPTER II

### SYNTHESIS OF RELATED LITERATURE

Each year, thousands of dissertations are written in American universities. Each dissertation incorporates the results of research undertaken during the process of attaining a doctorate. At North Texas State University alone, there are 2,596 dissertations which have been completed from the very first one in 1953 to those in 1986.

Boyer (2) states that any research efforts which add to man's knowledge are worthy of attention. An examination of studies related to dissertations as subjects found very few references. In the College of Education at North Texas State University, only one study was conducted on the dissertations themselves. Novak (11), who undertook the investigation in 1975, analyzed 642 dissertations produced during the period from 1953 through 1974. In her search of related literature, she found only three dissertations that examined dissertations in an evaluative manner, three others which assessed dissertations written in a specific academic area and four additional ones which dealt with dissertation-related aspects of the doctoral program.

From the time Novak undertook the study, in 1975, to the present, there was not much increase in the number of

studies connected with dissertation research. It was observed that most of the literature gathered on dissertation research in the 1980s deals with an important aspect of the dissertation, its contribution to the growth of knowledge.

Interest in dissertation research dates back to the early 1950s. Literature showed that dissertations written as early as 1920 had been analyzed to determine the type and level of research activity being undertaken at the different universities in the United States. Focus of the studies centered on the research methodology, topics investigated and the value of the dissertation research to the growth of knowledge.

For this study, the description of literature related to the study of dissertations is grouped into three headings. Discussion in this chapter proceeds in the following order: (1) type and focus of research, (2) methodology for analyzing dissertation research, and (3) the value of dissertation research to the growth of knowledge.

#### Type and Focus of Dissertation Research

A review of those doctoral dissertations in music education completed from 1940 to 1954 was conducted by Worthington (19). He classified the dissertations according to the methods of research used and according to the area of concentration each investigated. The methods of research

utilized by these music education doctoral studies and the number of studies which used the method are as follows: descriptive research, 201; historical research, 40; action research, 35; philosophical research, 34; experimental research, 25; test construction research, 9; and creative research, 2. Forty-six of the 346 dissertations included in this study could not be clearly classified under any of the established methods of research and were included in a miscellaneous category.

The study of Worthington clearly shows that descriptive research completed during the period of 1940 to 1955 was the predominant methodology employed. However, over the years, there was a shift from descriptive to experimental research. Weimer (15), in a study of 1,767 doctoral dissertations in music education from 1963 to 1977, found trends which revealed a decline in the use of descriptive research. The use of experimental methods and experimental designs have increased dramatically.

The findings in music education were contrary to those in social studies education. In a study of social studies education dissertations from 1934 to 1957, McPhie (10) found that analytical (30 percent) techniques had been used most often over experimental (21 percent) or survey (15 percent) techniques. Wick and Dirkes (16), in an analysis of the dissertation abstracts reported a different finding. They

found that 69 percent of the studies were experimental, 48 percent used program as an independent variable, 45 percent used post-test only design, 25 percent employed surveys as data gathering instruments, 38 percent made use of analysis of variance as a data gathering technique, and 33 percent employed deliberate sampling plans.

In a more recent study of dissertation research, Saffer (13) found that the majority of studies on stress in educational administration were correlational research studies using surveys to gather data. His findings agree with the results of the study conducted by Howard (4) who investigated dissertation literature on American sponsored overseas schools from 1869 to 1982. Howard's findings show that survey research is the predominant research strategy (76 percent), with experimental research accounting for the least (6 percent). The findings also indicate that the average dissertation analyzed in his inquiry was written by a male who had completed a Doctor of Philosophy in educational administration at a public university in the early 1970s.

#### Methodology for Analyzing Dissertation Research

A thorough search of related literature found several studies which primarily sought to develop a valid methodology for analyzing dissertations. A format or instrument,

usually developed by the researcher, is used as a basis for the analysis. The studies are described below.

In 1960, Irwin (5) undertook a study of the Doctor of Education program at Wayne State University in Detroit, Michigan. She developed a format for looking at "quality dimensions" of completed dissertations. The format consisted of three qualitative aspects which include the problem (theoretical significance), the procedure (selection of methodology and the treatment of data), and the presentation (utilization of techniques of effective writing). The format likewise incorporates the quantitative aspects of the dissertation such as: number of words in the title; number of pages of running text; number of chapters; number of pages in the bibliography; number of appendices; number of figures, charts, graphs in text; number of references to related studies; and number of pages bound.

In 1970, W. Kirk Avery (1) developed an instrument for the evaluation of doctoral dissertations produced in the Department of Higher Education, School of Education, at Indiana University. The basic design of the instrument incorporates the principles of content analysis and centers on two questions. The first question is related to the "substance" of the subject matter, such as what it was about, and the second question deals with the manner in which it was treated, or the "form" of how it was put

together. Since application of the instrument was the prime objective of the study there were no data regarding the evaluation of dissertations.

Five years later (1975), Novak developed and validated a format for analyzing dissertations completed in the College of Education at North Texas State University. The format describes the dissertations in terms of types of study, focus of each study, subject heading of each study, design characteristics, statistical treatment of data, general results of experimental studies, numeric characteristics of the dissertations and demographic information relating to the author. Unlike Avery, Novak used the format to gather information on 642 dissertations.

Most of the formats for studying the style or form of the dissertations, however, are based on the types of study being reported. Gerhart classified research projects into eight methodologies based upon the historical, descriptive, experimental and quasi-experimental methods (3). As cited previously, Sax described the three major types of studies which are descriptive, analytical and experimental (14, p. 53). The classification developed by Sax was used as the basis for the current study. The categories developed by Wick and Dirkes were revised to suit the purposes of the study. They classified dissertations as either experimental, historical, longitudinal, or as information collection (16, p. 21).



### Value of Dissertation Research

The precise description of a dissertation may vary from institution to institution, however, its essence remains the same. The dissertation is best typified by the following statement.

The doctoral dissertation must embody the results of extended research, be an original contribution to knowledge and include material worthy of publication. It should demonstrate the candidate's ability to conduct an independent investigation, to abstract principles upon which predictions can be made and to interpret in a logical manner facts and phenomena revealed by the research (9, p. 2).

Boyer compares the value of dissertation research with that undertaken in laboratories and workshops. He believes that the stringent conditions under which a dissertation is completed makes it "of no less value than that completed in laboratories and workshops outside the halls of the academe" (2, p. 14). The rigorous process which a completed dissertation goes through is described by Boyer in his definition of a dissertation. He defines a dissertation as a referred paper supervised by an advisor whose competence in the field is acknowledged by the position he holds within the university, and subject to the criticism and guidance of two to six other similarly distinguished individuals (2, p. 14).

Over the years, however, the scholarly nature and importance of the dissertation to the accumulation of knowledge has been challenged by some researchers not only

in education but in other fields as well. Serious questions about the quality of dissertations produced have been raised. The evaluation of quality in the dissertation presents many problems since "quality" is a construct with different indicators. Below are some ideas and comments regarding the evaluation of quality in the dissertations.

Koefod (7) believes that the things that count are quality and vitality of thought, clarity and precision of reasoned argument, lucidity of substantiation, originality of the inquiry, formulation of the problem and design of the research project and inventiveness with respect to a solution or position that is new. He further points out that the basic question relative to the dissertation is whether or not it is a matter of important knowledge (7, p. 46).

Whitney suggests that there should be general acceptance among workers in research centers on such matters as value of techniques used, originality of the study, value of outcomes, reflective thinking methods followed, and the degree to which a real contribution has been made (18, p. 228).

In the evaluation of the value of the dissertation to the growth of knowledge, other indicators aside from quality have been used by researchers. Studies on the value of the dissertation are described below.

Karsetter (6) examined 2,212 doctoral dissertations that were successfully completed in the field of speech from 1922 to 1961. Using influence, opinion, and congruence as indices of the value of the dissertation, he found that the assumption that the typical dissertation in speech does in fact make a significant contribution to knowledge is untenable.

Unlike Karsetter, however, some researchers use the influence of dissertation research on publications as an indicator of the value of the dissertation. Medlock (8) found that only 38 percent of 450 graduates at the University of Alabama published either journals, articles, abstracts, books or parts of books which were based primarily on the dissertation. However, over 60 percent have continued to work in the area of the dissertation subject. The study conducted by Medlock was designed to analyze selected criteria associated with the successful completion of the doctoral dissertation in physical education, with utility of the dissertation as one of the criteria.

In a study of social studies dissertations, McPhie (10) reported that over 60 percent of the authors of the dissertations had published nothing that was drawn from their dissertations.

The low influence of dissertation research on publications has raised serious questions about the quality of

dissertations. Starting in 1983, dissertation research is being examined to show the types of dissertations being done, and to assess their quality. Saffer (13), in an analysis of dissertation research on stress in educational administration, found that the quality of research is not high and contributes little to theory on stress in educational administration.

White (17), using the criteria of purpose, validity, theory testing and causal relationships, central importance of topic, and leading edge importance of topic, found that few doctoral projects in public administration met the criteria. Moreover, after surveying over 300 abstracts, he reported that dissertation research does not appear to be a major source of knowledge in the field. In a similar study, Kraemer and Perry (12), after analyzing abstracts of doctoral dissertations in public administration, arrived at the conclusion that most dissertations did not reflect good judgments about timely and important research.

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## CHAPTER III

### PROCEDURES FOR COLLECTION OF DATA

#### Sources of Data

Seven hundred and ninety-five dissertations from twelve major fields of study in education were the sources of data for this study. These dissertations were used to determine the characteristics of dissertation research in the College of Education from 1975 to 1986.

The data gathered by Novak in 1975 (1) and by the present study are synthesized in order to provide an overall picture of the dissertation research in the College of Education at North Texas State University from 1953 to 1986. Novak's findings were likewise used to compare dissertation research during the years 1953 through 1974 with that during the years 1975 through 1986.

#### Format for the Analysis of Dissertations

Novak, in 1975, developed a format used in analyzing 642 dissertations which were completed from 1953 through 1974. The format was presented to a panel of experts composed of four professors in the Department of Education of North Texas State University, and one doctoral candidate majoring in Educational Research, to ensure content validity.

The format was prepared in the form of a rating scale. Each of the panel members was given a copy of the validation form and asked to rate the categories in the format as either "appropriate" or "inappropriate." A majority vote was accepted as the basis for inclusion of an item. The following is a discussion of the final categories of the format.

#### Types of Study

The categories for the types of study were taken from the book entitled Empirical Foundations of Educational Research, by Gilbert Sax (2). Table I Summarizes the basic points of his categories.

#### Focus of the Study

Novak developed the categories of the focus of study through an analysis of the titles and purposes of the dissertations. The final categories were as follow: (1) methodology (usually instructional); (2) student-centered (including person- or patient-centered); (3) teacher-centered (including student teachers); (4) institutionally-centered (school, college, state, or federal in scope); (5) content-centered (academic course content); (6) administrator- or management-centered; (7) counselor-centered; and (8) others.



TABLE I  
 TYPES OF RESEARCH AND RELATIONSHIP TO  
 EDUCATIONAL INNOVATION

|                        | Analytical  | Descriptive   | Experimental  |
|------------------------|---|---|---|
| Purpose                | To derive relationships within a deductive system   | To describe existing conditions   | To test causal relationships  |
| Methods                | Deductive, mathematical, historical, philosophical, legal, linguistic                                 | Correlations, surveys, case studies, direct observation, cross cultural, growth studies | Comparison of experimental and non-experimental groups by systematically varying conditions |
| Relation to Innovation | Points out assumptions and possible consequences of proposed changes; useful in establishing criteria | Describes currently existing conditions so that they can be modified later              | Shows the effects of a proposed innovation  |

#### Subject Headings

The subject heading(s) recorded for each study were the ones assigned by the Cataloging Department of the North Texas State University Library, based on Library of Congress cataloging.

### Design Characteristics

The design characteristics consisted of two aspects: the kind of groups used, and the time of measurement. The categories were adapted from those of Wick and Dirkes (3). Groups: (1) experimental (every person being involved in some type of manipulation of variables; (2) experimental-control (when two groups were used, either experimental-control or two comparison groups); (3) experimental-control placebo (as used in the usual sense in research studies); (4) other (used for surveys which were conducted just to secure information); and (5) not applicable (or not mentioned). Time of measurement: (1) post-test only (including one administration, whether pre- or post-test, and surveys which collected data only one time); (2) pre- and post-test (or two administrations); (3) pre-, mid-, post-test (or three administrations); (4) not applicable (or not mentioned); (5) pre-, post, follow-up-test; and (6) repeated measures (used predominantly for physical education, music, or business skills).

### Data Collection Techniques

The basic concept of this section is more "ways information is secured" rather than "data collection instruments." The categories were adapted from those of Wick and Dirkes: (1) interviews (and observations); (2) questionnaire (personal data, information sheet); (3) physical

performance (including physical activities, musical performance or ability, business skills such as typing or writing shorthand); (4) standardized achievement measures (including grade-point average, test of course content, other academic information measures); (5) standardized personality measures; (6) rating scale (used for standardized scales and also in connection with number seven if it was a scaling instrument); (7) teacher- or researcher-made test (see number six); (8) interest, attitude, or opinion survey (including sociometric and semantic differential instruments); (9) literature; and (10) standardized intelligence measures.

#### Data Analysis Techniques

The categories for the data analysis techniques included the following: (1) analysis of covariance; (2) analysis of variance; (3)  $t$ -test (and multiple comparisons); (4) correlation or regression (this was divided into two categories); (5) chi-square tests with frequency information (frequency counts were included elsewhere); (6) percentages reported (including frequencies, sums, nonparametric); (7) regression; (8) factor analysis; (9) multivariate; (10) none (particularly appropriate for studies which were predominantly theoretical); and (11) nonparametric.

### General Results of Experimental Studies

The results of experimental studies were grouped into the following categories: (1) more than 50 percent; (2) about 50 percent; (3) some, but less than 50 percent; (4) none; and (5) not applicable.

### Procedures

The following steps were executed to meet the purposes of the study.

1. A list of the dissertations completed from 1975 to 1986 in the College of Education was obtained.

2. Abstracts of the dissertations were examined to determine the following:

- 2.1 Type of study.--The categories that were used are experimental, analytical, and descriptive research, as defined by Sax (2).

- 2.2 Focus of the Study.--This was determined by an examination of the purposes of the study. The categories developed by Novak in 1975 were used as a basis for the classification.

- 2.3 Subject headings of each study.--The cataloging descriptors used by the Willis Library, North Texas State University, for the subject heading(s) of each dissertation were recorded as given in the card catalog.

- 2.4 Design characteristics.--The design characteristics, method for collecting data and data analysis techniques were

determined in each dissertation. In coding the information for analysis, there were cases when a dissertation had more than one data collection measure and data analysis technique. Since each study could use more than one of each, the total refers to how many different kinds were used, not how many of each kind. For data analysis techniques, the "most sophisticated" techniques were recorded.

3. For experimental studies, the categories used by Novak in reporting the percentage of findings which showed statistical significance between variables were followed.

4. The data gathered by Novak using the same format on dissertations completed from 1953 to 1974 were examined and compared with the data gathered in the present study. The similarities and differences between the two studies were pointed out.

5. The information collected by Novak on dissertations during the period from 1953 to 1974 was synthesized with the information collected during the 1975 through 1986 period. The purpose of combining the data was to determine trends in types of study, focus of study, subject headings of the study and other characteristics which are descriptive of the dissertations or the candidates during the thirty-three year time span (1953 through 1986).

6. A discussion of the status of dissertation research in the College of Education within the 1953 through 1986 time frame is presented.

### Statistical Treatment

Descriptive statistics such as sums and percentages were utilized in the study. The hypotheses formulated in the study were tested by means of the chi-square test of independence. The chi-square test of independence was selected as the appropriate statistic because the data collected by Novak and the present study are nominal, and the chi-square is used to compare two or more independent samples.

## CHAPTER BIBLIOGRAPHY

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## CHAPTER IV

### RESULTS AND DISCUSSION

A total of 795 dissertations were analyzed. The findings of the study were organized according to the types of study, whether they were descriptive, analytical, or experimental. The presentation of the findings follow the order of the research questions previously raised.

Results of the study are likewise divided into four inclusive time periods: 1975 through 1977, 1978 through 1980, 1981 through 1983, and 1984 through 1986. Since the study covers a twelve-year period, grouping the data into blocks of three years facilitates a more efficient and effective presentation of findings.

It should be noted, however, that in some categories the total frequency of occurrence of variables exceeds the total number of dissertations originally analyzed. This is because there were instances when a variable was classified in more than one category.

#### Question One

Research question one asks, What were the descriptive characteristics of the dissertations in terms of (1) types of study, (2) focus of each study, (3) subject heading(s)



of each study, (4) design characteristics, (5) data collection techniques, and (6) data analysis techniques?

As can be seen in Table II, the majority of the dissertations in the College of Education were descriptive (50 percent). A closer examination of the findings likewise reveals that throughout the years, except in the mid-1970s, descriptive research was the most consistently used methodology. In the past six years, descriptive studies were conducted about twice as often as they were in the mid-1970s.

An analysis of research methodologies employed during the 1975 to 1977 time period indicates a slightly heavier use of experimental research over descriptive. However, as the doctoral candidates resorted to the easier descriptive research, the number of experimental studies became less and less. To date, experimental research accounts for only 29 percent of the dissertations written during the 1975 to 1986 time period.

Analytical research, although not totally neglected, seems to be of little interest to doctoral candidates. It represents only 21 percent of the total research output. One conjecture that might explain the infrequent use of analytical research is that it is time consuming. Stroud (6) points out that Schlacter and Thomison examined the relationship between dissertation completion and method employed.

They found that only half as many students who used the analytical approach (historical) finished their dissertations as students who employed other research methods. Table II summarizes the findings on the types of studies.

TABLE II  
TYPES OF STUDIES

| Type of Study | 1975-<br>1977 | 1978-<br>1980 | 1981-<br>1983 | 1984-<br>1986 | Total |
|---------------|---------------|---------------|---------------|---------------|-------|
| Descriptive   | 64            | 89            | 118           | 127           | 398   |
| Analytical    | 44            | 53            | 34            | 33            | 164   |
| Experimental  | 75            | 58            | 47            | 53            | 233   |
| Total         | 183           | 200           | 199           | 213           | 795   |

The preceding discussion reported the general findings of the study in terms of the research methodology employed. Because each type has distinct characteristics when analyzed using the format developed by Novak, a thorough analysis of each type was conducted. The specific findings are presented as they relate to the three major types of studies done by the doctoral candidates: descriptive, analytical, and experimental.

#### Descriptive Studies

Descriptive research studies are designed to obtain information concerning the current status of a phenomena.

They are directed toward determining the nature of a situation as it existed at the time of the study. Borg (2) pointed out the importance of descriptive studies in education when he wrote that there is still a great deal that should be known about students and teachers, who are the usual subjects of research.

As mentioned earlier, half of the dissertations examined were descriptive research (50 percent). Almost all of the dissertations classified as descriptive were of the survey type. Ary (1) describes survey research as more of a gathering of information about individuals.

The most popular subjects of research in descriptive studies are the administrator (28 percent), the student (22 percent), and the teacher (16 percent). This shows that descriptive studies are truly person-oriented. The remaining topical areas, such as methodology, institutional, content, and counselor account for less than 30 percent. Research topics which could not be forced to fit in any of the listed research topics represent 15 percent of the total number of dissertations. Table III provides the necessary statistical information.

Novak devised a category to reflect the use of a specific group of persons to respond to a survey, questionnaire or other descriptive measure. Out of the 398 descriptive studies, only ten were found which did not obtain information from individuals or groups of people.

TABLE III  
FOCUS OF THE STUDY--DESCRIPTIVE

| Focus of the Study | 1975-1977 | 1978-1980 | 1981-1983 | 1984-1986 | Total |
|--------------------|-----------|-----------|-----------|-----------|-------|
| Methodology        | 3         | 0         | 5         | 4         | 12    |
| Student            | 16        | 17        | 34        | 28        | 95    |
| Teacher            | 10        | 10        | 29        | 21        | 70    |
| Institutional      | 8         | 7         | 6         | 8         | 29    |
| Content            | 6         | 11        | 5         | 2         | 24    |
| Administrator      | 14        | 22        | 35        | 48        | 119   |
| Counselor          | 0         | 2         | 5         | 4         | 11    |
| Other              | 11        | 15        | 29        | 10        | 65    |
| Total              | 68        | 84        | 148       | 125       | 425   |

An overwhelming majority of the doctoral candidates who employed the survey technique made extensive use of the questionnaire (52 percent). Approximately one-half of the dissertations written during any three-year period used the questionnaire. Aside from the questionnaire, rating scales, standardized achievement measures, interviews and interest-attitude-opinion were utilized. Since much of the information needed in survey research must be obtained from people, it is understandable that the aforementioned instruments would rank as the top five in frequency of use. There was

little to no evidence showing the use of intelligence measures, personality measures, literature and physical performance as instruments. The information related to the data gathering techniques is found in Table IV.

TABLE IV  
DATA COLLECTION TECHNIQUE--DESCRIPTIVE

| Measurement Technique         | 1975-1977 | 1978-1980 | 1981-1983 | 1984-1986 | Total |
|-------------------------------|-----------|-----------|-----------|-----------|-------|
| Interview                     | 8         | 9         | 9         | 9         | 35    |
| Questionnaire                 | 46        | 56        | 63        | 57        | 222   |
| Physical Performance          | 3         | . .       | . .       | 1         | 4     |
| Standardized Achievement      | 6         | 7         | 24        | 14        | 51    |
| Literature                    | 2         | 2         | 3         | 3         | 10    |
| Standardized Personality      | 3         | 0         | 0         | 1         | 4     |
| Rating Scales                 | 10        | 6         | 24        | 12        | 52    |
| Teacher-Researcher-Made Tests | 1         | 0         | 2         | 3         | 6     |
| Interest-Attitude             | 5         | 7         | 10        | 12        | 34    |
| Intelligence Measure          | 0         | 0         | 0         | 0         | 0     |
| Others                        | 1         | 4         | 3         | 5         | 13    |
| Total                         | 85        | 91        | 138       | 117       | 431   |

The most popular statistical technique in the analysis of descriptive research data was the Analysis of Variance (ANOVA). Analysis of Variance is an inferential statistic which permits the simultaneous comparisons of multiple variables under study. The extensive use of ANOVA could be attributed to the fact that most of the dissertations sought to compare the information gathered from several groups of respondents such as the student, teacher, and administrator. This likewise supported the findings in the focus of study which found that approximately 70 percent of the dissertations concerned the student, teacher, or administrator.

Sums and percentages were understandably the second most widely used statistic (16 percent). This was, however, offset by the fact that chi-square and t-test placed third and fourth, respectively, in frequency of use. While examining Table V closely, one can see that there was a growing interest in the use of higher-order statistics such as regression, factor analysis, and multivariate statistics. The rubric "others" consisted mostly of studies which used discriminant analysis. Analysis of Covariance (ANCOVA) was the least used statistic since it lends itself better in experimental studies.

#### Analytical Studies

Analytical research, unlike descriptive or experimental research, has not been a widely used research methodology in

TABLE V  
DATA ANALYSIS TECHNIQUES--DESCRIPTIVE

| Technique                | 1975-<br>1977 | 1978-<br>1980 | 1981-<br>1983 | 1984-<br>1986 | Total |
|--------------------------|---------------|---------------|---------------|---------------|-------|
| ANOVA                    | 11            | 26            | 32            | 41            | 110   |
| ANCOVA                   | 1             | 0             | 1             | 0             | 2     |
| <u>t</u> -test           | 15            | 13            | 18            | 25            | 71    |
| Correlation              | 13            | 26            | 18            | 12            | 69    |
| Regression               | 6             | 3             | 16            | 14            | 39    |
| Chi-square               | 13            | 26            | 22            | 18            | 79    |
| Frequency,<br>Percentage | 19            | 13            | 33            | 17            | 82    |
| Factor<br>Analysis       | 2             | 1             | 4             | 2             | 9     |
| MANOVA                   | 0             | 0             | 4             | 1             | 5     |
| Nonparametric            | 2             | 2             | 1             | 4             | 9     |
| None                     | 2             | 0             | 6             | 11            | 19    |
| Others                   | 0             | 4             | 3             | 3             | 10    |
| Total                    | 84            | 114           | 158           | 148           | 504   |

the College of Education. This is revealed because analytical studies accounted for only 21 percent of all the dissertations written from 1975 to 1986. Although analytical research was not frequently used in dissertations, it has a limited but sustained use. In the mid-1970s, most of the analytical studies were more of document analysis,

model building and philosophical inquiries. With the increased accessibility to computers and packaged programs, simulation studies have also increased and have been added to the list of analytical studies. In the early 1980s and to date, simulation studies make up most of the analytical studies.

Analytical studies had a wide ranging focus of interest. This statement is supported by the fact that the rubric "others" made up 31 percent of the focus of the studies. The "others" were research topics which could not be fitted into any of the categories under focus of study. They consisted of any one of the following topics, such as drama and theater, scales, statistics, church, adults, females, and textbooks. A large number of studies, however, did look at students (18 percent), institutions (14 percent), and administrators (12 percent). Surprisingly, in spite of the twenty dissertations in Counseling and Student Services, only two dissertations used the counselor as the focus of study. The data related to the focus of study is found in Table VI.

Of the 164 analytical studies, 83 (51 percent) collected data from individuals. The instruments used in data collection are described in a later paragraph. The remaining studies, 81 (49 percent), which did not use individuals, made use of computer-generated data, document reviews, and the text and illustrations of textbooks. ' 1



TABLE VI  
FOCUS OF STUDY--ANALYTICAL

| Focus of Study | 1975-1977 | 1978-1980 | 1981-1983 | 1984-1986 | Total |
|----------------|-----------|-----------|-----------|-----------|-------|
| Methodology    | 8         | 2         | 2         | . .       | 12    |
| Student        | 4         | 8         | 8         | 8         | 28    |
| Teacher        | 3         | 4         | 1         | 3         | 11    |
| Institution    | 4         | 7         | 6         | 5         | 22    |
| Content        | 5         | 5         | 4         | . .       | 14    |
| Administrator  | 2         | 7         | 2         | 7         | 18    |
| Counselor      | 1         | 1         | 1         | . .       | 2     |
| Other          | 13        | 17        | 10        | 8         | 48    |
| Total          | 40        | 50        | 34        | 31        | 155   |

Of the dissertations that utilized data gathering instruments, most (78) were used to secure data only once. Only five doctoral candidates administered their instruments twice.

Analytical studies made as much use of the questionnaire (26 percent) as literature in collecting information. Most of the studies did not rely solely on one data collection technique but utilized combinations of techniques. It was noted that most of the dissertation writers who conducted literature reviews also made use of the questionnaire and rating scales. The questionnaire and rating scales were

used as preliminary data gathering techniques to support the rationale for conducting literature reviews. Table VII shows how many different techniques were employed, but not how many measures were used.

TABLE VII  
DATA COLLECTION TECHNIQUES--ANALYTICAL

| Measurement Technique    | 1975-1977 | 1978-1980 | 1981-1983 | 1984-1986 | Total |
|--------------------------|-----------|-----------|-----------|-----------|-------|
| Interview                | 6         | 6         | 6         | 8         | 26    |
| Questionnaire            | 12        | 17        | 7         | 8         | 44    |
| Physical Performance     | 0         | 0         | 0         | 0         | 0     |
| Standard Achievement     | 4         | 3         | 1         | 2         | 10    |
| Literature               | 13        | 10        | 11        | 7         | 41    |
| Standardized Personality | 0         | 1         | 0         | 0         | 1     |
| Rating Scales            | 5         | 3         | 3         | 3         | 14    |
| Teacher-Researcher-Test  | 1         | 2         | 1         | 2         | 6     |
| Interest-Attitudes       | 1         | 1         | 0         | 2         | 4     |
| Intelligence Measure     | 0         | 0         | 0         | 0         | 0     |
| Others                   | 9         | 6         | 5         | 6         | 26    |
| Total                    | 51        | 49        | 34        | 38        | 172   |

Since roughly one-half of the analytical studies used documentary analysis, it is assumed that most of the studies would not use any type of statistics, or if they did, the statistical technique would be limited to sums and percentages. A first glance at Table VIII confirms this assumption, because the category "no statistics used" has the highest frequency of occurrence (30 percent), with the sums and percentages accounting for only 13 percent of the statistical techniques used.

A closer look at Table VIII, however, reveals that the higher-order statistics such as ANOVA, t-test, chi-square, regression, MANOVA, and discriminant analysis represented over 60 percent of the statistics utilized. The frequent use of higher-order statistics could be attributed to the increasing popularity of simulation studies, especially among Educational Research majors. Of the three types of research methodology employed, analytical studies were found to have the largest number of higher-order statistics employed.

#### Experimental Studies

Of the three types of research methodology, the experimental research is the most highly regarded because it has the ability to establish causal relationships (6, p. 130). Inherent in the experimental research is the capacity to control the conditions under which the

TABLE VIII  
DATA ANALYSIS TECHNIQUES--ANALYTICAL

| Technique               | 1975-<br>1977 | 1978-<br>1980 | 1981-<br>1983 | 1984-<br>1986 | Total |
|-------------------------|---------------|---------------|---------------|---------------|-------|
| ANOVA                   | 7             | 5             | 2             | 3             | 17    |
| ANCOVA                  | 1             | 0             | 1             | 0             | 2     |
| Multiple<br>Comparisons | 4             | 5             | 1             | 4             | 14    |
| Correlation             | 1             | 2             | 4             | 2             | 9     |
| Regression              | 3             | 4             | 6             | 1             | 14    |
| Chi-Square              | 3             | 8             | 1             | 7             | 19    |
| Sums,<br>Percentage     | 5             | 9             | 6             | 3             | 23    |
| Factor<br>Analysis      | 1             | 1             | 0             | 0             | 2     |
| MANOVA                  | 0             | 1             | 0             | 2             | 3     |
| Nonparametric           | 0             | 4             | 1             | 0             | 5     |
| None                    | 16            | 14            | 12            | 11            | 53    |
| Other                   | 5             | 4             | 3             | 2             | 14    |
| Total                   | 46            | 57            | 37            | 35            | 175   |

experiment takes place and to isolate the variables being studied. As Novak pointed out, experimental studies are usually much easier to recognize and describe.

Experimental studies made up approximately 30 percent of the total number of dissertations analyzed. Considering

the limitations of conducting experimental research, especially in the school setting, this is surprisingly high. It was in the 1975 to 1977 time period when experimental research was heavily used.

Instructional methodology was the focus of most experimental studies. This comes as no surprise because this is a topic which is most conducive to the use of the experimental design. There was also considerable attention given to students (28 percent) and teachers and content (8 percent). The institution, as focus of study, was never used in experimental studies. There was a very minimal amount of experimental research done investigating the administrator. Table IX illustrates the breakdown in the number of research topics used throughout the years.

TABLE IX  
FOCUS OF STUDY--EXPERIMENTAL

| Focus of Study | 1975-1977 | 1978-1980 | 1981-1983 | 1984-1986 | Total |
|----------------|-----------|-----------|-----------|-----------|-------|
| Methodology    | 33        | 10        | 17        | 10        | 70    |
| Student        | 21        | 17        | 10        | 16        | 64    |
| Teacher        | 8         | 4         | 3         | 4         | 19    |
| Institution    | 0         | 0         | 0         | 0         | 0     |
| Content        | 4         | 4         | 5         | 5         | 18    |
| Administrator  | 0         | 1         | 2         | 3         | 6     |
| Counselor      | 8         | 2         | 5         | 1         | 16    |
| Others         | 9         | 16        | 6         | 8         | 39    |
| Total          | 83        | 54        | 48        | 47        | 232   |

One distinct characteristic of true experimental studies is that subjects are randomly assigned to the different treatment groups or experimental conditions. Furthermore, true experimental studies always have a control group. Most of the dissertations using the experimental methodology were true experimental studies (60 percent). A total of 140 studies out of 233 employed the experimental-control groups, compared to only 83 of the experimental only groups. The experimental-control groups used the pretest-posttest control group design which, according to Borg (2), is an excellent design and is subject to none of the eight internal validity threats. Ten dissertations employed the experimental-control-placebo group, which is a more sophisticated version of the experimental-control groups. It might be noteworthy to mention that the dissertation writers who utilized the placebo group design came mostly from the counseling and student services division.

Since the most popular research design is the pretest-posttest control group design, it is logical to find that the pre-post administration was the most widely used method of conducting experimental studies. Of the 233 dissertations, 140, or 60 percent, used the pretest-posttest measures, which is in consonance with the total number of dissertations using the experimental-control groups. The

posttest only group accounted for 69, or 30 percent, of the total number of experimental studies, while the pretest-midtest-posttest, pretest-posttest-follow-up and repeated measures represented only 10 percent, or 24.

Most of the experimental studies used a combination of different data gathering techniques. However, the most popular was the standardized achievement measures (30 percent). A large number of dissertations likewise used the rating scales (18 percent), interest-attitude-opinionnaire (16 percent), and teacher- or researcher-made tests (6 percent). It was noticed that most of those who used the standardized achievement measures or teacher- or researcher-made tests likewise used rating scales or interviews to verify or amplify information gathered. It is interesting to note that there was a small (6 percent) but continuous use of physical performance as a data gathering technique. Table X presents the information on the frequency of use of the data gathering instruments.

As important as the instrument used in the experiment is the statistical analysis employed. An examination of Table XI reveals that ANCOVA (Analysis of Covariance) was the most frequently used statistic. Together with ANOVA they make up over half of the statistical techniques used. ANCOVA, which is the variation of ANOVA, is a statistical control which permits comparisons of groups which are

TABLE X  
DATA COLLECTION TECHNIQUES--EXPERIMENTAL

| Measurement Technique             | 1975-1977 | 1978-1980 | 1981-1983 | 1984-1986 | Total |
|-----------------------------------|-----------|-----------|-----------|-----------|-------|
| Interview                         | 1         | 2         | 3         | 6         | 12    |
| Questionnaire                     | 6         | 7         | 5         | 2         | 20    |
| Physical Performance              | 8         | 4         | 5         | 1         | 18    |
| Standardized Achievement          | 27        | 25        | 19        | 24        | 95    |
| Standardized Personality          | 7         | 1         | . .       | 4         | 12    |
| Rating Scales                     | 32        | 12        | 5         | 6         | 55    |
| Teacher- or Researcher-Made Tests | 2         | 3         | 11        | 4         | 20    |
| Interest, Attitude, Opinion       | 31        | 7         | 4         | 8         | 50    |
| Intelligence Measure              | 1         | 2         | . .       | . .       | 3     |
| Others                            | 9         | 4         | 10        | 2         | 25    |
| Total                             | 124       | 67        | 62        | 57        | 310   |

different in the pretest. The predominant use of ANCOVA over the other statistical techniques could be explained by the fact that 60 percent of the experimental studies used the pretest-posttest administration.



TABLE XI  
DATA ANALYSIS TECHNIQUES--EXPERIMENTAL

| Technique           | 1975-<br>1977 | 1978-<br>1980 | 1981-<br>1983 | 1984-<br>1986 | Total |
|---------------------|---------------|---------------|---------------|---------------|-------|
| ANOVA               | 31            | 23            | 17            | 15            | 86    |
| ANCOVA              | 41            | 21            | 20            | 13            | 95    |
| <u>t</u> -test      | 31            | 16            | 11            | 12            | 70    |
| Correlations        | 11            | 8             | 10            | 4             | 33    |
| Regression          | 7             | 1             | . .           | 7             | 15    |
| Chi-Square          | 2             | 6             | 3             | 5             | 16    |
| Sums,<br>Percentage | 1             | 0             | 0             | 1             | 2     |
| Factor<br>Analysis  | 0             | 0             | 1             | 1             | 2     |
| MANOVA              | 2             | 0             | 4             | 4             | 10    |
| Nonparametric       | 2             | 3             | 5             | 0             | 10    |
| None                | 0             | 0             | 1             | 1             | 2     |
| Others              | 0             | 2             | 0             | 2             | 4     |
| Total               | 128           | 80            | 72            | 65            | 345   |

It is also very encouraging to note that there are experimental studies that used higher-order statistics such as multiple regression, factor analysis, discriminant analysis and other multivariate statistics. These statistics are not frequently found in the dissertations since

they require a more sophisticated knowledge of educational research and statistics. The data in Table XI summarize the statistical techniques used.

#### Question Two

Question two of this study asks, If the study was experimental, how many of the findings showed statistically significant differences?

The purpose of examining the number of statistical differences found in experimental studies is that one may learn something from a study that did not seem to work. Researchers might be inspired to find out what went wrong and be challenged to replicate the study. It should be recognized, however, that although findings might not have statistical significance, the study is still valid and thus may contribute to the fund of knowledge.

Of the 233 experimental studies, 110, or 47 percent, had "some" but "less than half" statistical significant difference, while 86 (37 percent) had "over half" significant difference, and 37 (16 percent) had "exactly one half" statistical difference.

A further analysis of the dissertations revealed a great diversity in the topics or subject headings of each study. There were over 200 topics addressed in the dissertations, ranging from accreditation to zero-based budgeting. A majority of the topics were addressed only

once; however, there were twenty topics used over five times. Eleven topics were studied ten times or more. These topics are vocational guidance, 10; reading-study and teaching, 13; teaching training, 10; mentally handicapped, 10; personnel services, 11; nursing-study and teaching, 15; job satisfaction, 10; attitudes, 11; academic achievement, 11; computer-assisted instruction, 10; and counseling, 10. A list of the subject headings is found in the Appendix.

### Question Three

Question three of this study asks, How many dissertations have been completed and how many doctoral degrees of each type were awarded from 1975 through 1986?

According to Novak (15), from the first doctoral degree awarded, until 1974, there were only 642 dissertations completed. From 1975 to 1986 there were 795 dissertations written, which brings the total to 1,437. The College of Education accounts for 55 percent of the total research output of North Texas State University.

From the beginning of the doctoral program in 1953 until 1969, the only doctoral degree offered at North Texas State University was the Doctor of Education (Ed. D). In August, 1969, however, the first Doctor of Philosophy (Ph. D.) degrees in education were conferred. This explains why the data on the number of Doctor of Philosophy graduates in Table XII is only available after 1969.

TABLE XII  
DEGREES AWARDED BY TYPE AND DATE

| Year | Type  |       | Total | Year  | Type  |       | Total |
|------|-------|-------|-------|-------|-------|-------|-------|
|      | Ed.D. | Ph.D. |       |       | Ed.D. | Ph.D. |       |
| 1953 | 1     | . .   | 1     | 1971  | 57    | 29    | 86    |
| 1954 | 2     | . .   | 2     | 1972  | 40    | 26    | 66    |
| 1955 | 3     | . .   | 3     | 1973  | 36    | 22    | 58    |
| 1956 | 7     | . .   | 7     | 1974  | 36    | 35    | 71    |
| 1957 | 6     | . .   | 6     | 1975  | 30    | 26    | 56    |
| 1958 | 3     | . .   | 3     | 1976  | 30    | 40    | 70    |
| 1959 | 6     | . .   | 6     | 1977  | 29    | 28    | 57    |
| 1960 | 10    | . .   | 10    | 1978  | 39    | 32    | 71    |
| 1961 | 15    | . .   | 15    | 1979  | 23    | 35    | 58    |
| 1962 | 13    | . .   | 13    | 1980  | 27    | 44    | 71    |
| 1963 | 21    | . .   | 21    | 1981  | 17    | 41    | 58    |
| 1964 | 29    | . .   | 29    | 1982  | 19    | 49    | 68    |
| 1965 | 24    | . .   | 24    | 1983  | 18    | 55    | 73    |
| 1966 | 26    | . .   | 26    | 1984  | 10    | 57    | 67    |
| 1967 | 32    | . .   | 32    | 1985  | 20    | 50    | 70    |
| 1968 | 32    | . .   | 32    | 1986  | 6     | 70    | 76    |
| 1969 | 56    | 5     | 61    |       |       |       |       |
| 1970 | 50    | 20    | 70    | Total | 773   | 664   | 1,437 |

#### Question Four

Question four asks, How many authors of dissertations were male and how many were female?

The male doctoral degree holder has always dominated the number of doctoral graduates in the College of Education. However, through the years there has been a constant increase, percentage-wise, in the number of female doctoral graduates. In 1975, female graduates made up only 25 percent of the population (15 of 56), but in 1978, female graduates made up 48 percent (34 of 71), the largest

percentage within the twelve-year period. The total division over all the years covered has been 42 percent female and 58 percent male, as compared to 20 percent female and 80 percent male during the period of Novak's study.

#### Question Five

Question five asks, How similar or different were the dissertations completed during the period from 1953 through 1974 from those completed during the period from 1975 through 1986?

In order to provide an overall description of the characteristics of dissertation research in the College of Education from the first dissertation written in 1953 to those completed in 1986, a synthesis of the data collected in the present study with data collected by Novak in 1975 was conducted. A comparative analysis of the findings of both studies was done to detect the similarities and differences between the dissertations completed during the period from 1953 through 1974 and those from 1975 through 1986. Noticeable trends in the data were likewise incorporated into the discussion.

The data in Table XIII were gleaned from the study of Novak and the present study. As can be seen in Table XIII, the research methodology employed in the College of Education is descriptive. Descriptive studies make up one-half

TABLE XIII  
 TYPE OF RESEARCH--1953-1986

| Time Period | Descriptive | Analytical | Experimental | Total |
|-------------|-------------|------------|--------------|-------|
| 1953-1959   | 13          | 23         | 1            | 37    |
| 1960-1964   | 43          | 40         | 27           | 110   |
| 1965-1969   | 76          | 45         | 81           | 202   |
| 1970-1974   | 151         | 56         | 150          | 357   |
| 1975-1977   | 64          | 44         | 75           | 183   |
| 1978-1980   | 89          | 53         | 58           | 200   |
| 1981-1982   | 118         | 34         | 47           | 199   |
| 1984-1986   | 127         | 33         | 53           | 213   |
| Total       | 681         | 328        | 492          | 1,501 |

of the total number of dissertations from 1953 to 1986. The experimental research method was the next most frequently utilized approach, representing 30 percent of the dissertations. The least used approach in dissertation research was the analytical, accounting for 20 percent of the total number of dissertations.

Novak found that during the period from 1953 through 1974, descriptive studies represented 40 percent of the total dissertations completed. This finding is consistent

with the findings of the present study which also found descriptive studies as the heavily favored research technique, representing 50 percent of the total number of studies done during the 1975 through 1986 period.

Examining Table XIII closely shows that during the first six years of the doctoral program, analytical studies were heavily used (64 percent) and continued to be used strongly during the next five years (34 percent), but started to decline from 1965 through 1986. This decline could be attributed to the popularity of descriptive studies, which began in 1965 and continued until the present time. The type of descriptive research which is most attractive to dissertation writers is the survey approach. According to Stroud, however, this method has been criticized because, while it can do a very good job of describing a situation as it exists, it does not have the capacity to explain "why" the situation exists.

Experimental studies started with only one study in the first seven years of the doctoral program (3.5 percent), but rose to 28 percent during the next five years, then to 45 percent, and finally 53 percent in the year 1970. During the 1975 to 1977 period, experimental research was predominantly used, accounting for 41 percent. But as descriptive research gained popularity as a research technique, the use of experimental studies decreased to 29 percent,

then 24 percent, and finally increased slightly to 25 percent in 1985.

In summary, dissertation research from the period 1953 through 1986 is descriptive, of the survey type. The fact that descriptive research is used in the College of Education is understandable, since so much of the information needed in the field of education is obtained from individuals.

The general focus of study during the 1953 through 1986 period was instructional methodology (25 percent). Student centered studies were used almost as often as instructional methodology (22 percent), with teacher (12 percent) and the administrator (12 percent) having the same percentage of use. The other categories involved 4 percent or less each. (See Table XIV.)

Comparing the findings of this study with those of Novak's, it was found that instructional methodology was the topic of the bulk of dissertations during the 1953 to 1974 period, while most of the dissertations in the 1975 to 1986 period dealt with the student. In Novak's study, the administrator and counselor were seldom subjects of research. However, in the present study, the administrator was the second most frequently discussed research subject. It was also noted that in the present study, the dissertation writers touched on a wider variety of subjects as reflected by the rubric "others" (19 percent)!



TABLE XIV

FOCUS OF THE STUDY--1953 to 1986

| Time Period | 1*  | 2   | 3   | 4   | 5   | 6   | 7  | 8   | Total |
|-------------|-----|-----|-----|-----|-----|-----|----|-----|-------|
| 1953-1959   | 8   | 9   | 2   | 7   | 2   | 0   | 0  | 0   | 28    |
| 1960-1964   | 29  | 19  | 17  | 9   | 8   | 6   | 0  | 0   | 88    |
| 1965-1969   | 70  | 49  | 21  | 10  | 20  | 5   | 0  | 0   | 175   |
| 1970-1974   | 165 | 53  | 29  | 52  | 34  | 13  | 2  | 3   | 351   |
| 1975-1977   | 41  | 38  | 18  | 11  | 15  | 15  | 8  | 33  | 179   |
| 1978-1980   | 12  | 41  | 20  | 13  | 19  | 30  | 4  | 50  | 189   |
| 1981-1983   | 22  | 57  | 32  | 12  | 14  | 38  | 10 | 46  | 231   |
| 1984-1986   | 14  | 53  | 28  | 21  | 7   | 63  | 5  | 26  | 217   |
| Total       | 361 | 319 | 167 | 135 | 119 | 170 | 29 | 158 | 1,458 |

\*1--Methodology, 2--Student, 3--Teacher, 4--Institutional, 5--Content, 6--Administrator, 7--Counselor, 8--Others.

Summarizing the general focus of dissertation research throughout the years, methodology is the most frequently used research method with the student-centered approach coming in second. This finding could be attributed to the fact that during the early years of the program, dissertation writers were more concerned with discovering the best way to facilitate teaching and learning. Realizing that there is much more to be learned about the students, there was a gradual shift from the study of instructional methodology to study of the students.

Novak, in her study of dissertations written from 1953 through 1974, found that 60 percent of the candidates collected their information from groups of people. The present study found almost the same result (62 percent). Since there is more descriptive research being undertaken, compared with experimental and analytical, there should be an increase in the use of people as sources of data. However, the growing popularity of simulation studies, especially in the latter part of the mid-1980s, could have increased the use of computer-generated data, thus registering a 38 percent use of data from sources other than persons.

Examining experimental studies revealed that the 1953 to 1974 dissertations favored the use of the experimental-control groups (61 percent) over the

experimental-only groups. The same findings were revealed in the present study. In terms of test administration, the most popular method of conducting experimental studies was the pretest-posttest administration. During the 1953 through 1974 period, 63 percent used the pretest-posttest measures, 15 percent used repeated measures, 8 percent used one administration, and 5 percent used three administrations. Only 4 percent used a pretest-posttest-follow-up design. Almost the same values were obtained in the 1975 through 1986 time period. It was found that 60 percent used the pretest-posttest measures, 30 percent used one administration, and 10 percent used either three administrations, pretest-posttest-follow-up, or repeated measure measures.

Dissertations during the thirty-three-year time span used a large number of instruments in collecting information. However, across the years the questionnaire has been consistently used by an overwhelming majority. This comes as no surprise since the use of the questionnaire is consistent with the most commonly employed research methodology: descriptive research.

The only difference in the use of the questionnaire in Novak's study and in the present study is the frequency of use. The questionnaire seems to have been used more frequently in the 1975 through 1986 period than during the 1953 through 1974 period. There was an extensive use of

opinion surveys and personality measures during the period 1953 through 1974. There were also extensive uses of opinion surveys and scales; however, intelligence measures and standardized personality tests were no longer used as much.

Table XV shows the information related to the data collection techniques.

Statistical procedures employed in the dissertations revealed surprises. Given the heavy use of survey research, it was expected that sums and percentages and chi-square would be the widely used statistics. However, they only accounted for 18 percent. The higher-order statistics such as ANOVA (18 percent), ANCOVA (12 percent), and t-test, multiple comparisons (20 percent), accounted for 50 percent of the total number of statistical techniques used. Table XVI indicates the data analysis used and the frequency of use.

During the 1953 to 1959 period, 28 percent did not use any statistical technique while 23 percent used sums and percentages only. The 1960 to 1964 period showed an increase in the use of the t-test (30 percent), the Analysis of Variance (13 percent), and a decrease in the use of sums and percentages (11 percent). It was only during the 1970 to 1974 period that an increase in the use of higher-order statistics was noted. It could be gleaned from a study of

TABLE XV

## DATA COLLECTION TECHNIQUES--1953 TO 1986

| Time Period | 1*  | 2   | 3   | 4  | 5   | 6   | 7  | 8   | 9   | 10  | 11 | 12 | Total |
|-------------|-----|-----|-----|----|-----|-----|----|-----|-----|-----|----|----|-------|
| 1953-1959   | 20  | 5   | 10  | 0  | 2   | 3   | 9  | 4   | 6   | 2   | .  | .  | 61    |
| 1960-1964   | 14  | 20  | 35  | 2  | 23  | 26  | 7  | 10  | 46  | 8   | .  | .  | 191   |
| 1965-1969   | 25  | 19  | 116 | 11 | 51  | 43  | 21 | 9   | 75  | 14  | 6  | .  | 390   |
| 1970-1974   | 63  | 116 | 132 | 31 | 53  | 30  | 32 | 36  | 123 | 8   | 5  | .  | 629   |
| 1975-1977   | 15  | 22  | 59  | 9  | 33  | 12  | 7  | 44  | 7   | 26  | 1  | 20 | 255   |
| 1978-1979   | 12  | 16  | 92  | 4  | 25  | 15  | 3  | 27  | 7   | 16  | 2  | 12 | 231   |
| 1980-1982   | 14  | 18  | 75  | 6  | 39  | 14  | 0  | 38  | 12  | 26  | 1  | 18 | 261   |
| 1983-1986   | 10  | 24  | 69  | 4  | 41  | 9   | 3  | 39  | 15  | 27  | 1  | 10 | 252   |
| Total       | 173 | 240 | 588 | 67 | 267 | 152 | 82 | 207 | 291 | 127 | 16 | 60 | 2,270 |

\*1--Literature, 2--Interviews, 3--Questionnaire, 4--Physical Performance, 5--Achievement Measures, 6--Personality Measures, 7--Rating Scales, 8--Teacher- or Researcher-Made Tests, 9--Interest, Attitude, Opinion, 10--Intelligence Measures 11--Not Applicable, 12--Others.

TABLE XVI

DATA ANALYSIS TECHNIQUES--1953 TO 1986

| Time Period | 1*  | 2   | 3   | 4   | 5   | 6  | 7  | 8  | 9   | 10  | 11 | 12 | Total |
|-------------|-----|-----|-----|-----|-----|----|----|----|-----|-----|----|----|-------|
| 1953-1959   | 9   | 0   | 1   | 3   | 8   | 0  | 0  | 0  | 7   | 11  | 0  | 0  | 39    |
| 1960-1964   | 15  | 11  | 16  | 16  | 19  | 0  | 0  | 4  | 40  | 13  | 1  | 0  | 135   |
| 1965-1969   | 11  | 3   | 67  | 19  | 61  | 5  | 4  | 10 | 96  | 6   | 13 | 0  | 295   |
| 1970-1974   | 76  | 77  | 96  | 34  | 75  | 9  | 3  | 18 | 128 | 46  | 49 | 0  | 611   |
| 1975-1977   | 25  | 38  | 49  | 16  | 25  | 3  | 2  | 15 | 46  | 22  | 4  | 12 | 257   |
| 1978-1980   | 22  | 22  | 55  | 39  | 36  | 3  | 5  | 11 | 35  | 15  | 12 | 0  | 255   |
| 1981-1983   | 36  | 20  | 44  | 25  | 32  | 7  | 12 | 18 | 33  | 19  | 5  | 0  | 251   |
| 1984-1986   | 18  | 96  | 50  | 25  | 18  | 3  | 9  | 21 | 35  | 14  | 8  | 4  | 301   |
| Total       | 212 | 267 | 378 | 177 | 274 | 30 | 35 | 97 | 420 | 146 | 92 | 16 | 2,144 |

\*1--Sums, Percentage, 2--Analysis of Covariance, 3--Analysis of Variance, 4--Chi-Square, 5--Correlations, 6--Factor Analysis, 7--Multivariate, 8--Regression, 9--t, Multiple Comparisons, 10--None, 11--Nonparametric, 12--Others.

Table XVI that during the period from 1953 through 1974, the most commonly used statistics were the  $t$ -test and the Analysis of Variance (42 percent).

During the 1975 through 1986 period, there is much evidence of an increased use of statistics as well as computer processing to manipulate data. While frequencies and percentages were used only in 10 percent of the dissertations, statistical procedures were employed in approximately 57 percent of the identified dissertations. It was only during this time period that dissertations utilizing discriminant analysis were found. It is also encouraging to note that studies employing factor analysis, multivariate, and regression are increasingly employed in the analysis of data. Although their contribution to the total number of dissertations is negligible, it gives a positive indication that statistical packages such as SAS, SPSS, and others are being used.

#### Question Six

Question six asks, What is the status of dissertation research in the College of Education from 1953 to 1986?

There is cause for optimism with regards to the status of dissertation research in the College of Education at North Texas State University. Using the criteria of massive and institutionalized research, that is, if the majority of research efforts emanate from institutions or organizations,

one could judge the level and type of research activity taking place in any given field of study. If it is cumulative research it is built on the results of prior research efforts and if it is experimental research then it is of the type that can determine causality and can determine why certain phenomena are occurring rather than simply determining that it has occurred.

Dissertation research in the College of Education has met the criteria of massiveness and institutionalization. The bulk of existing research in the College of Education is dissertation research. Since the first doctoral degree was awarded in 1953, there has been a total of 1,436 dissertations written through 1986. The College of Education has, over the years, consistently topped other departments and colleges in the university in the production of doctoral dissertations. Over half (55 percent) of the dissertations completed come from the College of Education.

In terms of research being cumulative, that is, research that is built upon other research efforts, the College of Education shows evidences of replication. An example of a study being replicated is that of Brice (3). Brice, in 1974, developed a questionnaire for evaluating the doctoral program in higher education. Maneenil (4) replicated the study and used the instrument Brice developed to assess higher education in 1982. There were also areas



that have been addressed by more than one person. These areas include those of academic achievement, play therapy, group counseling, foreign students, classroom management, school administrator, reading comprehension and many more. A list of the topics which were used numerous times is found in the Appendix. Another fact that satisfies the criterion of cumulative research is that measures such as tests, rating scales, and inventories were widely used. This is a strong indication that there has been a consistent use of previous research efforts.

Experimental research is highly regarded for its ability to establish causal relationships. However, it is a difficult approach since "inherent in the experimental approach is the capacity to control the conditions under which the experiment takes place and to isolate the variables being studied" (2, p. 120). In addition to this is the fact that there are areas which are not conducive to experimental design. Despite its inherent difficulties through the years, there has been consistent use of experimental research. Out of 1,437 research studies undertaken, 492 were experimental, placing it second after descriptive research.

Based on the above analysis of dissertation research, one could generalize that there is an adequate and satisfactory level and degree of research activity taking place in the College of Education.

### Testing Hypothesis One

Hypothesis one states that the type of study conducted from 1953 through 1974 is not related to the type of study conducted from 1975 through 1986. In order to test this hypothesis, the chi-square test of independence was computed. Statistical significance was set at  $p < .01$ .

Comparing the type of study and the time period the dissertations were completed, a value of 13.5 was obtained. The computed value of 13.5 is larger than the table value of chi-square, which is 6.635,  $df = 2$ . The null hypothesis is therefore rejected. The type of study conducted during the 1953 through 1974 time period is related to the type of study conducted during the 1975 through 1986 time period.

It was stated earlier that the type of study popular from 1953 through 1974 was descriptive. The present study also found descriptive research to be the most widely used research methodology from 1975 through 1986. The finding on the relationship that exists between type of study and time period the studies were conducted supports the contention that descriptive study was the most utilized type of research from 1953 through 1986.

### Testing Hypothesis Two

Hypothesis two states that the focus of study in dissertations completed during the period from 1953 through 1974 is not related to the focus of study in dissertations

completed during the period from 1975 through 1986. Testing of the hypothesis was done through chi-square test of independence. Rejection or acceptance of the null hypothesis was set at  $p < .01$ .

The focus of study during both time periods, although not in this order, are instructional methodology, student, teacher, institutional, content, administrator, counselors, and others. A comparison of the focus of study during the two time periods obtained a value of 399.03. The computed value went beyond the .01 level of significance which was set at 18.475,  $df = 7$ . The null hypothesis was rejected. The focus of study in dissertations completed during the period from 1953 through 1974 is related to the focus of study in dissertations completed from 1975 through 1986.

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## CHAPTER V

### SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

This study attempted to determine the degree and level of research taking place in the College of Education at North Texas State University through an analysis of the content and focus of dissertations produced by its graduates.

The study had three basic purposes. One purpose was to analyze the dissertations in terms of types of study, focus of each study, subject heading(s) of each study, design characteristics, statistical treatment of data, general results of experimental studies, and data collection techniques. The second purpose was to synthesize the data of the present study with that obtained by Novak in her study, in order to provide an overall description of the characteristics of dissertation research in the College of Education from 1953 through 1986. The third purpose was to examine the research activity taking place in the College of Education in terms of the quality of dissertations produced by its graduates.

Sources of data included 795 dissertations from 12 major fields of study; namely college teaching, educational research, secondary education, reading, special education,

vocational-technical education, administrative leadership, adult and continuing education, counseling and student services, higher education, elementary education, and early childhood education. The format developed and validated by Novak in her study of dissertation research from 1953 through 1974 was used in the analysis of the dissertations completed from 1975 through 1986.

Findings of the study include the following.

1. Exactly one-half of the dissertations written during the 1975 through 1986 time period were descriptive. The most common type of descriptive research employed was the survey. Almost 30 percent were experimental studies while analytical studies accounted for over 20 percent of the total number of dissertations analyzed. Analytical studies were comprised mostly of simulation studies.

2. Most of the studies were people-oriented in that they focused mostly on the students, teachers, and administrators. Institutional methodology has been the center of interest in the mid-1970s; however, its appeal among dissertation writers declined in the early 1980s. Since then, studies on students, teachers, and administrators have been prevalent, with the administrator coming in strongly during the 1984 through 1986 period.

3. The design characteristics were closely related to the types of research being conducted. Thus, experimental

research used experimental-control groups extensively while descriptive research used people as sources of information. The number of times the instrument has been administered is consistent with the type of study.

4. The data collection techniques are likewise consistent with the type of study. The most popular instrument for experimental studies was the standardized achievement measure. For descriptive studies, the questionnaire was used extensively, while analytical studies made wide use of literature, interviews, and observations.

5. The data analysis techniques used were consistent with the types of research undertaken. Experimental studies which examined variances and comparisons of variables used ANOVA, ANCOVA, and  $t$ -tests, while analytical studies used sums and percentages or did not use any technique at all. In descriptive studies, ANOVA and chi-square were heavily used, as well as sums and percentages.

6. Less than half of the experimental studies produced less than half of the statistical findings.

A comparative analysis of the findings of the present study with those of Novak's is listed below.

1. Novak's findings showed that the most common type of research methodology employed, from 1953 through 1974, was descriptive, with experimental research as the second most widely used research. The results of the present study were similar to those of Novak's.

2. The focus of study in Novak's research was instructional methodology. The present study found that the student was the most researched topic.

3. As in the present study, the design characteristics in Novak's study were closely related to the types of research. Descriptive studies used people as sources of information. There is, however, a slight difference with experimental studies. Novak's study found that experimental studies frequently used experimental groups only, while those in the present study frequently used experimental-control groups.

4. In terms of the data collection techniques, both studies found similar findings. Questionnaires were used extensively in descriptive studies, and standardized instruments were used in experimental studies, and literature reviews in analytical studies.

5. The data analysis techniques employed in both studies were almost similar; that is to say, the statistics used went beyond those of sums and percentages. Higher-order statistics were used extensively in analytical studies, while those of Novak's study used only correlations, sums, percentages, or no statistics at all.

#### Conclusions

On the basis of the findings of this study, the following conclusions are drawn.



1. The format developed by Novak in 1975 can be used to analyze dissertations completed during the years from 1975 through 1986.

2. The degree and level of research activity in the College of Education can be assessed through an analysis of the dissertations produced by its graduates.

3. Doctoral candidates are using statistical methods and computers to analyze and manipulate data more often.

4. There is an indication that doctoral candidates are beginning to use a wider variety of data gathering techniques.

#### Recommendations

On the basis of the preceding findings regarding the content and focus of dissertation research in the College of Education, the following recommendations are offered.

1. Studies like this should be periodically undertaken and should include other graduate institutions in education.

2. Faculty members should direct the doctoral candidates to research areas that could use amplification or validation.

3. Doctoral candidates should consider the research techniques in other disciplines such as Fault Tree Analysis, Delphi Technique, Q-sort and other ethnographic research methods.

4. Research proposals in graduate school should consider the criterion of the usefulness of expected findings to practitioners in the field.

## APPENDIX

### Subject Headings

|                          |                          |
|--------------------------|--------------------------|
| Ability grouping-1       | Attitudes-11             |
| Academic achievement-11  | Auditors-1               |
| Academic degrees-1       | Audio-visual education-2 |
| Academic honesty-1       | Authoring-1              |
| Achievement test-1       | Bank management-1        |
| Accreditation-1          | Behavioral association-1 |
| Activities association-1 | Behavioral therapy-1     |
| Adaptive behavior-1      | Bilingual education-2    |
| Adjustment-1             | Biofeedback-1            |
| Adlerian education-1     | Biology-1                |
| Administration-2         | Birth control-1          |
| Adult education-4        | Birth order-1            |
| African colleges-1       | Black English-1          |
| Afro-American-3          | Brain growth-1           |
| Aged service-1           | Breast cancer-1          |
| Alumni-followup-1        | Broadcast advertising-2  |
| ANOVA-8                  | Broadcaster-1            |
| Anxiety-2                | Bureaucracy-1            |
| Arab students-2          | Burnout-1                |
| Art-3                    | Business-3               |
| Assertiveness-1          | Business math-1          |
| Athletic ability-1       | Calculating machines-1   |

Career education-2  
Career patterns-1  
Cheating-1  
Chemistry-1  
Child abuse-1  
Children management-6  
Child problems-1  
Child rearing-3  
Church-1  
Cigarettes-1  
Civil rights-1  
Classroom management-5  
College administrator-6  
College choice-1  
College cost-1  
College evaluation-1  
College faculty-7  
College management-1  
College student-6  
College teaching-1  
Color vision-1  
Community colleges-6  
Community schools-1  
Communications-3  
Competencies-1  
Competency-based education-2  
Competency-based test-3  
Computation-5  
Computer-assisted instruction-10  
Computer exam-1  
Computer literacy-4  
Computer simulation-1  
Correlation-2  
Conservation-1  
Court decision-1  
Counseling-10  
Counseling handicapped-1  
Counselor-3  
Creative-thinking-1  
Critical case-1  
Curiosity-1  
Curriculum-4  
Curriculum planning-3  
Curriculum study-1  
Data processing-1  
Day care-1  
Day care directors-1  
Deaf children-2  
Death-1  
Dental hygiene-1  
Depression-1  
Developmental counseling-1

|  |                        |
|--|------------------------|
| Developmental disabilities-1             | Enrollment-1           |
| Discipline-3                             | Exercise-4             |
| Discussion-1                             | Exceptional children-2 |
| Discrimination-learning-1                | Experience-1           |
| Distributive education-1                 | Evaluation-1           |
| Drama-1                                  | Family stress-1        |
| Drug abuse-1                             | Family psychotherapy-2 |
| Drug use-1                               | Federal aid-2          |
| Dropouts-5                               | Filial therapy-1       |
| Economics-1                              | Finance-3              |
| Education-1                              | Food allergy-1         |
| Educational aims and objectives-1        | Forecasting-1          |
| Educational innovation-1                 | Foreign student-5      |
| Education of the aged-2                  | Foreign studies-1      |
| Educational research-1                   | Funding-3              |
| Elder abuse-1                            | Fundraising-2          |
| Electronic data processing-1             | Gifted children-1      |
| Elementary teachers-1                    | Grade repetition-1     |
| Employment-2                             | Graduate work-1        |
| Employee assistance program-3            | Graves-1               |
| Employee-administrative representation-1 | Group counseling-5     |
| Employee training-1                      | Habits-1               |
| English-6                                | Handicapped children-7 |
| Engineering-2                            | Harmony-1              |
|  | Health-3               |
|  | Health education-4     |

|                              |                                 |
|------------------------------|---------------------------------|
| Health studies-1             | Iowa-1                          |
| Helicopter training-1        | Item bias-1                     |
| Higher education-5           | Job attitudes-1                 |
| Higher education, Korea-1    | Job satisfaction-10             |
| Higher education, Nigeria-2  | Job stress-4                    |
| Higher education, Thailand-1 | Joints-1                        |
| Home nursing-1               | Journalism-1                    |
| Hygiene-4                    | Juvenile delinquent-2           |
| Hyperkinetic child-1         | Juvenile detention facilities-1 |
| Hypnotic depth-2             | Kindergarten-1                  |
| Hypothesis testing-1         | Kindergarten music-1            |
| Imagery-1                    | Language-1                      |
| Incest victims-1             | Laws and litigation-1           |
| Individual instruction-1     | Leadership-1                    |
| Industrial arts-1            | Learning-1                      |
| Inquiry-1                    | Learning disability-1           |
| Iranian college student-1    | Learning theory-2               |
| Institution-1                | Legal services-1                |
| Instrumental music-1         | Legal status-1                  |
| Inservice education-1        | Lesson planning-1               |
| Insurnace-1                  | Listening psychology-2          |
| Integration-1                | Literature-1                    |
| Interaction analysis-1       | Love-1                          |
| Interest inventories-1       | Manufacturing system-1          |
| Interpersonal relations-1    | Marriage-5                      |
| Interview-1                  | Martial arts-1                  |

Mathematics-10  
Math model-1  
Medical-1  
Medication-1  
Mental depression-1  
Mental health-2  
Mentally handicapped-10  
Mentally ill-3  
Mental suggestion-1  
Metallurgy-1  
Methodist church-1  
Memory-1  
Mexican-American education-2  
Mexican literature-1  
Microbiology-1  
Microcomputer-2  
Microcounseling-2  
Microeconomics-1  
Middle schools-2  
Military-1  
Minimum competency testing-1  
Minority education-3  
Moving picture-2  
Music-4  
Music ability-1  
Music education-1  
Muslim-1  
Nigeria-7  
Nigerian history-1  
Numerical ability-1  
Non-verbal communication-1  
Nurse aides-1  
Nursing-15  
Nursing homes-1  
Nursing laboratory-1  
Nursing research-1  
Nursing school facility-1  
Occupational training-1  
Open classroom-1  
Orientation program-1  
Organizational management-1  
Osteopathic-1  
Parent-child-1  
Pastoral tenure-1  
Perception-1  
Personality-3  
Personality assessment-1  
Personality test-1  
Personnel services-11  
Physical education-1  
Physical fitness-1  
Physically handicapped-1

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| Phonemic reading-1                     | Recreation-3            |
| Physics-2                              | Relaxation-2            |
| Planning and evaluation-1              | Religion-1              |
| Planetarium-1                          | Religious value-1       |
| Play therapy-2                         | Rehabilitation-2        |
| Political science-1                    | Religious education-1   |
| Principals-13                          | Remedial reading-1      |
| Problem children-2                     | Retirement-3            |
| Problem solving-3                      | Robotic-1               |
| Professional education-1               | Role playing-1          |
| Professional ethics-1                  | Residential education-2 |
| Professional negotiations-1            | Sales personnel-1       |
| Program evaluation-1                   | School administration-7 |
| Psychology-2                           | School attendance-1     |
| Psychological aspects-4                | School board-4          |
| Psychotherapy-2                        | School bond-1           |
| Psycho-verbal behavior-1               | School budget-1         |
| Public education-1                     | School districts-1      |
| Public institution<br>administration-1 | School employees-1      |
| Public library service-1               | School management-4     |
| Public relations-2                     | School success-1        |
| Reading-13                             | School schedule-2       |
| Reading comprehension-4                | Science-3               |
| Reading disability-1                   | Self-evaluation-1       |
| Reality therapy-1                      | Self-perception-1       |
|  | Self-respect-1          |



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| Service training-1   | Symbolic thought-1           |
| Sex discrimination-1 | Syntactic structure-1        |
| Sex role-1           | Systems analysis-1           |
| Shorthand-1          | Tax relief-1                 |
| Singing-1            | Teacher attitude-2           |
| Social adjustment-1  | Teacher background-1         |
| Social aspects-2     | Teacher certification-1      |
| Social groups-1      | Teacher contract-1           |
| Social interest-1    | Teacher economics-1          |
| Social skills-1      | Teacher evaluation-1         |
| Social workers-2     | Teacher rating-1             |
| Sociology-1          | Teacher salary-3             |
| Sociometric data-2   | Teacher service-1            |
| Speech-2             | Teacher success-1            |
| Spelling ability-1   | Teacher training-10          |
| Spinal injury-1      | Teaching-2                   |
| State education-1    | Technical drawing-1          |
| Stress management-4  | Technical education-1        |
| Student activities-1 | Television-3                 |
| Student evaluation-2 | Temperament-1                |
| Student union-1      | Temptation-1                 |
| Student teacher-1    | Test-3                       |
| Student teaching-2   | Test bias-1                  |
| Superintendent-3     | Texas history-1              |
| Supervision-1        | Texas laws and legislation-1 |
| Supervisors-2        | Textbooks-1                  |

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Thailand-3  
Theatre-1  
Transcript-1  
Transfer of training-1  
Typewriting-1  
University administration-4  
Universities and colleges-1  
University and college  
planning-2  
University extension-1  
Verbal abilities-1  
Verbal learning-1  
Visual perception-1  
Vocational education-9  
Vocational guidance-10  
Vocational rehabilitation-1  
Vocational interest-1  
Volunteer workers-1  
Voice culture-1  
Woman college students-2  
Women employment-1  
Woman psychology-1  
Women school administration-5  
Word processing-1  
Word problem-1  
Written language-2  
Zero-based budgeting-1

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