To the Graduate Council:

I am submitting herewith a dissertation written by Charles E. Smith entitled "A Study of Inservice Education in Tennessee as Perceived by Principals, Supervisors and Superintendents." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration and Supervision.

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Vice Chancellor
Graduate Studies and Research

A STUDY OF INSERVICE EDUCATION IN TENNESSEE AS PERCEIVED BY PRINCIPALS, SUPERVISORS AND SUPERINTENDENTS

A Dissertation

Prepared for the

Doctor of Education

Degree

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Charles E. Smith

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ABSTRACT

The purpose of the study was to investigate the nature of inservice education in Tennessee as perceived by principals, supervisors and superintendents. The information obtained was to become part of a data base for making decisions about possible improvements in the inservice programs in the state.

A random sample of 317 schools determined the group of principals, instructional supervisors and superintendents to be surveyed with a questionnaire designed to determine perceptions based on the frequency of occurrence and desirability of various components of inservice education. The Plan for Inservice Training documents from the 112 school districts determined by the sample were also examined.

The major findings of the study included:

1. Major discrepancies existed between what administrators perceived as the nature of inservice education and what they considered desirable practices.

2. Administrators did not generally believe that inservice education was adequately supported financially at the local level; however, they did consider that adequate time was devoted to these programs by central office personnel.

3. Most administrators felt that the inservice programs were generally successful, but many of them indicated that they received insufficient personal benefit from these programs.

4. There was little compatibility between the characteristics of inservice education in Tennessee and those of effective staff development which were identified in the review of related literature.

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CHAPTER I

INTRODUCTION

The maintenance and improvement of skills and knowledge associated with the job is a concern of all professionals. This concern is extremely important in the education field due to the changing needs of students and society. Keeping up with the rapid development of general knowledge alone could be a full-time effort.

There are many notions of what constitutes staff development or inservice education in the schools. Likewise, there are many opinions of what it should be. However, there appears to be one consistent opinion among teachers about the value and effectiveness of inservice programs. They generally consider inservice activities not relevant to their felt needs (Brimm and Tollett, 1974, p. 524). Part of the problem may be attributed to the fact that most committees responsible for planning inservice tend to be composed largely of school administrators. Therefore, the perceptions of administrators regarding inservice education are a critical part of the concern.

In the State of Tennessee the legislature has mandated programs of inservice education at the local school level and has funded ten days of inservice training for many years. According to the law, these programs should be ". . . designed to improve the school curriculum and promote the continuous professional growth of all personnel" (State Board of Education, 1979, p. 35). During recent years serious questions have been raised about the value of inservice education in the

state. With a cost of tens of millions of dollars annually, what return is the state getting on its investment? In April 1980, the State Department of Education issued a new set of guidelines for the planning of inservice activities (Cox, 1980). Intended to upgrade staff development activities, it required every school district to submit a proposal for the initial year that would be subject to approval by the Commissioner of Education. The major purpose was to eliminate the inappropriate activities during the ten days of state supported inservice training.

I. STATEMENT OF THE PROBLEM

There is a serious lack of information concerning the inservice education programs in the public schools of Tennessee. The submission of the required plans for inservice does not necessarily translate into action at the district level. It is possible that the plans have been developed with little involvement of teachers, principals or supervisors and are, therefore, inconsistent with the needs of the individuals closest to classroom instruction. Even if compatibility exists between the plans and the needs, it is possible that insufficient efforts are made to carry out the plans.

II. PURPOSE OF THE STUDY

The primary purpose of this study was to investigate the nature of inservice education as perceived by principals, supervisors and superintendents in Tennessee. The information obtained was to become

part of a data base for making pertinent decisions about the present state of inservice education and possible future directions for improving these programs.

Specific outcomes of the study included:

1 A review of current literature to determine underlying assumptions or characteristics of effective staff development and inservice education programs.

2. A general description of information included in the Plan for Inservice Training documents submitted by the school districts in Tennessee.

3. An examination of the perceptions of principals, supervisors and superintendents regarding inservice education in Tennessee.

4. An analysis of differences in the perceptions of members of the three groups based on selected variables such as size of school system, grade level structure, years of training and length of service.

III. IMPORTANCE OF THE STUDY

Any attempt to improve inservice education must begin with an identification of what is actually practiced at the local school level. Since administrators have major responsibility for the planning and implementation of these programs, their perceptions are critical parts of the description. Utilizing this information it can be determined whether or not congruence exists between the intended goals of inservice and the actual outcomes of the programs. At the same time comparisons

can be made between existing programs and the characteristics of effective inservice as identified in the literature.

IV. ASSUMPTIONS

The following assumptions were made as an important part of the study:

1. Personal and professional growth for all educators can be accomplished through appropriate programs of inservice education.

2. Characteristics of effective staff development can be determined in a review of current literature.

3. The perceptions of administrators provide an acceptable description of local inservice programs.

4. Educators desire to improve inservice education.

V. DELIMITATIONS

Delimitations of the study included:

1. Only the principals, supervisors and superintendents identified in the 1980-1981 Directory of Public Schools or supplementary lists were included in the survey of administrators' perceptions.

2. Only the information relative to the number of days of inservice, assessment of needs, established priorities and the makeup of local inservice committees was considered in the summary of the Plan for Inservice Training documents.

IV. DEFINITIONS OF TERMS

For the purpose of the study the following terms were defined:

Administrator. An administrator is any person holding the position of principal, supervisor or superintendent.

Evaluation of inservice education. The evaluation of inservice education consists of assessing the value of the program through careful examination to determine if purposes have been accomplished.

Implementation of inservice education. The implementation of inservice education involves the execution of plans designed to fulfill the stated purposes of the program.

Inservice education. Inservice education refers to "any planned program of learning opportunities afforded staff members of schools, colleges, or other educational agencies for purposes of improving the performance of the individual in already assigned positions" (Harris, 1980, p. 21). For the present study it was considered to include the components of purposes, planning, methods, implementation and evaluation.

Methods of inservice education. The methods of inservice education comprise the systematic use of specific procedures to carry out the program and accomplish its purposes.

Needs assessment. A needs assessment is a process by which needs are identified, categorized and often prioritized. It is also an attempt to determine what most of the participants want.

Perception. Perception refers to the consciousness that an individual possesses or the awareness obtained through the senses. The term also refers to knowledge gained by perceiving.

Plan for inservice training. The required form submitted to the Tennessee State Department of Education by each school system outlining the program of inservice education is the Plan for Inservice Training (Cox, 1980).

Planning of inservice education. The planning of inservice education includes the detailed scheme of action designed in advance for the accomplishment of the objectives of the program.

Preservice education. Preservice education is the series of courses and experiences which comprise a program of study for students aspiring to be teachers.

Principal. The person at the building level who is appointed by the Board of Education to assume the ultimate responsibility for the operation of that school unit is the principal.

Purposes of inservice education. The purposes of inservice education are identified as the objectives of the program based on the needs and interests of the participants. Purposes specify desired results, usually involving changes in attitudes and/or behaviors for the improvement of instruction.

Staff development. A staff development program includes "all efforts of school officials to recruit, select, orient, train or

reassign staff members so as to provide the best possible staff for the operation of the schools; generally used to include staffing and inservice education" (Good, 1959, p. 448).

Superintendent. The superintendent is the chief executive of the school system and possesses ultimate responsibility for the program of inservice education in the district.

Supervisor. The supervisor performs a system-wide function of instructional support service including the planning and implementation of inservice activities. Other titles for the position include assistant superintendent, director, coordinator, consultant and specialist.

VII. QUESTIONS

The intent of this study was to answer the following questions:

1. What are the perceptions of administrators regarding the purposes, planning, methods, implementation and evaluation of inservice education based on frequency of occurrence and desirability? Further, how do these five areas of inservice education relate to the following?

A. Do principals and supervisors of varying grade levels possess different perceptions of inservice education?

B. Do administrators in school systems of varying sizes possess different perceptions of inservice education?

C. Do administrators of varying lengths of service possess different perceptions of inservice education?

D. Do administrators of varying lengths of training possess different perceptions of inservice education?

2. What are the perceptions of administrators concerning the overall inservice education process as a function of their school systems' financial support and commitment of central office staff time to inservice education?

3. What are the perceptions of administrators concerning the success of their school systems' inservice education program in general and as related to their personal needs?

4. What components of inservice education identified in the literature are representative of the programs in the school districts of Tennessee?

5. How do these programs compare with the characteristics of effective staff development identified in the literature?

VIII. HYPOTHESES

The review of current literature did not provide sufficient basis for making deliberate predictions regarding possible differences of opinions among administrators regarding inservice education. The training and experience of the researcher tended to support the expectation that certain differences relative to specific characteristics of inservice education would exist in the opinions of administrators; however, these notions were judged to be too subjective in nature.

Therefore, it was necessary to specify the following null hypotheses which correspond to the last four parts of question one stated in the previous section.

Hypothesis I. Principals and supervisors of varying grade levels do not possess different perceptions of inservice education.

Hypothesis II. Administrators in school systems of varying sizes do not possess different perceptions of inservice education.

Hypothesis III. Administrators of varying lengths of service do not possess different perceptions of inservice education.

Hypothesis IV. Administrators of varying lengths of training do not possess different perceptions of inservice education.

Each hypothesis was tested utilizing the chi-square technique for frequencies (Nie & Hull, 1975, pp. 223-224). The .05 level of significance was applied in each case.

IX. PROCEDURES

The present study was conducted in cooperation with two other doctoral students. Zulette Melnick (1981) examined the perceptions of teachers relative to inservice education in Tennessee, and Vicki Dean (1981) compared the perceptions of administrators and teachers. Each participant developed research questions appropriate for the particular focus of his or her dissertation; however, the group collaborated in the gereration, collection and analysis of data by utilizing one sample of teachers and administrators and one questionnaire. Likewise, the review of related literature and research was a cooperative effort. For these reasons, portions of the three dissertations were very similar and in certain instances the same.

The Plan for Inservice Training

An examination of several of the forms prepared by school systems to be submitted to the State Department of Education revealed that an external structure would need to be imposed on the information included therein. This was due primarily to the lack of a detailed format on the form and the vagueness with which it had been completed. The necessary structure was found in the review of the literature.

It was decided that the purposes of inservice education provided the most appropriate foundation for analyzing the Plan for Inservice Training forms. Six major reasons for inservice education programs were identified in the literature (Howey & Joyce, 1978; Harris, 1980). These included: (1) improvement of classroom performance, (2) general professional improvement, (3) personal development, (4) organizational development, (5) improvement of student outcomes and (6) extension of certification of individual teachers. Since the improvement of student outcomes was considered to be the underlying aim of inservice education and the other purposes represented various approaches to that aim, the decision was made to categorize the priorities listed in the inservice plans according to the five approaches.

Additional analysis of the Plan for Inservice Training forms related to the number of inservice days scheduled, means by which needs assessment was conducted and the composition of the local inservice committee.

Sampling Procedures

In order to establish a relationship between the groups to be surveyed in the study, it was decided that a sample of schools would be used. An examination of the 1980-1981 State Department of Education Directory of Public Schools indicated that 1,741 schools were listed under County School Systems, City School Systems or Special District School Systems. In the cases where a principal supervised more than one school, these schools were considered as one under that principal. If a person served as both principal of the school and superintendent of the district, the schools were eliminated from the list. This was necessary to maintain the groups as mutually exclusive. These decisions reduced the total number of schools to 1,730. A random sample was drawn from the final group.

Based on the formula suggested by Hauskin (1963), the sample size should be 317. His formula is as follows:

$$n = \frac{X^2 N \emptyset (1-\emptyset)}{d^2 (n-1) + X^2 \emptyset (1-\emptyset)}$$

Where N = population size

n = sample size

X^2 = chi-square, with 1 d.f. and desired confidence level

d = error range

$\emptyset$ = (.50 for largest sample size or percent of population with a given characteristic).

With this sample of schools, the groups of administrators to be surveyed were the principals of the schools, the instructional

supervisors and the superintendents of the district in which the schools were located. Attempts were made to make the list of administrators as accurate as possible since the Directory of Public Schools was based on information submitted in the fall of 1980, and changes were known to exist since then. Updated files from the State Department of Education were sufficient to accomplish this task. Ultimately, the sample included 317 principals, 286 supervisors and 112 superintendents. This also determined that the Plan for Inservice Training forms for 112 school districts would be examined.

The Survey Questionnaire

The questionnaire was developed to determine the perceptions of administrators regarding the concerns addressed by the research questions (see Appendix A). Specific items were constructed to deal with the perceptions of administrators relative to the success of inservice programs and support given by the school system. Responders were asked to use a Likert-type scale on each of these questions.

Information extracted from the review of literature was utilized for the preparation of items relating to the purposes, planning, methods, implementation and evaluation of inservice education. Examples were used to describe the various alternatives for each component. The respondents were asked to rank the various examples according to their perception of the frequency of occurrence within their school system and the desirability they would assign to each example.

Demographic data were requested on the cover sheet of the questionnaire concerning levels of responsibility, size of the school system, years of experience in education and highest degree earned. This information was necessary to make the desired comparisons between the groups of administrators.

The section of the questionnaire related to purposes of inservice was designed to be compatible with the types of inservice which were used in the analysis of the Plan for Inservice Training documents. This made it possible to relate the perceptions of the responders relative to the purpose of inservice education with the information included on the forms submitted by each school district in the study. Perceptions were solicited in terms of the frequency of occurrence and the desirability of each type of inservice education.

A jury of experts in the field of inservice education or staff development was selected to review the questionnaire in an attempt to determine its validity (see Appendix B). Members of the jury included:

1. Dr. Gordon Cawelti, Executive Secretary
   Association for Sueprvision and Curriculum Development
2. Ms. Betty Dillon-Peterson, Director of Staff Development
   Lincoln Public Schools, Nebraska
3. Dr. Ben Harris, Professor
   University of Texas
4. Dr. Robert Krajewski, Professor
   Auburn University

5. Dr. Gordon Lawrence, Professor
   University of Florida
6. Dr. Dale Mann, Professor
   Columbia University
7. Ms. Alice Meil, Professor (retired)
   Columbia University
8. Dr. Joe Minor, Chief of Curriculum and Instruction
   Tennessee State Department of Education
9. Dr. Louis Rubin, Professor
   University of Illinois
10. Ms. Janice Shelby, Assistant Commissioner
    Tennessee State Department of Education
11. Dr. Fred H. Wood, Professor
    Pennsylvania State University
12. Dr. Patricia Zigarmi, Editor
    Journal of Staff Development

Subsequent revisions were made before a field test was conducted with a group of 25 principals, supervisors and superintendents. Only minor additional changes were necessary before the questionnaire was distributed to the groups determined in the random sample.

The realiability of the questionnaire was evaluated by a test-retest procedure with two classes of graduate students in the Department of Educational Administration and Supervision at The University of Tennessee, Knoxville. The Pearson correlation coefficient (Hull & Nie, 1979, pp. 82-84) was .73 which is a moderate value but less than

desirable. A follow-up analysis based on 204 returned questionnaires resulted in a Cronbach's alpha score of .92 which is substantially better than the first value. The instrument was, therefore, judged to be sufficiently reliable.

The questionnaires were mailed along with a cover letter to all administrators in the sample (see Appendix C). After approximately four weeks a follow-up mailing was made. A final effort to obtain the returns involved telephone calls to a random sample of administrators in the original sample who had not responded after six weeks.

Treatment of the Data

The data collected in the review of the Plan for Inservice Training documents were summarized and reported as frequencies and percents for each category involved. The results were then compared to the perceptions of administrators regarding the frequency of occurrence for each corresponding purpose of inservice education included in the questionnaire.

The perceptions of administrators based on frequency of occurrence and desirability for all items in the questionnaire were reported as frequencies and percents. Separate tables were prepared for the purposes, planning, methods, implementation and evaluation components.

Cross-tabulations based on the demographic data were used to determine significant relationships between the perceptions of administrators and the variables grade level assignment, school system size, years of experience in education and highest degree held. In each case

the chi-square test was applied, and a level of .05 was selected for an indication of significant relationship. In order to meet the requirements for the application of the chi-square test, the various responses on the questionnaire for demographic data were collapsed into new categories.

Since a substantial number of respondents did not rank the items in the questionnaire as requested, it was necessary to consider the responses as ratings of "high," "neutral" or "low" regarding the frequency of occurrence or desirability. The computer analysis was constructed to alter each response to fit such a three point scale. Since only the chi-square technique was to be used in the analysis, no change in statistical procedures was necessary.

X. ORGANIZATION OF THE STUDY

The final report on the study was divided into the following chapters:

Chapter I contains the introduction, statement of the problem, purpose of the study, importance of the study, assumptions, limitations and delimitations, definitions of terms, questions, hypotheses, procedures and organization of the study.

Chapter II includes the review of literature regarding staff development and inservice education.

Chapter III contains the presentation of data and findings.

Chapter IV includes the summary, conclusions, recommendations and suggestions for further research.

CHAPTER II

A REVIEW OF RELATED LITERATURE AND RESEARCH*

This chapter includes the review of the literature related to staff development and inservice education. The various sources of information were research studies, books, theses, dissertations and periodical literature. The chapter is organized into sections which consider the following: (1) a historical overview of the development of inservice education, (2) research and theory of the components of inservice education identified as purposes, planning, methods, implementation and evaluation, (3) models of inservice education, and finally (4) a summary of successful inservice education practices.

I. HISTORICAL DEVELOPMENT OF INSERVICE EDUCATION

The development of inservice education must be examined as part of the changes which have evolved in the total educational process. Factors influencing the development of inservice education included the concepts of the aims and values of education, the nature of the learner and learning, the function of the school and the role of the teacher (Edelfelt & Lawrence, 1975, pp. 1-8).

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*The review of literature was conducted in cooperation with Vicki Dean and Zulette Melnick. Parts of the chapter will be similar to, or in certain instances the same as, portions of the review of literature contained in each of their dissertations.

Initially, the need for inservice training was minimal since teachers were viewed only as givers of information (Edelfelt & Lawrence, 1975, p. 9). The ability to read, write and compute better than the students was the main expectation that a community held for a teacher. At this time teachers had little or no professional training.

With the development of the normal school and teacher institute, there developed a new model for learning and teaching. "Lecture and recitation were the forms used to train teachers, teachers were expected to use these forms with their students," according to Edelfelt & Lawrence (1975, p. 10).

Dillon (1976, p. 165) stated that staff development, under the title "inservice education," has been with us ever since the time when new teachers entered the profession holding their normal training certificates. Teacher institutes served not only preservice functions but inservice functions as well, and this accounted for their early widespread success. These services, plus an occasional convention, kept teachers informed and after a probationary period teachers were generally granted permanent licenses. These patterns of permanent licensing and unchanging teaching methodology and content were reflected in public school practice until well into this century.

By the 1930's, inservice institutes, now called teacher workshops, were continuing to serve only as a means of extending the teacher's knowledge of subject matter (Edelfelt & Lawrence, 1975, p. 11). This was true despite the rapid technological and social change that was

occurring. Three-fourths of teachers had attended college for at least two years, but inservice education was still considered a means of remediating deficiencies.

Harris (1980, p. 26) stated, "Historically inservice education has been reactive rather than proactive." Initially its purpose was based on the problems of teacher shortage and inadequate preservice preparation, and this reactive nature persisted. Eventually teachers considered the workshops a waste of time even though their attendance was compulsory in over 50 percent of the states.

Dissatisfaction with teacher institutes led to the "era of techniques of inservice education." The most influential writing of the 1940's was by Barr, Burton and Brueckner, who emphasized a vast array of "improvement devices" (Harris, 1980, p. 27). This emphasis on process, procedure and techniques coupled with emerging group dynamics studies and the ever-present teacher shortage resulted in expanded use of inservice education as a major means of professional development.

Toward the end of the era of techniques the National Education Association's (NEA) publication The Teaching Profession Grows In Service (1949) stressed the importance of planned programs (Harris, 1980, p. 27). Inservice education workshops were receiving considerable attention during this time. The Fifty-Sixth Yearbook of the National Society of the Study of Education was devoted to this topic (Stephens & Hartman, 1978, p. 1). Several pioneer studies were financed by the Fund for Advancement of Education. The researchers Edmonds, Ogletree, and Wear recommended inservice education be viewed as professional growth

with the use of continuous, constant efforts (Harris, 1980, p. 27). Tower (1956, pp. 181-192) meanwhile surveyed superintendents and reported their efforts at planning orientation and inservice education programs for beginning teachers. Inservice workshops during this period could be characterized as "staff development days that were conducted at the school district level and frequently in cooperation with the teacher associations" (Stephens & Hartman, 1978, p. 1).

The postgraduate inservice programs included summer school and extension courses. Typically these graduate studies were extensions of the traditional four-year programs (Stephens & Hartman, 1978, p. 1).

Curriculum reform efforts had a major impact on inservice education in the late 1950's and early 1960's. The National Science Foundation institutes were funded with $30 million in 1959 and $40 million in 1962, despite evidence of the limitations of this approach (Harris, 1980, p. 28). The Educational Professions Development Act (EPDA) was passed by Congress in 1964 and emphasized field-based program change. This act was short-lived and only provided funds for five years. During EPDA hearings before the United States Senate Subcommittee on Education in 1967, Don Davis described inservice education as " . . . The slum of American education . . . disadvantaged, proverty stricken, neglected, psychologically isolated, wittled with exploitation and broken promises" (Harris, 1980, p. 30).

The 1970's revealed increasing dissatisfaction with university controlled inservice education. Demands were made to involve teachers

in the planning and organizational efforts and to offer more practical programs (Edelfelt, 1974, pp. 250-251).

In addition to the pressures on inservice education from within the profession, legislative and fiscal constraints were placed on inservice education. During the Ford and Nixon administration efforts in education were concentrated on changing from categorical to general funding (Florio, 1978, p. 154). These failed and support for federal professional development legislation was deleted as a category. The United States Office of Education (USOE) was involved in professional development, but the exact amount of involvement was difficult to determine because categorical programs determined their own degree of involvement. In 1978, 21 of USOE's 120 programs had a component for educational professional development. The degree of involvement varied greatly from 2 percent to 100 percent of total program appropriation (Feistritzer, 1979, p. 36). Only four were totally dedicated to professional development, i.e., Teacher Corps, Teacher Centers, Education of the Handicapped Personnel Preparation and Vocational Education Personnel Development (Florio, 1978, p. 154).

Seventy-five percent of USOE programs which had a component for inservice education did not have specific regulations or guidelines for inservice education. This resulted in a lack of coordination among USOE programs and an overlap of content and delivery at the local, state and national levels (Feistritzer, 1979, p. 38). The National Institute of Education (NIE) also recognized the need to reduce segmentation, overlap and gaps in inservice education activities (Vaughn, 1979,

p. 33). A "Lifelong Learning Bill" sponsored in 1976 by Walter Mondale, United States Senator from Minnesota, wouuld have provided for better coordination of federal support of staff development/inservice education (Mondale, 1976, p. 45). Unfortunately the bill did not pass, and federal policy remained confused and disjointed.

Collective bargaining (professional negotiations) provided an area of political influence on inservice education. Many teachers organizations were considering inservice education a negotiable item (Luke, 1976, p. 468). Demands for quality inservice designed to meet teacher needs were voiced by John Ryor, former president of the National Education Association, while Albert Shanker, president of the American Federation of Teachers, expressed concerns over purposes, governance, content and fiscal responsibility (Ryor, Shanker & Sandefur, 1979). They quoted Rand study findings that innovative programs were ineffective unless the teachers who carry them out were involved in the decision-making process. Other specific demands being made by teacher organizations included public financial support for meaningful programs and teacher designed needs assessments (Luke, 1976, pp. 469-470).

The impact of collective bargaining has also affected fiscal control of inservice education. For example, Florida school boards encountered collective bargaining for the first time in 1975-76. School boards quickly realized that they could not relinquish 60 percent of control through funding of local teacher centers to the bargaining units, as mandated by Teacher Center legislation. Therefore, participation in the development of new teacher centers declined (Zenke, 1976, p. 179).

Inservice education continued into the late 1970's with no significant changes. Usually required of teachers and designed by administrators and/or universities, the programs were generally piecemean and consisted of remedial efforts (Edelfelt & Johnson, 1975, p. 13). School systems assigned a low priority to inservice efforts. A study by the NEA released in 1976 indicated a significant discrepancy between what existed in inservice education and what respondents desired (National Education Association, 1976, p. 16).

The problems associated with inservice education were evident in several major issues. The first was a lack of conceptual framework for studying inservice education (Massanari, 1977, p. 41). This compounded the problems of policy making at the local, state and national level. Every state possessed legal structures regarding regulation and certification of inservice education, but there were no clear relationships between the practice of inservice and a conceptual framework.

Another issue involved the governance of inservice education. The major question was who should control--the state or local education agency, teacher organizations, universities or some collaborative arrangement (Massanari, 1977, p. 41). These agencies traditionally assumed a win-lose stance toward each other (Arends, Hersch & Turner, 1978, p. 203).

Mann (1978, p. 213) viewed the process of inservice education as similar to the process of politics. If the political process determined who would and would not get what quality of education, then the

inservice education process carried similar power and value implications.

Williams (1978, p. 96) hypothesized that the overwhelming failure of present inservice education efforts were due to political considerations (essentially economic or organizational self-interest). When the various groups involved behaved in their own best interests, the ineffectiveness of inservice education could be traced to these ensuing conflicts.

In a broader view, Howey and Joyce (1978, p. 206) categorized inservice education problems as: (1) conceptual (no common definitions and purposes), (2) legal-political-economic (legislative manates, governance and financing), (3) structural-organizational (time restraints and agency relationships), and (4) personal-psychological (perceptions of self-worth and enhancing individual mental health and the ability to grow). While other authors (Houston & Freiberg, 1979; Wood & Thpmpson, 1980) identified additional problems facing inservice education, most were viewed as a variation of one of these categorizations.

II. COMPONENTS OF INSERVICE EDUCATION

For the present study the components of inservice education were considered to include purposes, planning, methods, implementation and evaluation. These components were chosen as a means of defining the concept of inservice education and each one is examined in depth.

Purposes

An examination of the literature revealed general agreement as to the purposes of inservice education, although the extent of precision was questioned by some writers. Harris (1980, p. 15) contended the major purpose of inservice education was the improvement of instruction, but he warned that this phrase had substantial hidden meaning. Improving, rather than maintaining was implied, emphasizing the change process and eliminating monitoring acitivities. Howey and Joyce (1978, p. 207) agreed with this overall purpose in stating, "inservice has a bottom line objective, the improvement of instruction." They declared, however, that valid distinctions existed as to why one pursued inservice education at any given time. They offered the following typology of purposes:

1. Job-embedded inservice education. This type of inservice education occurred on the job. Four typical examples included committee work for program planning and organization, team teaching, interaction with consultants, and curriculum analysis.

2. Job-related inservice education. This type of inservice education was closely related to the job but one that does not actually take place while teaching is going on. Typical examples included workshops and teacher centers.

3. Career credential inservice education. This type of inservice education was organized to help one obtain a new credential or prepare for a new role.

4. General professional inservice education. This type of inservice education was designed to improve general competence but was not tailored to specifically identified needs.

5. Personal inservice education. This type of inservice education was designed to facilitate personal development which may or may not be related to the job.

Howey and Joyce (1978, p. 208) expressed this need for more precise delineation of purpose for planning inservice education as a result of a nationwide study. They found that most teachers preferred other teachers as leaders for inservice education; however, their preferences varied according to the specific purpose of the inservice activity.

Harris (1980, p. 165) found that the place of certification and recertification as a purpose of inservice education received heavy emphasis in many states. While he commended these efforts to keep certification from becoming permanent by requiring continuing training, he suggested that this imposed standards on individuals and school systems that might not be consistent with their on-the-job needs.

Firth (1977, p. 216) contended basic purposes must be coordinated in terms of programs for schools and of instruction for teachers. Wilen and Kindsvatter (1978, p. 394) agreed in stating that one major reason inservice education had been ineffective was that teachers' instructional needs and classroom problems had not been given primary emphasis in the conception of programs.

Mann (1976, p. 325) suggested a different view of purposes of inservice education. He found that precise purposes increased conflict, and in no case did target groups select themselves as the focus of change. Lawrence (1974, pp. 22-23) also found that there is greater chance of improving teacher and student performance if teachers are allowed to identify and pursue their own priorities for inservice education. Howey (1980, p. 109) contended that many programs were too narrowly conceived and that a well-conceived program must ". . . attend to three domains: curricular improvement, individual change and organizational development."

Planning

The planning of inservice education programs was characterized by four general patterns according to a study reported by McLaughlin and Marsh (1978, pp. 73-75). They included the following:

1. Top-down. Planning was done by administrators. Teachers felt little personal involvement so plans were usually met with resistance or indifference. Central office staffs usually lacked awareness of needs and practices of particular schools and classroom teachers.

2. Grass-roots. Planning was done by teachers, but it was only a little more successful than top-down. Teachers found it difficult to sustain initial enthusiasm and motivation where there was little indication that district officials cared. Even

the successful projects withered due to staff turnover, indifference or lack of information on the part of the building principal.

3. No-planning. No systematic planning attempts were made.

4. Collaborative. Planning was done by teachers and administrative staff from the proposal stage through implementation. Only this method of planning generated the broad-based institutional support necessary for effective implementation and continuation of successful practices.

The authors suggested the commitment of teachers gained through the collaborative approach had the most consistent positive relationship to project goals of changes in teachers' and students' performances (McLaughlin and Marsh, 1978, pp. 73-75). Other writers also expressed the importance of involving teachers in a collaborative planning process (Arends, Hersh & Turner, 1978; Feinberg, 1974; Hruska, 1978; Juris, 1973: Ludwig, 1977; McElhone, 1979; Patterson, 1975: Unruh & Turner, 1970; Wilen & Kindsvatter, 1978).

Smith (1975, p. 32) pointed out there are two kinds of collaboration. "One is coerced collaboration; the other is a free and uninhibited exchange of ideas and services as envisioned in an equal partnership concept." He maintained that coerced collaboration was the kind most frequently used in teacher inservice education often under the guise of an open system, but also acknowledged the second can be found in some teacher center concepts currently in use.

One of the more popular methods used to involve teachers in the planning of inservice education programs has been the needs assessment. Ingersoll (1976, p. 173) has done extensive work in this area, developing and utilizing an instrument which identified teaching competencies and skills. He warned, however, "that to depend solely on teacher responses for decisions may be as much in error as previous policy was patronizing . . . the needs identified for inservice training may differ as a function of who is asked to respond."

Arends et al. (1978, pp. 197-199) contended teachers were veterans at having their training needs assessed and prescribed by others. They identified several problems including the fact that choices were cued by others when a roster was provided. They pointed out that teachers tend to respond as representatives of teachers as a group rather than as individual self, and teachers also tend to make absolutely predictable choices based not on their own experience in the classroom but from whatever was currently receiving the most attention by the news media.

This finding was affirmed by Jones and Hayes (1980, p. 32) who stated, "Determining needs and securing statements from teachers about concerns on current problems are two distinctly different tasks." In a study of elementary reading teachers, they found that teachers were either unaware of much need for additional knowledge, or were reluctant to express their needs. Rogus and Martin (1979, p. 86) took the position that historically classroom effectiveness

had been equated with the absence of problems, and teachers had consequently learned to deny any of their difficulties to others.

Firth (1977, p. 216) found planning priorities were often set on the basis of frequency of requests. Considering a teaching force en masse was not the best information to use in planning, and the author suggested qualitative rather than quantitative indices be used.

King, Hayes and Newman (1977, p. 687) noted inservice efforts were most frequently criticized for inept or inadequate planning. They suggested that planning of any inservice activity should produce a planning document which includes:

1. Realistic objectives,
2. Type of inservice most likely to attain these objectives,
3. Approriate sponsorship,
4. Combinations of activities to be employed,
5. Characteristics of target population,
6. Incentives for participants,
7. Appropriate media,
8. Critical time factors,
9. Adequacy of location and facilities,
10. Proper evaluation.

Harris (1980, p. 159) concurred in stating "However approached, whoever is involved, inservice education planning must be systematic, emphasize design, and generate a set of materials called the plan." He also suggested the use of flow charts or Gantt charts for the

implementation planning phase. Hunt (1978, p. 240) emphasized the collaborative, systematic approach in stating that planning must give priority to the ". . . specific school, the specific concerns of the teachers, and the specific relationships among the persons involved in the activities."

From his point of view, Patterson (1975, p. 59) stated teachers have rightly rejected inservice training when they had not been involved in planning and development. Indeed, these strategies for change were so central to the success of any program development process that they should have become an integral part of any system developed.

Mann (1976, p. 325) in a review of the change-agent study found a relationship between extensive planning and the success of the projects. The explanation of that lay not in the intrinsic value of the planning activity but in the fact that the most successful projects were also the most ambitious and complicated, thus demanding of good training. McLaughlin and Berman (1977, p. 192) reporting from this same study observed that continuous planning was related to successful outcomes.

Methods

A general synthesis of the literature relative to inservice education and staff development suggested three major factors in the methods applied to inservice education. These included group size or format, session leaders and instructional techniques.

Harris (1980, p. 82) examined methods through the use of a graph which depicted relationships between group size, experience impact and complexity of objectives. He maintained that the greater the complexity of the objectives, the greater is the required experience impact. Small groups must be utilized for this degree of impact.

Examination of existing practices revealed that most writers called for a more individualized approach. Hunt (1978, p. 240) maintained that despite the concern about individual differences among students, little attention is given to differences among teachers. He found that provisions are generally made for such differences as experience versus inexperience or elementary versus secondary classifications.

Lawrence (1974, p. 18) in his review stated that although individualization was reported in many programs it meant only the pace and sequence might vary from person to person or that participants had choices of learning experiences. He indicated that few efforts are made to differentiate "on the basis of learning style, personality differences or teaching style."

Firth (1977, p. 218) reported, "The obsession to involve the faculty in the same program ignoring the fact that one program no matter how comprehensive or flexible cannot serve the needs of all teachers, simultaneously." Wilson (1978, p. 276) agreed in providing evidence of the inappropriateness of many large group approaches. She took the position that learning occurred more readily

through methods that were suited to the individual and that few goals were best achieved by requiring everyone to engage in the same activity at the same time.

Thurber (1978, pp. 262-265) called for school-based programs planned jointly by administrators and teachers using an individualized approach with a range of alternatives appropriate for a given teacher. Zigarmi, Betz and Jenson (1977, pp. 549-551) took a similar approach in defining characteristics of useful types of inservice. In this case teachers would be given a choice about the inservice focus, when it was to take place, and who the resource people would be. Rubin (1978, p. 23) agreed in stating:

> Inservice education programs that have differentiated experiences for different teachers (that is, "individualized") are more likely to accomplish their objectives than are programs that have common activities for all participants.

The second major factor in the methods of inservice education related to the choice of personnel to serve as leaders for inservice sessions. Alternatives in the selection were suggested by Firth (1977, p. 217) who stated some systems introduced change-agents from outside the system while others identified and trained teams composed of individuals who had demonstrated leadership potential.

Many writers found programs were more effective when teachers acted as session leaders. Reilly and Denbo (1975, p. 126) in a research project involving elementary teachers in California suggested that teachers were more likely to take the advice of experienced teachers who were currently teaching rather than other professionals who had more specialized training but less teaching experience.

Ainsworth (1976), in a similar study in Maryland, found teachers wanted a structured program of other teachers presenting new and different ideas. Lawrence (1974, pp. 23-24) also affirmed that in effective programs teachers shared ideas and provided material assistance to one another.

The position of teachers within the organizational structure of most school systems tended to be at the bottom according to Rogus and Martin (1979, p. 84), and those whose role it was to provide the help to teachers were normally higher on the organizational chart, were paid more and occupied work space quite distant from the classroom setting. They contended, therefore, that it was no surprise that teachers viewed other teachers as the best source of assistance.

Winterton (1977, p. 37) compared the use of "within staff" resources with outside consultants and also found a number of positive benefits with the use of staff members. One was the availability of the expertise following the inservice education activity itself, and secondly this "provided an opportunity to elevate teachers among peers, a situation that creates internal motivation for continued professional growth."

Zigarmi et al. (1977, p. 550) focused on understanding what teachers preferred by looking at what they did not find useful. Teachers generally rated programs conducted by outside consultants as not useful. Smith (1975, p. 32) took the position that in all too many cases "educational experts are brought in from the outside

to 'give the word' and leave without becoming involved in the setting before, during or following the workshop setting."

McElhone (1979) found that administrators were ineffective as inservice resources but contradicted other studies concerning outside consultants. His research found that the majority of inservice activities should be conducted by professional consultants. Feinberg (1974) produced similar findings in stating services of consultants and other resource persons should be used in inservice programs.

A possible explanation for these differences in findings was suggested by Howey and Joyce (1978, p. 208) in their classification of inservice education on the basis of purpose. That is, teachers tend to prefer one type of session leader over another according to the particular purpose of the inservice activity.

Finally, the instructional techniques were a factor in the methods of inservice education. Most writers took the position that those techniques requiring the most active participation by teachers were generally more effective. Lawrence (1974, p. 17) found that no one technique was superior to others; however he did find that inservice programs:

> . . . that required teachers to construct and generate ideas, materials, and behaviors were more frequently successful than programs in which teachers accepted ideas and behaviors from the instructional agent.

McLaughlin and Marsh (1978, p. 75) contended that the more required of teachers, and the greater the overall change in teaching style, the greater the commitment of teachers to the project.

The value of supervised practice, modeling and feedback was found in the results of over 200 training studies by Joyce and Showers (1980, p. 379-385). They concluded that maximum effectiveness of inservice activities resulted form the use of several, if not all, of the training components of theory, modeling, practice, feedback and coaching for application. Hruska (1978) found in a study concerning beliefs about staff development that participants were better able to apply new learning and refine their skills as they received feedback and support from others.

Implementation

Implementation of inservice education involves the scheduling and delivery of the strategies utilized. Mann (1976, p. 325) contended implementation began when the project settled down to the hard work of trying to influence teacher behavior. McLaughlin (1978, pp. 20-21) identified three types of interactions within the implementation process:

1. Mutual adaptation--involved modifications of the project design, changes in the institutional setting and the individual participants.

2. Cooptation--signified adaptation of the project design, but no corresponding changes on the part of the institutional setting or the participants.

3. Nonimplementation--projects broke down during implementation or were ignored by participants.

In the Rand Change-Agent study, successful implementation was characterized by mutual adaptation (McLaughlin, 1978, p. 20). As the author pointed out most innovations focused on technological change, not organizational change; and without changes in the structure of the institutional setting, new practices were unlikely to lead to much change in what happened to students.

Many researchers identified a need for organizational change in the area of scheduling for inservice education and called for released time for teachers (Arends, Hersch & Turner, 1978; Johnson, 1972; Wilen & Kindsvatter, 1978; Vaughn, 1975). Howey and Joyce (1978, p. 209) took the position that "teachers should be periodically released during the course of the instructional day to engage in . . . inservice education." They found in a nationwide study, however, that less than one in five teachers had been released on any kind of a regular basis. They also explored the concept of released time with community persons. Over one-half of the parents surveyed were also supportive of released time schemes as long as quality instruction was provided the students during this time. However more parents tended to support designs such as paying teachers during the summer or on occasional weekends.

Arends et al. (1978, pp. 203-204) contended that state departments of education must assume the lead in acquiring financial resources necessary, not only to finance the services themselves but more importantly, to provide the release time for teachers to participate. Winterton (1977, p. 36) suggested the use of paid

substitutes or fuller use of aides to free teachers for inservice activities during the day.

Other writers emphasized the need for more time in general. Zigarmi et al. (1977, p. 551) stated more time should be set aside not only for implementation but also for planning and follow-up activities. These authors found that longer inservice experiences are seen as more useful than inservice experiences that last only a day or part of a day. Ngaiyaye and Hanley (1978, p. 306) indicated that the appropriate length of time for an inservice activity should be determined by the content and type of meeting.

Winterton (1977, p. 36) found that time was the most inflexible element of the inservice process. He maintained that "time for inservice should become an expected, planned for, integral part of the teaching commitment." Rubin (1978, p. 294) agreed that retraining should take place during the teacher's regular day.

Harris (1980, p. 157) focused on time allotments which allowed for continuity of training. He stated that "time allocation should allow for flexible use of time as needed to design for appropriate and necessary variety of activities."

Several strategies for the delivery of inservice education programs were identified, but apparently few were utilized in actual practice. Ingersoll (1975, p. 171) in a study of inservice practices found the most frequent activities were school or district workshops, textbook publisher's instructional programs, state and national conventions, college or university courses, building-sponsored workshops, and summer college courses or travel. Lawrence (1974,

p. 18) in his research reported the narrowness of conception of inservice in this area. He contended, "four situational designs--workshops, institutes, courses, and mini-courses--accounted for nearly all the programs reported." Arends et al. (1978, p. 199) suggested that inservice training which comes in prescribed "boxes" such as the standard college courses usually does not apply to the teachers' situations or simply duplicates their existing knowledge.

Johnson (1975, p. 76) stated that continuing staff development should take many forms to achieve the variety of different purposes in ways appropriate to the learning styles of different individuals. Wood and Thompson (1980, p. 375) insisted there should be more participant control in this area. However, in order for this to occur, Massanari (1977, p. 42) suggested more experimentation was needed with alternative modes to expose teachers to other delivery strategies.

Evaluation

Lutz (1976, pp. 45-46) suggested that evaluation of inservice education was an essential but often neglected component. The purpose of evaluation is the improvement of both the procedures and the content of inservice education according to Lawrence (1974, p. 20).

Harris (1980, pp. 299-300) emphasized a planned, systematic evaluation effort as part of any major inservice education program and suggested that efforts should be focused on the identification of strengths and weaknesses of the program. Lutz (1976, p. 46)

stressed the need to diagnose the strengths and weaknesses of students and prescribed plans of action based on the diagnosis.

The involvement of teachers in the evaluation of inservice education programs was a concern expressed by Lawrence (1974, p. 21) who found that in nearly all the studies he reviewed persons outside the school system conducted the evaluation. He stated that the value of teacher participation extended to the evaluation of programs as well.

Inservice education activities which had no feedback or continuity were of little value to teachers, according to Zigarmi et al. (1977, p. 551). In most cases activities were designed to satisfy a set amount of required inservice time.

Firth (1977, p. 22)) found that teachers judged the effectiveness of an inservice program on its success in helping them acquire better professional performance. King et al. (1977, p. 687) also contended that appropriate evaluation procedures would reveal the extent to which the participants benefited. This assessment should suggest additional or revised inservice programs.

Cross (1977) developed a set of criteria for the evaluation of inservice education programs. These were based on a model of curriculum evaluation designed by Stufflebeam, the CIPP (Context-Input-Process-Product) model. The major conclusion of this doctoral research was that appropriate criteria were available for the evaluation of inservice education of teachers.

III. MODELS OF INSERVICE EDUCATION

The literature revealed numerous models of inservice education reflecting the differing views of staff development and growth. McLaughlin and Berman (1977, p. 192) suggested, however, that two basic views underlie all models of teacher training. One, the deficit model, assumed inadequate knowledge and skill on the part of the teacher. The development programs in such a model were "top-down" implying that teachers' needs were identified by administrators and the necessary programs were prescribed by them to correct the deficits.

The model was further refined to indicate other educators--principals, school district administrators, university professors, state department officials, and legislators--operated on this set of expectations that staff development was necessary because teachers lacked the necessary skills to teach successfully. These officials reinforced their beliefs through a network of administrative regulations, credential requirements, university degree requirements and state laws. This left teachers with the impression that everyone was critical of them, and they had been excluded from any discussion of their deficit and how to carry out its removal (McLaughlin and Marsh, 1978, p. 89). Ainsworth (1976, p. 107) called attention to this issue in stating "In spite of many lofty ideals about teacher involvement, many inservice programs are planned for the teacher rather than with or by the teacher . . . ", and Bunker (1977, p. 31)

reiterated that inservice was provided to change teachers. The inference was that what one has been doing was not right and therefore must be corrected. In other words, the deficit model provided for little staff participation and was generally standardized across a school district.

On the other hand, the developmental model presented a point of view of inservice education as a process of growing and developing (McLaughlin and Berman, 1977, pp. 193-194). Teachers assumed greater responsibility for solving problems in the classroom and assumed a collaborative role with administrators for the governance of these programs. The model provided the teachers with options for training, a flexible format and on-going experiences. It also provided for the training of principals in their change from the authoritarian administrator role to that of educational leader.

Jackson (1971, p. 21) referred to these two models labeling them the "defect" approach and the "growth" approach. The defect it seemed was ignorance, arising from a lack of exposure to the latest developments of instructional techniques. Teachers had not kept up with what was going on in education. This charge implied the teacher was either professionally lazy or had attended the wrong school. The "growth" approach emphasized inservice education experiences which provided teachers with the time and tools necessary to conceptualize their experiences and to reach insights that altered perceptions of their roles and tasks.

McLaughlin and Berman (1977, p. 194) in the Rand Change-Agent study examined staff development in the context of broader changes in the schools associated with various types of federally funded projects. The implications were significant for inservice education because the study incorporated "outcome" measures which corresponded directly to anticipated results of inservice education such as changes in teacher practices and pupil growth, plus the retention of continued use of methods and materials following termination of the projects. "Process" variables such as teacher commitment and involvement, reward structures, skill training and classroom follow-up, and the role of the principal and school climate were also examined. The Rand model developed from this study followed the developmental pattern, and McLaughlin and Marsh (1978, p. 89) viewed this type of staff development or inservice education as a part of program building and as such saw it as one method of displacing the deficit-model view.

Another major study, the Kettering Foundation's Institute for the Development of Educational Activities (I/D/E/A), also developed a model as the result of a longitudinal study of the change process in selected elementary schools in Southern California (Williams, 1978, p. 97). It, too, followed the "developmental" or "growth" model and included the following components:

1. The individual school site was the focus of school renewal efforts. (Staff development meant the improvement of the staff collectively, not of individual teachers.)

2. The individual school staff was organized so that it had effective problem-solving skills. Each site had unique problems and conditions for which general solutions were inadequate.

3. School staffs needed assistance in developing problem-solving skills. (Present structure of schools was such that the individual school site did not typically behave in this way.)

4. School staffs were not sufficiently aware of the inservice activities that could be made available to them to solve their problems.

5. There was a need for a central coordinating group that could work with school staffs in helping them become more effective problem solvers and assist them in identifying resources.

Several writers presented models based on the individualized approach to inservice education (Arnold, 1973; Holly, 1977; Ingersoll, 1976; Schiffer, 1977). Just as students in the classroom possess different needs and learning styles, teachers vary in their competencies and preferences for learning experiences. Ingersoll (1976, p. 197) stressed the need to utilize teacher input to maximize the effectiveness of inservice activities.

Smyth (1980, p. 31) suggested the "clinical supervision" model as one possible method of individualizing inservice education. The various components of this approach include the preobservational conference, observation of the teacher in action, analysis of collected data, postobservational conference and postconference analysis. A basic principle of this model was the belief that improvement of instruction depends upon direct feedback to the teacher.

Meyers (1978) addressed the problem-solving issue in developing a model in cooperation with the Phi Delta Kappan Commission on Educational Personnel Renewal. This General Process Model for Inservice Education/Professional Renewal (IS/PR) identified these main components:

1. Problem awareness, identification and clarification
2. Feasibility to resolve
3. Commitment to resolve
4. Planning and program alternatives, and selecting the better alternative
5. Implementation
6. Evaluation

The author contends that this model helped create a more systematic means of developing participant-relevant professional growth experiences.

Drummond (1979, p. 39) stated: "In simple language inservice education should be managed by the people who work in the building and should deal with the individual and group problems and aspirations found there." He identified four models in classifying inservice. The provision-of-service model utilized people outside the faculty who had services or ideas wanted or needed. The job-maintenance model was classified as related to the deficit model in that those in power mandated or strongly suggested teachers submit to remediation. The personal-devleopment model allowed teachers to break out of a routine and provided situations where they would take the initiative.

The problem-solving model involved three types--type A, the outside linkage model; type B, the situational-learning model; and type C, the problem-management model. All of these types utilized problem-solving skills either with outside assistance, application of research evidence to the unique situation of a particular school, or changes in organizational relationships within a school system.

The political issue was addressed by Dale Mann (1976, p. 324) in considering inservice education programs in relation to planned change strategies. He stressed the importance of two models. The first encompassed a goal seeking model in which the impetus for change came from a desire to move to a preferred future. The second consisted of a problem-solving orientation in which dissatisfaction with a current situation prompted a definitive remedy. Mann emphasized that within these models of change was the implicit notion that those who sought to change schools must change teachers, an idea also expressed by Lutz (1976, p. 44). The failure of many change efforts of the 1960's demonstrated the process of changing was close to the process of politics--fundamental values and power structures were involved. These efforts failed to recognize that teachers at the delivery level have a final and definitive say, and this has implications about how inservice education should be conducted.

Arends et al. (1978, pp. 201-202) addressed both individual and group development in structuring two delivery models for inservice education. The first, the linking-agent model, was devised from

an agricultural base. This model employed inservice agents who linked individuals and school clients to resources and practices developed and validated by others. The agents traveled to the schools, helped clients identify their needs, and assisted in providing research-validated solutions. Unlike current inservice delivery models, this one took the service to the client. The second model was borrowed from business and industry and followed the organizational development (OD) concept. The authors stated that in many school improvement efforts, the common strategy was to begin specifying inservice training that presumably would change the individual educator. However, research findings indicated that schools should be developed as organizations. Instead of trying to improve isolated components, training and development efforts must be directed toward helping people in schools come together and use resources they already possess in more effective ways.

Howey and Joyce (1978, p. 207) pointed to a National Education Association survey to substantiate the fact that more teachers than ever were dissatisfied with their roles and responsibilities in inservice education. They contended that well-intentioned efforts such as "needs assessment" and "on-site" training have not adequately addressed the problem. Major changes were needed in the organizational structure of the schools. Their model included two main objectives. The first was a more realistic conceptualization of the teacher's role in inservice education. The second related to structural-organizational changes in schools which go beyond those

identified by needs assessment surveys. The problem lies not so much with individual teachers but in many situations in the operation of the schools.

Joyce and others (1976, pp. 19-21) proposed that future models of inservice education should take into account four dimensions of structure--the governance system, the substantive system, the delivery system and the modal system. The governance system contained the decision-making structures which legitimized and governed activities. The substantive system was composed of content and process variables which examined what was learned and how it was learned. The delivery system contained incentives, plus the interactions between trainees, trainers, and training. Staff motivation, access, and relevance to the individual were included. The modal system consisted of the forms or formats of inservice experiences.

Cruickshank, Lorish and Thompson (1979, pp. 30-31) developed a model based on teaching research which included four classes of variables. Recognizing the organizational component, they conceded that inservice education programs occurred in the sociopolitical context of a school system. This model acknowledged that inservice education probably was affected not only by the social dynamics of teachers as a learning group but also by the political forces surrounding the why, what, and when of inservice programs. Presage variables included characteristics of inservice leaders such as experience, knowledge, and attitudes. Context variables accounted

for the characteristics of teacher participants, school and community setting, and the learning group climate. Process variables referred to the actual instructional activities--lectures, discussions, and simulations. Product variables referred to the long- and short-term effects of the three previous variables. The interrelationships of these variables must be considered in relation to changes which occur over time within school systems.

Along this same line John Lutz (1976) developed an inservice education model based on a systems approach. Recognizing that the teacher is the crucial agent in instructional improvement, training programs must involve constructs from learning theory, psychology, subject matter specialities, management and information systems, training and implementation systems, as well as evaluation and feedback systems. The involvement of these many areas would require a continuous coordinating and monitoring function during program construction.

The most extensive treatment of inservice education models was provided by William Beck (1978, pp. 7-8). He contended there are three basic ways to establish goals for inservice education:

1. The individual teacher established the goals.
2. Goals are established by person other than teachers.
3. Goals are established cooperatively by teachers and others.

Likewise, there are three basic ways to establish means for meeting goals:

1. Means are directed by the individual teacher.
2. Means are directed by others.
3. Means are directed cooperatively.

The nine typologies representing the possible combinations of one way to establish goals and one way to establish means were used to characterize various existing models of inservice education.

IV. SUMMARY OF SUCCESSFUL INSERVICE EDUCATION PRACTICES

An attempt to identify successful practices in inservice education must begin with the recognition of two underlying factors which have been substantially supported by research. First, most current inservice practices have been developed outside the context of any conceptual model. Secondly, a practice may be successful in certain situations but not in others. Therefore, the inservice education practices identified in this section must be viewed as generally successful but subject to limitations that might be imposed by certain situations.

For the present study inservice education was considered to include the components of purposes, planning, methods, implementation and evaluation. The successful practices identified in the review of literature are summarized according to this classification.

Many researchers identified the overall purpose of inservice education as the improvement of instruction or performance of instructional staff; however, research was lacking to support a particular purpose of inservice education as more successful than any other.

Most models (Rand, Lawrence, I/D/E/A) supported the concept that inservice education was more successful when it met both personal and organizational needs.

Collaborative planning between teachers and administrators contributed to the success of inservice education. Such a pattern of planning was more effective than planning by administrators or teachers only.

Research has also identified certain methods associated with successful inservice education programs. Individualized programs were more likely to produce desired results than those with universal activities. Programs in which teachers participated in all phases of the program had a greater success rate than those where outside personnel were in charge. Programs emphasizing demonstrations, trials, and feedback were more effective in problem solving than merely absorbing ideas for future use. Lastly, while school-based and college-based programs were both effective to a certain extent, school-based programs were more successful in changing attitudes and behaviors, thus resulting in permanent changes in instructional programs.

Successful implementation of inservice education programs was clearly related to a broad view of the process. A variety of options and a flexible program that was adaptive to different learner needs should be available. Linkage and coordination with outside agencies were other critical elements of implementation.

Inservice education was more effective when integrated with curriculum development and administrative reform. Organizational factors at the school site also critically influenced professional learning.

The research on effective inservice education evaluation was limited. One explanation has been offered that: "School behavior is too complex to reasonably evaluate and our aim should be to formulate rather than test hypothesis" (McLaughlin and Berman, 1978, p. 8). School site characteristics were important determiners of successful inservice education and the need existed to evaluate their effect. Charters and Jones (1973, p. 7) commented that we often measure the effects of "non-events." However, Light (1975) developed and tested a formative model for the evaluation of teacher inservice education programs relative to the instructional behavior of teachers in the classroom. He concluded that an analysis of results based on actual behavior provided feedback to the stated objectives to determine the value of the inservice education program for purposes of modification or revision of the program objectives.

Several researchers have determined that reducing the use and threat of external judgments increased inservice education effectiveness (Goodlad, 1975; Mann, 1976; McLaughlin & Berman, 1977). By separating the training and evaluation functions, the evaluation component could focus on strengths and growth, and uncover next steps.

The credible independent evaluation of individual progress at relatively infrequent intervals by people outside the teachers' school-based chain of command, and unrelated to the teachers' official permanent-record performance evaluation was most often preferred by teachers and administrators. Wilen and Kindsvatter (1978) also associated immediate, objective-based evaluation with highly successful inservice education.

CHAPTER III

PRESENTATION OF DATA AND FINDINGS

I. INTRODUCTION

This chapter includes a presentation of data and the findings of the study. A summary of the demographic information is followed by a separate section for each of the inservice education components of purposes, planning, methods, implementation and evaluation. The "support" and "success" of inservice education are discussed in the next two sections. Finally, the findings are presented according to the research questions which provided the basis for the study.

The intent of the study was to investigate the nature of inservice education in Tennessee as perceived by principals, supervisors and superintendents. The data collected were to become part of a base of information for decision making relative to the present state of and future directions for improving inservice education in Tennessee.

A random sample of 317 schools was drawn from those listed in the 1980-1981 Directory of Public Schools prepared by the State Department of Education, and administrators from these schools were surveyed with a questionnaire which was designed to determine their perceptions of inservice education. The Plan for Inservice Training forms for these 112 school systems were also examined in the study.

The administrators were requested to respond to a Likert-type scale for their perceptions of the school systems' support of inservice

education and the success of these programs. For the various components of inservice education, they were asked to rank various items for each component as to their perception of the frequency of occurrence and the desirability of each item. Since a substantial number of respondents did not rank the items, the analysis was limited to a classification of "high," "neutral" and "low" ratings. Results for the "high" and "low" responses were reported as frequencies and percents.

The chi-square test was utilized to determine significant relationships between the perceptions of administrators and the demographic variables of grade level assignment, size of school system, years of experience in education and level of training. In order to meet the requirements for the chi-square test, the various responses for grade level assignment, years of experience and level of training had to be collapsed into new categories. The chi-square analysis was based on all three ratings of "high," "neutral" and "low" in order to utilize all different responses.

Since the number of returned questionnaires was less than two-thirds of the sample, the findings of the study cannot be generalized to the total population of administrators in the State of Tennessee. In fact, generalizations to the total sample of administrators would be questionable; therefore, the findings should be interpreted as applicable to the group of administrators who responded to the survey.

Table I includes the number and percent of returned and usable responses from the three groups of administrators. Questionnaires

TABLE I

NUMBER AND PERCENT OF RETURNED AND USABLE RESPONSES OF ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Group	Sample Size	Number Returned	Percent Returned
Principals	317	172	54.3
Supervisors	286	213	74.5
Superintendents	112	47	42.0
Total	715	432	60.4

were mailed to the principals in the random sample of 317 schools in addition to the instructional supervisors and superintendents of the districts in which the schools were located.

The grade level assignments of the responders are indicated in Table II. One hundred forty-nine respondents (34.5 percent) listed their assignment as elementary school; 43 (10.0 percent) listed their level as middle or junior high; and 29 (6.7 percent) indicated that they were assigned to the senior high level. The balance of the respondents, 211 (48.8 percent), classified their grade level assignment as kindergarten through eighth grade, kindergarten through twelfth grade, or something other than the available categories.

Table III includes the size of the school system in which the respondents were employed. One hundred fifty-six (36.1 percent) were employed in systems with less than 5,000 students; 130 (30.1 percent) were in school systems with 5,000-10,000 students; and 139 (32.2 percent) were employed in systems with student enrollment over 10,000. Seven respondents did not indicate their school system size.

Table IV includes the years of experience in education of the respondents. Twelve (2.8 percent) had worked from 0 to 7 years; 52 (12.0 percent) had worked 8 to 12 years; 130 (30.1 percent) had worked from 13 to 20 years; and 238 (55.1 percent) had worked in excess of 20 years.

Respondents' degree levels are shown in Table V. Twenty-four (5.6 percent) had a Bachelors degree or less; 181 (41.9 percent) held the Masters degree; and 223 (51.6 percent) were at the Specialist,

TABLE II

GRADE LEVEL ASSIGNMENT OF ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Grade Level	Frequency	Percent
Elementary	149	34.5
Middle-Junior High	43	10.0
Senior High	29	6.7
K-8, K-12, Other	211	48.8

TABLE III

SIZE OF THE SCHOOL SYSTEM IN WHICH ADMINISTRATORS ARE EMPLOYED IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Size of School	Frequency	Percent
Less than 5,000 students	156	36.1
5,000-10,000 students	130	30.1
More than 10,000 students	139	32.2
Not indicated	7	32.2

TABLE IV

YEARS OF EXPERIENCE IN EDUCATION OF ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Years	Frequency	Percent
0-7	12	2.8
8-12	52	12.0
13-20	130	30.1
20+	238	55.1

TABLE V

DEGREE LEVEL OF ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Degree	Frequency	Percent
Bachelors Degree or Less	24	5.6
Masters Degree	181	41.9
Specialist, M.S. + 45, Doctorate	223	51.6
Not indicated	4	0.9

Masters plus 45 or doctoral level. Four respondents did not indicate their degree level.

II. PURPOSES OF INSERVICE EDUCATION

Plan for Inservice Training

Table VI includes the data secured in the examination of the Plan for Inservice Training documents submitted by the 112 school systems determined in the random sample of schools. The priorities listed by the staff of the various systems were categorized according to the purpose of inservice education implied by each priority. Twenty-six (4.3 percent) dealt with improving performance; 378 (62.9 percent) addressed general professional improvement; 16 (2.7 percent) related to personal development; 181 (30.1 percent) involved organizational development; and no priorities were listed to extend certification.

Questionnaire

Respondents to the questionnaire rated the purposes according to their perceptions of the frequency of occurrence and the desirability of each. The purposes were presented in the form of vignettes, and the following interpretations were assigned to them.

Item A--inservice education should develop more positive self-concepts--referred to personal development.

Item B--inservice education should help meet certification requirements--represented the purpose to extend certification.

TABLE VI

PURPOSE OF INSERVICE EDUCATION AS DETERMINED BY PRIORITIES* LISTED IN THE PLAN FOR INSERVICE TRAINING BY TENNESSEE SCHOOL SYSTEMS IN THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Purposes	Frequency	Percent
Improving Performance	26	4.3
Improve Professionally	378	62.9
Personal Development	16	2.7
Organizational Development	181	30.1
Extend Certification		

*A School system could list several priorities.

Item C--inservice education should develop positive faculty relationships--focused on one component of organizational development.

Item D--inservice education should improve student performance--represented the ultimate purpose of the improvement of instruction.

Item E--inservice education should improve teaching performance--referred to improvement of classroom performance.

Item F--inservice education should broaden professional competencies--represented the purpose of improving professionally.

Item G--inservice education should meet State Department requirements only--referred to the 10 day minimum mandated by the State of Tennessee Department of Education.

Table VII contains the data for administrators' perceptions of the purposes of inservice education. A total of 249 (57.6 percent) rated "improvement of classroom performance" high in frequency of occurrence as a purpose of inservice education, while 34 (7.9 percent) rated it low. A total of 363 (84.0 percent) rated "improvement of classroom performance" high in desirability as a purpose of inservice education, while 10 (2.3 percent) rated it low.

A total of 215 (49.8 percent) rated "improve professionally" high in frequency of occurrence as a purpose of inservice education, while 39 (9.0 percent) rated it low. A total of 316 (73.1 percent) rated "improve professionally" high in desirability as a purpose of inservice education, while 20 (4.6 percent) rated it low.

A total of 118 (27.3 percent) rated "organizational development" high in frequency of occurrence as a purpose of inservice education,

TABLE VII

PURPOSES OF INSERVICE EDUCATION PROGRAMS AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Purposes	Frequency of Occurrence				Desirability			
	High		Low		High		Low	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Personal Development	105	24.3	80	18.5	200	46.3	38	8.8
Extend Certification	42	9.7	235	54.4	81	18.8	235	54.4
Organizational Development	118	27.3	54	12.5	198	45.8	31	7.2
Improvement of Instruction (Improve student performance)	98	22.7	74	17.1	184	42.6	51	11.8
Improve Performance (Improve classroom performance)	249	57.6	34	7.9	363	84.0	10	2.3
Improve Professionally (Broader professional competencies)	215	49.8	39	9.0	316	73.1	20	4.6
Meet State Department Requirements Only	113	26.2	194	44.9	32	7.4	318	73.6

while 54 (12.5 percent) rated it low. A total of 198 (45.8 percent) rated "organizational development" high in desirability as a purpose of inservice education, while 31 (7.2 percent) rated it low.

A total of 113 (26.2 percent) rated "meeting State Department requirements" high in frequency of occurrence as a purpose of inservice education, while 194 (44.9 percent) rated it low. A total of 32 (7.4 percent) rated "meeting State Department requirements" high in desirability as a purpose of inservice education, while 318 (73.6 percent) rated it low.

A total of 105 (24.3 percent) rated "personal development" high in frequency of occurrence as a purpose of inservice education, while 80 (18.5 percent) rated it low. A total of 200 (46.3 percent) rated "personal development" high in desirability as a purpose of inservice education, while 38 (8.8 percent) rated it low.

A total of 98 (22.7 percent) rated "improvement of instruction" high in frequency of occurrence as a purpose of inservice education, while 74 (17.1 percent) rated it low. A total of 184 (42.6 percent) rated "improvmeent of instruction" high in desirability as a purpose of inservice education, while 51 (11.8 percent) rated it low.

A total of 42 (9.7 percent) rated "extended certification" high in frequency of occurrence as a purpose of inservice education, while 235 (54.4 percent) rated it low. A total of 81 (18.8 percent) rated "extended certification" high in desirability as a purpose of inservice education, while 235 (54.4 percent) rated it low.

Chi-Square Tests of the Purposes of Inservice Education

Table VIII includes the chi-square tests of the purposes of inservice education based on frequency of occurrence. The test was used to determine if there was a significant relationship between the perceptions of administrators and the demographic variables of grade level assignment, school system wide, years of experience, and degree level.

The test based on frequency of occurrence revealed a significant relationship between the perceptions of principals and supervisors and grade level assignment relative to the purpose "improve classroom performance" (X^2 = 13.491; df = 6; P = 0.0359). A significant relationship was found between administrators perceptions and degree level relative to the purpose "meet State Department requirements" (X^2 = 14.104; df = 4; p = 0.0070).

Table IX includes the chi-square tests of the purposes of inservice education based on desirability. Significant relationships were found between the perceptions of principals and supervisors and grade level assignment relative to the purposes "extend certification" (X^2 = 14.610; df = 6; p = 0.0235) and "improvement of instruction" (X^2 = 14.530; df = 6; p = 0.0242).

Significant relationships were found between the perceptions of administrators and degree level relative to the purposes "extend certification" (X^2= 14.608; df = 4; p = 0.0056), "organizational development" (X^2 = 12.448; df = 4; p = 0.0143), and "improve performance" (X^2 = 13.645; df = 4; p = 0.0085), and "improve professionally" (X^2 = 16.023; df = 4; p = 0.0030).

TABLE VIII

CHI-SQUARE OF THE PURPOSES OF INSERVICE EDUCATION PROGRAMS BASED ON FREQUENCY OF OCCURRENCE AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Purpose	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Personal Development	3.864(6)	1.684(4)	8.348(6)	2.117(4)
Extend Certification	9.203(6)	2.251(4)	2.981(6)	3.501(4)
Organizational Development	3.142(6)	1.363(4)	8.544(6)	2.182(4)
Improvement of Instruction (Improve Student Performance)	8.344(6)	0.570(4)	9.329(6)	2.310(4)
Improve Performance (Improve Classroom Instruction)	13.491(6)*	2.044(4)	1.539(6)	1.770(4)
Improve Professionally (Broaden Professional Competencies)	0.797(6)	0.763(4)	12.174(6)	4.670(4)
Meet State Department Requirements Only	9.247(6)	5.860(4)	8.234(6)	14.104(4)*

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

TABLE IX

CHI-SQUARE OF THE PURPOSES OF INSERVICE EDUCATION PROGRAMS BASED ON DESIRABILITY AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Purpose	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Personal Development	8.812(6)	4.281(4)	8.637(6)	2.907(4)
Extend Certification	14.610(6)*	1.283(4)	6.146(6)	14.608(4)*
Organizational Development	9.065(6)	4.078(4)	5.684(6)	12.448(4)*
Improvement of Instruction (Improve Student Performance)	14.530(6)*	3.208(4)	2.819(6)	2.068(4)
Improve Performance (Improve Classroom Performance)	2.069(6)	3.337(4)	1.982(6)	13.645(4)*
Improve Professionally (Broaden Professional Competencies)	6.126(6)	4.991(4)	4.353(6)	16.023(4)*
Meet State Department Requirements Only	11.088(6)	3.995(4)	12.355(6)	8.104(4)

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

Summary

Tables VI and VII (pages 63 and 65) include the results of the state plans and administrators' perceptions of the purposes of inservice education based on frequency of occurrence and desirability. The results of the chi-square tests which determined significant relationships between the perceptions and the demographic variables are reported in Tables VIII and IX (pages 68 and 69).

Over one-half of the priorities listed in the Plan for Inservice Training related to the purpose "improve professionally." The purpose "organizational development" accounted for most of the rest. No priority listed was related to the purpose "extend certification."

Except for the purpose "meet State Department requirements" administrators rated each purpose of inservice education higher in desirability than in frequency of occurrence. More than one-half of the administrators rated "improve classroom performance" high in frequency of occurrence, and almost one-half rated "improve professionally" high in frequency of occurrence. A majority of administrators perceived "improve classroom performance" and "improve professionally" high in desirability. "Extend certification" and "meet State Department requirements" were rated low in desirability by a majority of administrators.

In the chi-square analysis based on frequency of occurrence, a significant relationship was found between the perceptions of principals and supervisors and the level of assignment relative to the

purpose "improve classroom performance." A significant relationship was also found between the perceptions of administrators and degree level relative to the purpose "meet State Department requirements."

In the chi-square analysis based on desirability, a significant relationship was found between the perceptions of principals and supervisors and grade level assignment relative to the purposes "extend certification" and "improvement of instruction." A significant relationship was also found between the perceptions of administrators and degree level relative to the purposes "extend certification" "organizational development," "improve classroom performance" and "improve professionally."

III. PLANNING OF INSERVICE EDUCATION

This section includes the data which related to administrators' perceptions of the planning of inservice education based on the frequency of occurrence and desirability. Planning patterns in the questionnaire were also presented in the form of vignettes. The following interpretations were assigned to the four patterns.

Items A and D--represented collaborative planning; one between faculty and outside consultants and the other between faculty members only.

Item B--school faculties should plan their own inservice education--represented a grass-roots approach to planning with teacher control.

Item C--the staff of a center should plan for the school--referred to a top-down pattern of planning, with administrators acting as the decision makers.

Table X contains the data relative to perceptions of the planning of inservice education. A total of 163 (37.7 percent) rated the "grass-roots" approach with teacher control high in frequency of occurrence as a planning pattern of inservice education while 42 (47.9 percent) rated it low. A total of 192 (44.4 percent) rated the "grass-roots" approach high in desirability as a planning pattern of inservice education while 47 (10.9 percent) rated it low.

A total of 135 (31.3 percent) rated "collaborative planning between faculty members only" high in frequency of occurrence as a planning pattern of inservice education while 59 (13.7 percent) rated it low. A total of 207 (47.7 percent) rated "collaborative planning between faculty members only" high in desirability as a planning pattern of inservice education while 38 (8.8 percent) rated it low.

A total of 36 (8.3 percent) rated the "top-down" approach with administrator control high in frequency of occurrence as a planning pattern of inservice education while 156 (36.1 percent) rated it low. A total of 52 (12.0 percent) rated the "top-down" approach high in desirability as a planning pattern of inservice education while 150 (34.7 percent) rated it low.

A total of 35 (8.1 percent) rated "collaborative planning between faculty and outside consultants" high in frequency of occurrence as a planning pattern of inservice education, while 205

TABLE X

PLANNING OF INSERVICE EDUCATION PROGRAMS AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Planning Patterns	Frequency of Occurrence				Desirability			
	High		Low		High		Low	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Collaborative (Faculty and consultants)	35	8.1	205	47.5	42	9.7	218	50.5
Grass-Roots	163	37.7	42	9.7	192	44.4	47	10.9
Top-Down	36	8.3	156	36.1	52	12.0	150	34.7
Collaborative (Faculty only)	135	31.3	59	13.7	207	47.9	38	8.8

rated it low. A total of 42 (9.7 percent) rated "collaborative planning between faculty and outside consultants" high in desirability as a planning pattern of inservice education, while 218 (50.5 percent) rated it low.

Chi-Square Tests of the Planning of Inservice Education Programs

Table XI contains the chi-square tests of the planning of inservice education based on frequency of occurrence. The chi-square test was used to determine if there was a significant relationship between the perceptions of administrators and grade level assignment, school system size, years of experience, and degree level.

There was a significant relationship between the perceptions of principals and supervisors and grade level assignment relative to the planning pattern "collaborative planning between faculty members only" ($X^2 = 13.209$; $df = 6$; and $p = 0.0398$). A significant relationship also existed between the perceptions of administrators and school system size relative to "collaborative planning between faculty and outside consultants" ($X^2 = 17.621$; $df = 4$; $p = 0.0015$).

Table XII contains the chi-square tests of the planning of inservice education based on desirability. There was a significant relationship between the perceptions of principals and supervisors and grade level assignment relative to the "top-down" planning pattern ($X^2 = 16.437$; $df = 6$; $p = 0.0116$). A significant relationship was found between the perceptions of administrators and years of experience relative to "collaborative planning between faculty and

TABLE XI

CHI-SQUARE OF THE PLANNING OF INSERVICE EDUCATION PROGRAMS BASED ON FREQUENCY OF OCCURRENCE AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Planning Patterns	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Collaborative (Faculty and Consultants)	8.106(6)	17.621(4)*	5.618(6)	2.545(4)
Grass-Roots	8.567(6)	1.680(4)	9.121(6)	4.408(4)
Top-Down	7.184(6)	5.865(4)	9.274(6)	4.093(4)
Collaborative (Faculty Only)	13.209(6)*	2.353(4)	5.126(6)	5.941(4)

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

TABLE XII

CHI-SQUARE OF THE PLANNING OF INSERVICE EDUCATION PROGRAMS BASED ON DESIRABILITY AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Planning Patterns	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Collaborative (Faculty and Consultants)	8.963(6)	8.935(4)	16.838(6)*	7.319(4)
Grass-Roots	11.956(6)	5.413(4)	23.166(6)*	3.365(4)
Top-Down	16.437(6)*	7.582(4)	7.869(6)	4.202(4)
Collaborative (Faculty Only)	6.428(6)	5.064(4)	2.348(6)	3.073(4)

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

outside consultants" (X^2 = 16.838; df = 6; p = 0.0099) and the "grass-roots" pattern of planning (X^2 = 23.166; df = 6; p = 0.007).

Summary

Table X (page 73) contains data relative to administrators' perceptions of the planning patterns of inservice education based on frequency of occurrence and desirability. The results of the chi-square tests which determined significant relationships between the demographic variables and perceptions of the planning of inservice education are reported in Tables XI and XII (pages 75 and 76).

Administrators rated each planning pattern of inservice education higher in desirability than in frequency of occurrence. More than one-third of the respondents rated "grass-roots" planning high in frequency of occurrence, and almost one-third rated "collaborative planning between faculty members only" high in frequency of occurrence. Nearly one-half of the administrators rated "collaborative planning between faculty and outside consultants" low in frequency of occurrence. Approximately one-half rated "collaborative planning between faculty members only" high in desirability, and a comparable number rated "grass-roots" high in desirability. More than half of the administrators rated "collaborative planning between faculty and outside consultants" low in desirability while more than one-third rated "top-down" low in desirability.

In the chi-square analysis based on frequency of occurrence, a significant relationship was found between perceptions and grade level

assignment relative to "collaborative planning between faculty members only" and between perceptions and school system size and "collaborative planning between faculty and outside consultants." When based on desirability, the chi-square test revealed a significant relationship between the perceptions of administrators and years of experience relative to "collaborative planning between faculty and outside consultans" and "grass-roots" planning patterns. A significant relationship between the perceptions of principals and supervisors and grade level assignment was found relative to the "top-down" planning pattern.

IV. METHODS OF INSERVICE EDUCATION

Methods of inservice education were analyzed under the headings of format, session leaders and instructional techniques. Administrators' perceptions of the methods of inservice education are reported in Table XIII.

A total of 159 (36.8 percent) rated a "system-wide or multi-system" approach high in frequency of occurrence as a format of inservice education, while 79 (18.3 percent) rated it low. A total of 93 (21.5 percent) rated a "system-wide or multi-system" approach high in desirability as a format, while 168 (38.9 percent) rated it low.

A total of 139 (32.2 percent) rated the "small group" approach high in frequency of occurrence as a format of inservice education, while 30 (6.9 percent) rated it low. A total of 204 (47.2 percent)

TABLE XIII

METHODS OF INSERVICE EDUCATION PROGRAMS AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Methods	Frequency of Occurrence				Desirability			
	High		Low		High		Low	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Format								
Individualized	50	11.6	206	47.7	104	24.1	130	30.1
Small Group	139	32.2	30	6.9	204	47.2	19	4.4
Total Faculty	114	26.4	47	10.9	103	23.8	41	9.5
System-Wide or Multi-System	159	36.8	79	18.3	93	21.5	168	38.9
Session Leaders								
Other Teachers in the School	106	24.5	66	15.3	211	48.8	28	6.5
College Personnel, Teachers or Consultants Outside the System	127	29.4	76	17.6	109	25.2	73	16.9
Building Level or Central Office Personnel	128	29.6	25	5.8	89	20.6	53	12.3
You As Leader	56	13.0	167	38.7	32	7.4	183	42.4
Instructional Techniques								
Lecture	228	52.8	108	25.0	68	15.7	268	62.0
Discussion	301	69.7	37	8.6	227	52.5	86	19.9
Self-Instructional Modules or Professional Reading	65	15.0	223	51.6	105	24.3	202	46.8
Simulation, Including Presentation, Modeling, Practice, and Feedback	158	36.6	129	29.9	317	73.4	51	11.8
Direct Classroom Assistance When Applying New Skills	112	25.9	219	50.7	303	70.1	52	12.0

rated the "small group" approach high in desirability as a format, while 19 (4.4 percent) rated it low.

A total of 114 (26.4 percent) rated the "total faculty" approach high in frequency of occurrence as a format of inservice education, while 47 (10.9 percent) rated it low. A total of 103 (23.8 percent) rated the total faculty approach high in desirability as a format, while 41 (9.5 percent) rated it low.

A total of 50 (11.6 percent) rated an "individualized" approach high in frequency of occurrence as a format of inservice education, while 206 (47.7 percent) rated it low. A total of 104 (24.1 percent) rated an "individualized" approach high in desirability as a format, while 130 (30.1 percent) rated it low.

A total of 128 (29.6 percent) rated "building level or central office personnel" high in frequency of occurrence as session leaders of inservice education, while 25 (5.8 percent) indicated a low rating. A total of 89 (20.6 percent) rated "building level or central office personnel" high in desirability as session leaders, while 53 (12.3 percent) indicated a low rating.

A total of 127 (29.4 percent) rated "college personnel, teachers, or consultants outside the school system" high in frequency of occurrence as session leaders of inservice education, while 76 (17.6 percent) indicated a low rating. A total of 109 (25.2 percent) rated "college personnel, teachers or consultants outside the school system" high in desirability as session leaders, while 73 (16.9 percent) indicated a low rating.

A total of 106 (24.5 percent) rated the use of "other teachers in the school" as session leaders high in frequency of occurrence, while 66 (15.3 percent) indicated a low rating. A total of 211 (48.8 percent) rated the "use of other teachers in the school" high in desirability as session leaders, while 28 (6.5 percent) indicated a low rating.

A total of 56 (13.0 percent) rated "you as leader" high in frequency of occurrence as session leaders of inservice education, while 167 (38.7 percent) indicated a low rating. A total of 32 (7.4 percent) rated "you as leader" high in desirability as session leaders, while 183 (42.4 percent) indicated a low rating.

A total of 301 (69.7 percent) rated "discussion" high in frequency of occurrence as an instructional technique of inservice education, while 37 (8.6 percent) indicated a low rating. A total of 227 (52.5 percent) rated "discussion" high in desirability as an instructional technique, while 86 (19.9 percent) indicated a low rating.

A total of 228 (52.8 percent) rated "lecture" high in frequency of occurrence as an instructional technique of inservice education, while 108 (25.0 percent) indicated a low rating. A total of 68 (15.7 percent) rated "lecture" high in desirability as an instructional technique, while 268 (62.0 percent) indicated a low rating.

A total of 158 (36.6 percent) rated "simulation" high in frequency of occurrence as an instructional technique of inservice education, while 129 (29.9 percent) indicated a low rating. A total

of 317 (73.4 percent) rated "simulation" high in desirability as an instructional technique, while 51 (11.8 percent) indicated a low rating.

A total of 112 (25.9 percent) rated "direct classroom assistance when applying skills" high in frequency of occurrence as an instructional technique of inservice education, while 219 (50.7 percent) indicated a low rating. A total of 303 (70.1 percent) rated "direct classroom assistance when applying skills" high in desirability as an instructional technique, while 52 (12.0 percent) indicated a low rating.

A total of 65 (15.0 percent) rated "self-instructional modules or professional reading" high in frequency of occurrence as an instructional technique of inservice education, while 223 (51.6 percent) indicated a low rating. A total of 105 (24.3 percent) rated "self-instructional modules or professional reading" high in desirability as an instructional technique, while 202 (46.8 percent) indicated a low rating.

Chi-Square Tests of the Methods of Inservice Education Programs

Table XIV contains the chi-square tests of the methods of inservice education based on frequency of occurrence. The chi-square test was used to determine if there was a significant relationship between administrators' perceptions and grade level assignment, school system size, years of experience, and degree level.

There was a significant relationship between the perceptions of principals and supervisors and grade level assignment relative to the instructional techniques "discussion" ($X^2 = 16.286$; $df = 6$; $p = 0.0123$)

TABLE XIV

CHI-SQUARE OF THE METHODS OF INSERVICE EDUCATION PROGRAMS BASED ON FREQUENCY OF OCCURRENCE AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Methods	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Format				
Individualized	4.643(6)	4.106(4)	3.747(6)	1.180(4)
Small Group	6.477(6)	22.831(4)*	5.098(6)	3.744(4)
Total Faculty	9.844(6)	5.119(4)	1.422(6)	2.769(4)
System-Wide or Multi-System	3.198(6)	5.795(4)	6.077(6)	3.349(4)
Session Leaders				
Other Teachers in the School	2.197(6)	8.524(4)	7.530(6)	0.845(4)
College Personnel, Teachers or Consultants Outside the System	2.110(6)	9.869(4)*	6.375(6)	4.793(4)
Building Level or Central Office Personnel	2.501(6)	18.830(4)*	12.992(6)*	6.528(4)
You as Leader	2.503(6)	2.944(4)	8.787(6)	4.371(4)
Instructional Techniques				
Lecture	4.725(6)	6.376(4)	2.617(6)	5.818(4)
Discussion	16.286(6)*	1.999(4)	12.293(6)	4.750(4)
Self-Instructional Modules or Professional Reading	6.904(6)	2.917(4)	5.748(6)	6.435(4)
Simulation, Including Presentation, Modeling, Practice, and Feedback	14.568(6)*	2.711(4)	2.154(6)	3.396(4)
Direct Classroom Assistance When Applying New Skills	3.529(6)	2.244(4)	17.091(6)*	4.353(4)

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

and "simulation" (X^2 = 14.568; df = 6; p = 0.239). A significant relationship also existed between administrators' perceptions and school system size relative to the possible session leaders "college personnel, teachers or consultants outside the system" (X^2 = 9.869; df = 4; p = 0.0427) and "building level or central office personnel" (X^2 = 18.830; df = 4; p = 0.0008). A significant relationship existed between perceptions and school system size relative to the format "small group" (X^2 = 22.831; df = 4; p = 0.001). A significant relationship existed between perceptions and years of experience relative to the session leader "building level or central office personnel" (X^2 = 12.992; df = 6; p = 0.0432) and the instructional technique "direct classroom assistance" (X^2 = 17.091; df = 6; p = 0.0090).

Table XV contains the chi-square tests of the methods of inservice education based on desirability. A significant relationship existed between administrators' perceptions and school system size relative to the format "small group" (X^2 = 14.148; df = 4; p = 0.0068) and the session leader "building level or central office personnel" (X^2 = 25.181; df = 4; p = 0.0000). A significant relationship existed between perceptions and years of experience relative to the format "system-wide or multi-system" (X^2 = 12.676; df = 6; p = 0.0485), the session leader "other teachers in the school" (X^2 = 21.598; df = 6; p = 0.0014), the session leader "you as leader" (X^2 = 12.611; df = 6; p = 0.0496), and the instructional technique "discussion" (X^2 = 17.818; df = 6; p = 0.0067).

TABLE XV

CHI-SQUARE OF THE METHODS OF INSERVICE EDUCATION PROGRAMS BASED ON DESIRABILITY AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Methods	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Format				
Individualized	4.068(6)	5.748(4)	3.589(6)	3.163(4)
Small Group	3.609(6)	14.148(4)*	3.248(6)	4.733(4)
Total Faculty	6.569(6)	8.124(4)	6.627(6)	1.701(4)
System-Wide or Milti-System	5.984(6)	1.973(4)	12.676(6)*	5.354(4)
Session Leaders				
Other Teachers in the School	5.451(6)	7.825(4)	21.598(6)*	1.430(4)
College Personnel, Teachers or Consultants Outside the System	2.699(6)	3.013(4)	4.097(6)	6.623(4)
Building Level or Central Office Personnel	5.679(6)	25.181(4)*	7.725(6)	4.939(4)
You As Leader	6.956(6)	4.459(4)	12.611(6)*	5.494(4)
Instructional Techniques				
Lecture	0.897(6)	5.328(4)	4.133(6)	2.972(4)
Discussion	1.352(6)	6.582(4)	17.818(6)*	3.500(4)
Self-Instructional Modules or Professional Reading	4.471(6)	4.370(4)	4.778(6)	6.435(4)
Simulation, Including Presentation, Modeling, Practice, and Feedback	1.245(6)	2.723(4)	8.693(6)	2.056(4)
Direct Classroom Assistance When Applying New Skills	2.411(6)	4.573(4)	3.891(6)	3.631(4)

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

Summary

Table XIII (page 79) contains data relative to administrators' perceptions of the methods of inservice education including various formats, session leaders, and instructional techniques, based on frequency of occurrence and desirability. The results of the chi-square tests which determined significant relationships between perceptions and the demographic variables as they related to the methods of inservice education are reported in Tables XIV and XV (pages 83 and 85).

Administrators rated the formats of inservice education--"individualized" and "small group"--higher in desirability than in frequency of occurrence. Nearly one-half of the administrators rated the "individualized" format low in frequency of occurrence, and a comparable number rated "small group" high in desirability. About one-third rated the "individualized" format low in desirability, and more than one-third rated "system-wide or multi-system" low in desirability.

Only one type of session leader, "other teachers in the school," was rated higher in desirability than in frequency of occurrence. It was rated high in desirability by nearly one-half of the administrators. The session leader "you as leader" was rated lower in frequency of occurrence and desirability than any other item.

The instructional techniques "lecture" and "discussion" were rated higher in frequency of occurrence than in desirability; however, the difference was much larger for "lecture" than "discussion." Over one-half of the administrators rated "discussion" high in desirability, and over one-third rated it high in frequency of occurrence. The

"lecture" was rated low in desirability by a majority of the group. The techniques "simulation" and "direct classroom assistance when applying new skills" were rated high in desirability by nearly three-fourths of the administrators. The technique "self-instructional modules or professional reading" was rated about equally as low in frequency of occurrence and desirability.

In the chi-square analysis of inservice education methods based on frequency of occurrence, significant relationships between the perceptions of administrators and school system size were found relative to the format "small group," the session leader "college personnel, teachers or consultants outside the system" and the "building level or central office personnel" leader. When years of experience was considered, significant relationships were found relative to "building level or central office personnel" session leader and the instructional technique "direct classroom assistance when applying new skills."

When based on desirability, the chi-square analysis revealed significant relationships between the perceptions of administrators and school system size relative to the "small group" format and the "building level or central office personnel" session leader. When years of experience was considered, significant relationships were found relative to "system-wide or multi-system" format, "other teachers in the school" and "you as leader" for session leaders, and the "discussion" instructional technique.

V. IMPLEMENTATION OF INSERVICE EDUCATION

Implementation of inservice education was analyzed under the headings of scheduling and strategies. Table XVI contains data relative to administrators' perceptions of the implementation of inservice education. A total of 384 (88.9 percent) rated the "regularly scheduled inservice days paid by the state" high in frequency of occurrence, while 9 (2.1 percent) indicated a low rating. A total of 344 (79.6 percent) rated these "regularly scheduled days" high in desirability while 33 (7.6 percent) indicated a low rating.

A total of 249 (57.6 percent) rated "before and after normal school day" scheduling high in frequency of occurrence for inservice education activities, while 91 (21.1 percent) indicated a low rating. A total of 161 (37.3 percent) rated "before and after normal school day" scheduling high in desirability for inservice education activities, while 172 (39.8 percent) indicated a low rating.

A total of 71 (16.4 percent) rated "weekends or summer" scheduling high in frequency of occurrence for inservice education activities, while 210 (48.6 percent) indicated a low rating. A total of 80 (18.5 percent) rated "weekends or summer" scheduling high in desirability for inservice education activities, while 242 (56.0 percent) indicated a low rating.

A total of 53 (12.3 percent) rated "collegial, ongoing, everyday" scheduling high in frequency of occurrence for inservice education activities, while 249 (57.6 percent) indicated a low rating. A total

TABLE XVI

IMPLEMENTATION OF INSERVICE EDUCATION PROGRAMS AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Implementation	Frequency of Occurrence				Desirability			
	High		Low		High		Low	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Scheduling								
Regularly Scheduled Days Paid by the State	384	88.9	9	2.1	344	79.6	33	7.6
Before and After Normal School Day	249	57.6	91	21.1	161	37.3	172	39.8
Weekends or Summer	71	16.4	210	48.6	80	18.5	242	56.0
Release Time During School Day	33	7.6	268	62.0	160	37.0	181	41.9
Collegial, Ongoing, Everyday	53	12.3	249	57.6	144	33.3	180	41.7
Strategies								
Workshops	348	80.6	15	3.5	345	79.9	13	3.0
Conferences	288	66.7	23	5.3	271	62.7	37	8.6
Conventions	80	18.5	145	33.6	106	24.5	169	39.1
Interschool Visits	91	21.1	133	30.8	200	46.3	57	13.2
Intraschool Visits	82	19.0	152	35.2	178	41.2	83	19.2
College/University Courses	120	27.8	121	28.0	129	29.9	132	30.6
Committee Work	194	44.9	58	13.4	184	42.6	77	17.8
Internships	38	8.8	208	48.1	114	26.4	177	41.0
Individualized, Self-determined	124	28.7	133	30.8	189	43.8	105	24.3

of 144 (33.3 percent) rated "collegial, ongoing, everyday" scheduling high in desirability for inservice education activities, while 180 (41.7 percent) indicated a low rating.

A total of 33 (7.6 percent) rated "released time" during the school day high in frequency of occurrence for inservice education activities, while 268 (62.0 percent) indicated a low rating. A total of 160 (37.0 percent) rated "release time" during the school day high in desirability for inservice education activities, while 181 (41.9 percent) indicated a low rating.

A total of 348 (80.6 percent) rated "workshops" high in frequency of occurrence as a strategy of inservice education, while 15 (3.5 percent) indicated a low rating. A total of 345 (79.9 percent) rated "workshops" high in desirability as a strategy of inservice education, while 13 (3.0 percent) indicated a low rating.

A total of 288 (66.7 percent) rated "conferences" high in frequency of occurrence as a strategy of inservice education, while 23 (5.3 percent) indicated a low rating. A total of 271 (62.7 percent) rated "conferences" high in desirability as a strategy of inservice education, while 37 (8.6 percent) indicated a low rating.

A total of 194 (44.9 percent) rated "committee work" high in frequency of occurrence as a strategy of inservice education, while 58 (13.4 percent) indicated a low rating. A total of 184 (42.6 percent) rated "committee work" high in desirability as a strategy of inservice education, while 77 (17.8 percent) indicated a low rating.

A total of 124 (28.7 percent) rated "self-determined" high in frequency of occurrence as a strategy of inservice education, while 133 (30.8 percent) indicated a low rating. A total of 189 (43.8 percent) rated "self-determined" high in desirability as a strategy of inservice education, while 105 (24.3 percent) indicated a low rating.

A total of 120 (27.8 percent) rated "college or univeristy courses" high in frequency of occurrence as a strategy of inservice education, while 121 (28.0 percent) indicated a low rating. A total of 129 (29.9 percent) rated "college or university courses" high in desirability as a strategy of inservice education, while 132 (30.6 percent) indicated a low rating.

A total of 91 (21.1 percent) rated "interschool observational visits" high in frequency of occurrence as a strategy of inservice education, while 133 (30.8 percent) indicated a low rating. A total of 200 (46.3 percent) rated "interschool observational visits" high in desirability as a strategy of inservice education, while 57 (13.2 percent) indicated a low rating.

A total of 82 (19.0 percent) rated "intraschool observational visits" high in frequency of occurrence as a strategy of inservice education, while 152 (35.2 percent) indicated a low rating. A total of 178 (41.2 percent) rated "intraschool observational visits" high in desirability as a strategy of inservice education, while 83 (19.2 percent) indicated a low rating.

A total of 80 (18.5 percent) rated "state or national conventions" high in frequency of occurrence as a strategy of inservice

education, while 145 (33.6 percent) indicated a low rating. A total of 106 (24.5 percent) rated "state or national conventions" high in desirability as a strategy of inservice education, while 169 (39.1 percent) indicated a low rating.

A total of 38 (8.8 percent) rated "internships" high in frequency of occurrence as a strategy of inservice education, while 208 (48.1 percent) indicated a low rating. A total of 114 (26.4 percent) rated "internships" high in desirability as a strategy of inservice education, while 177 (41.0 percent) indicated a low rating.

Chi-Square Tests of the Implementation of Inservice Education Programs

Results of the chi-square tests of the implementation of inservice education based on frequency of occurrence are contained in Table XVII. The chi-square test was used to determine if there was a significant relationship between the responses of administrators and grade level assignment, school system size, years of experience, and degree level.

Based on frequency of occurrence there was a significant relationship between the perceptions of principals and supervisors and grade level assignment relative to the strategy "internships" ($X^2 = 14.909$; $df = 6$; $p = 0.0210$). A significant relationship also existed between administrators' perceptions and school system size relative to the strategies "conventions" ($X^2 = 10.023$; $df = 4$; $p = 0.0400$), "college or university courses" ($X^2 = 13.905$; $df = 4$; $p = 0.0308$) and "internships" ($X^2 = 13.905$; $df = 4$; $p = 0.0076$). A significant relationship existed between perceptions and years of experience

TABLE XVII

CHI-SQUARE OF THE IMPLEMENTATION OF INSERVICE EDUCATION PROGRAMS BASED ON FREQUENCY OF OCCURRENCE AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Implementation	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Scheduling				
Regularly Scheduled Days Paid by the State	4.887(6)	6.679(4)	3.306(6)	2.554(4)
Before and After Normal School Day	3.855(6)	9.389(4)	9.161(6)	2.802(4)
Weekends or Summer	3.419(6)	2.783(4)	19.452(6)*	7.557(4)
Release Time During School Day	6.704(6)	4.970(4)	5.263(6)	2.658(4)
Collegial, Ongoing, Everyday	1.908(6)	4.806(4)	4.624(6)	4.722(4)
Strategies				
Workshops	11.636(6)	9.679(4)	6.224(6)	3.288(4)
Conferences	12.279(6)	6.889(4)	5.757(6)	3.858(4)
Conventions	2.607(6)	10.023(4)*	8.469(6)	4.648(4)
Interschool Visits	2.697(6)	1.764(4)	13.854(6)*	7.857(4)
Intraschool Visits	4.552(6)	3.898(4)	11.448(6)	1.022(4)
College/University Courses	6.438(6)	10.651(4)*	6.686(6)	0.413(4)
Committee Work	3.470(6)	3.546(4)	11.137(6)	3.150(4)
Internships	14.909(6)*	13.905(4)*	3.475(6)	3.f05(4)
Individualized, Self-determination	5.133(6)	2.415(4)	8.718(6)	5.310(4)

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

relative to the "weekend or summer" scheduling arrangement (X^2 = 19.452; df = 6; p = 0.0035) and the strategy "interschool visits" (X^2 = 13.854; df = 6; p = 0.0313).

Table XVIII includes data relative to the chi-square test of the implementation of inservice based on desirability. There was a significant relationship between the perceptions of administrators and school system size relative to "release time during school day" scheduling (X^2 = 14.809; df = 4; p = 0.0051) and the strategies "conventions" (X^2 = 12.928; df = 4; p = 0.0116) and "intraschool visits" (X^2 = 10.873; df = 4; p = 0.0280). A significant relationship also existed between perceptions and years of experience relative to "release time during school day" scheduling (X^2 = 16.752; df = 6; p = 0.0102), "collegial, ongoing, everyday" scheduling (X^2 = 21.978; df = 6; p = 0.0012), the strategy "conferences" (X^2 = 21.984; df = 6; p = 0.0012) and the strategy "committee work" (X^2 = 14.560; df = 6; p = 0.0240). A significant relationship existed between administrators' perceptions and degree level relative to the strategy "workshops" (X^2 = 10.060; df = 4; p = 0.0394).

Summary

Administrators' perceptions of the implementation of inservice education including scheduling patterns and strategies, based on frequency of occurrence and desirability are reported in Table XVI (page 89). The results of the chi-square tests which determine significant relationships between perceptions and the demographic

TABLE XVIII

CHI-SQUARE OF THE IMPLEMENTATION OF INSERVICE EDUCATION PROGRAMS BASED ON DESIRABILITY AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Implementation	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Scheduling				
Regularly Scheduled Days Paid by the State	8.866(6)	7.787(4)	9.334(6)	3.111(4)
Before and After Normal School Day	8.151(6)	1.298(4)	5.339(6)	4.413(4)
Weekends or Summer	4.538(6)	5.296(4)	6.384(6)	5.443(4)
Release Time During School Day	6.925(6)	14.809(4)*	16.752(6)*	4.211(4)
Collegial, Ongoing, Everyday	12.295(6)	0.952(4)	21.978(6)*	1.136(4)
Strategies				
Workshops	1.769(6)	0.509(4)	8.529(6)	10.060(4)*
Conferences	12.380(6)	1.731(4)	21.984(6)*	8.067(4)
Conventions	7.294(6)	12.928(4)*	10.102(6)	0.621(4)
Interschool Visits	12.006(6)	3.364(4)	1.836(6)	4.625(4)
Intraschool Visits	7.858(6)	10.873(4)*	6.171(6)	5.634(4)
College/University Courses	4.028(6)	1.850(4)	11.715(6)	5.381(4)
Committee Work	3.394(6)	3.738(4)	14.560(6)*	4.058(4)
Internships	5.029(6)	8.807(4)	1.850(6)	2.993(4)
Individualized, Self-determined	6.055(6)	2.891(4)	2.938(6)	2.681(4)

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

variables as they related to the implementation of inservice education are reported in Tables XVII and XVIII (pages 93 and 95).

Administrators rated the scheduling patterns "regularly scheduled days paid by the State" and "before and after normal school day" higher in frequency of occurrence than in desirability. The "regularly scheduled days paid by the State" was rated high in both categories by more administrators than any other scheduling pattern. It was rated high in desirability by more than twice as many administrators than any other. The scheduling pattern "weekend or summer" was rated low in desirability by over one-half of the group.

A majority of administrators rated "workshops" and "conferences" high both in frequency of occurrence and desirability. A little less than half of the administrators rated "committee work" high in frequency of occurrence, and a comparable number rated it high in desirability. The strategy "internships" was rated low in frequency of occurrence and desirability by more administrators than any other implementation strategy.

In the chi-square analysis based on frequency of occurrence, a significant relationship was found between the perceptions of administrators and school system size relative to the strategies "conventions," "college or university courses," and "internships." A significant relationship existed between perceptions and years of experience relative to the scheduling pattern "weekend or summer" and the strategy "interschool visits."

When based on desirability, the chi-square analysis revealed a significant relationship between the perceptions of administrators and school system size relative to the scheduling pattern "release time during school day" and the strategies "conventions" and "intraschool visits." A significant relationship also existed between perceptions and years of experience relative to the scheduling patterns "release time during school day" and "collegial, ongoing, everyday" in addition to the strategies "conferences" and "committee work." When degree level was considered, the analysis revealed a significant relationship relative to the strategy "workshops."

VI. EVALUATION OF INSERVICE EDUCATION

Evaluation patterns were represented by examples in the questionnaires.

Item A--represented the use of a questionnaire to determine attitudes toward inservice education sessions.

Item B--represented the use of a knowledge-level test as an evaluation instrument.

Item C--specified the use of State Department of Education personnel to rate the quality of inservice education programs.

Item D--represented a multi-criteria approach to evaluation.

Item E--specified a personalized approach.

Table XIX includes data based on administrators' perceptions of the evaluation of inservice education. A total of 266 (61.6 percent)

TABLE XIX

EVALUATION OF INSERVICE EDUCATION PROGRAMS AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Evaluation	Frequency of Occurrence				Desirability			
	High		Low		High		Low	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Questionnaires	266	61.6	77	17.8	269	62.3	62	14.4
Knowledge-Level Tests	79	18.3	222	51.4	101	23.4	243	56.3
Ratings by State Department of Education Official	20	4.6	282	65.3	47	10.9	317	73.4
Combination of Questionnaire, Interview, Observation and Official Ratings	168	38.9	117	27.1	290	67.1	61	14.1
Personalized-Individual Logs of Effectiveness	97	22.5	176	40.7	188	43.5	113	26.2

rated the use of attitude "questionnaires" high in frequency of occurrence as a means of evaluating inservice education, while 77 (17.8 percent) indicated a low rating. A total of 269 (62.3 percent) rated the use of attitude "questionnaires" high in desirability while 62 (14.4 percent) indicated a low rating.

A total of 168 (38.9 percent) rated a "combination" approach high in frequency of occurrence as a means of evaluating inservice education, while 117 (27.1 percent) indicated a low rating. A total of 290 (67.1 percent) rated a "combination" approach high in desirability while 61 (14.1 percent) indicated a low rating.

A total of 97 (22.5 percent) rated a "personalized" approach high in frequency of occurrence as a means of evaluating inservice while 176 (40.7 percent) indicated a low rating. A total of 188 (43.5 percent) rated a "personalized" approach high in desirability while 113 (26.2 percent) indicated a low rating.

A total of 79 (18.3 percent) rated "knowledge-level tests" high in frequency of occurrence as a means of evaluating inservice education, while 222 (51.4 percent) indicated a low rating. A total of 101 (23.4 percent) rated "knowledge level tests" high in desirability while 243 (56.3 percent) indicated a low rating.

A total of 20 (4.6 percent) rated "State Department of Education ratings" high in frequency of occurrence as a means of evaluating inservice education, while 282 (65.3 percent) indicated a low rating. A total of 47 (10.9 percent) rated "State Department of Education

ratings" high in desirability while 317 (73.4 percent) indicated a low rating.

Chi-Square Tests of the Evaluation of Inservice Education Programs

Results of the chi-square test of the evaluation of inservice education based on frequency of occurrence are reported in Table XX. The chi-square test was used to determine if there was a significant relationship between the responses of administrators and grade level assignment, school system size, years of experience, and degree level. Based on frequency of occurrence, there was a significant relationship between administrators' perceptions and school system size relative to the evaluation technique "knowledge-level test" (X^2 = 9.916; df = 4; p = 0.0419).

Table XXI includes the results of the chi-square test based on desirability. The only significant relationships were found between the perceptions of administrators and school system size. They involved the evaluation patterns "questionnaire" (X^2 = 13.865; df = 4; p = 0.0077) and "State Department of Education ratings" (X^2 = 10.083; df = 4; p = 0.0391).

Summary

Table XIX (page 98) contains data relative to administrators' perceptions of the evaluation of inservice education based on frequency of occurrence and desirability. The results of the chi-square tests which determined significant relationships between

TABLE XX

CHI-SQUARE OF THE EVALUATION OF INSERVICE EDUCATION PROGRAMS BASED ON FREQUENCY OF OCCURRENCE AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Evaluation	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Questionnaire	7.205(6)	4.241(4)	9.079(6)	7.109(4)
Knowledge-Level Test	1.036(6)	9.916(4)*	3.030(6)	4.236(4)
Ratings by State Department of Education Official	4.397(6)	8.063(4)	9.361(6)	2.242(4)
Combination of Questionnaire, Interview, Observation and Official Ratings	4.220(6)	9.181(4)	4.616(6)	2.288(4)
Personalized-Individua. Logs of Effectiveness	2.003(6)	1.219(4)	7.601(6)	8.245(4)

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

TABLE XXI

CHI-SQUARE OF THE EVALUATION OF INSERVICE EDUCATION PROGRAMS BASED ON DESIRABILITY AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Evaluation	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Questionnaire	4.872(6)	13.865(4)*	5.792(6)	3.754(4)
Knowledge-Level Test	4.901(6)	5.381(4)	5.228(6)	2.839(4)
Ratings by State Department of Education Official	6.239(6)	10.083(4)*	4.363(6)	4.081(4)
Combination of Questionnaire, Interview, Observation and Official Ratings	8.224(6)	4.062(4)	9.565(6)	2.562(4)
Personalized-Individual Logs of Effectiveness	5.980(6)	5.648(4)	2.531(6)	3.853(4)

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

perceptions and the demographic variables as they related to the evaluation of inservice education are presented in Tables XX and XXI (pages 101 and 102).

Administrators rated each evaluation pattern higher in desirability than in frequency of occurrence. Over one-half of the respondents rated "questionnaires" high in frequency of occurrence and a similar number rated it high in desirability. The "combination" approach was rated high in frequency of occurrence by more than one-third of the administrators, but it was rated high in desirability by nearly two-thirds.

Approximately one-half of the administrators rated the "knowledge-level tests" low in frequency of occurrence, and a comparable number rated it low in desirability. The "State Department of Education ratings" pattern was identified low in both frequency of occurrence and desirability by more administrators than any other item.

In the chi-square analysis, all significant relationships existed between perceptions and school system size. The significant relationship was found relative to "knowledge-level tests" when the analysis was based on frequency of occurrence. When based on desirability, the analysis revealed a significant relationship relative to the "questionnaire" pattern and the "State Department of Education rating" pattern.

VII. SUPPORT OF INSERVICE EDUCATION

Table XXII contains data based on administrators' perceptions of their school systems' financial support of inservice education. A total of 189 (44.2 percent) indicated adequate financial support for inservice education programs by their school systems, while 128 (29.9 percent) indicated little or no support. In terms of central office staff time devoted to inservice education, a total of 284 (66.4 percent) indicated adequate time, while 42 (9.8 percent) indicated little or no time.

Results of the chi-square tests of the school systems' support of inservice education are reported in Table XXIII. A significant relationship was found between the perceptions of administrators and school system size relative to financial support ($X^2 = 29.123$; $df = 4$; $p = 0.0000$) and the commitment of central office staff time ($X^2 = 13.220$; $df = 4$; $p = 0.0102$). A significant relationship existed between perceptions and years of experience relative to commitment of central office staff time ($X^2 = 17.156$; $df = 6$; $p = 0.0087$).

Summary

Table XXII (page 105) contains data relative to administrators perceptions of their school systems' support of inservice education. The results of the chi-square tests which determined significant relationship of inservice education are reported in Table XXIII (page 106).

More than two-fifths of the administrators indicated that their school systems' financial support of inservice education was

TABLE XXII

SCHOOL SYSTEMS' SUPPORT OF INSERVICE EDUCATION PROGRAMS AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Variables	Frequency	Percent
Financial Support		
Adequate Support	189	44.2
No Support	128	29.9
Commitment of Central Office Staff Time		
Adequate Time	284	66.4
No Time	42	9.8

TABLE XXIII

CHI-SQUARE OF SCHOOL SYSTEMS' SUPPORT AND SUCCESS OF INSERVICE EDUCATION PROGRAMS AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Support and Success	Variables			
	Grade Level Assignment[a]	School System Size	Years Experience in Education	Degree Level
Support				
Financial Support	3.843(6)	29.123(4)*	5.432(6)	3.149(4)
Commitment of Central Office Staff Time	9.633(6)	13.220(4)*	17.156(6)*	1.771(4)
Success				
Program In General	4.234(6)	8.213(4)	11.395(6)	10.609(4)*
Meeting Personal Needs	5.886(6)	1.504(4)	28.193(6)*	13.824(4)*

* = significant chi-square at the .05 level, ( ) = degrees of freedom, and [a] = based on principals and supervisors only.

adequate, but almost one-third perceived little or no financial support. Nearly two-thirds indicated that the commitment of central office staff time was adequate, but less than one-tenth perceived little or no time.

In the chi-square analysis, significant relationships were found relative to both financial and time support between administrators' perceptions and school system size. A significant relationship also existed between perceptions and years of experience relative to time support.

VIII. SUCCESS OF INSERVICE EDUCATION

Table XXIV contains data relative to administrators' perceptions of the success of their school systems' inservice education programs. A total of 269 (62.9 percent) indicated inservice education programs were very successful in general terms, while 42 (9.8 percent) indicated their programs were not successful in general terms. On a personal level, a total of 207 (48.4 percent) indicated inservice education programs were of maximum benefit, while 88 (20.6 percent) indicated no benefit.

Table XXIII (page 106) contains the results of the chi-square tests of the success of school systems' inservice education programs. A significant relationship was found between administrators' perceptions and years of experience relative to success in meeting personal needs ($X^2 = 28.193$; df = 6; p = 0.0001). A significant relationship was found between perceptions and degree level relative to general

TABLE XXIV

SUCCESS OF SCHOOL SCHOOLS' INSERVICE EDUCATION PROGRAMS AS PERCEIVED BY ADMINISTRATORS IN THE STATE OF TENNESSEE FROM THE RANDOM SAMPLE OF SCHOOLS FOR THE 1980-1981 SCHOOL YEAR

Variables	Frequency	Percent
Program In General		
Very Successful	269	62.9
Not Successful	42	9.8
Meeting Personal Needs		
Maximum Benefit	207	48.4
No Benefit	88	20.6

success (X^2 = 10.609; df = 4, p = 0.0313) and meeting personal needs (X^2 = 13.824; df = 4; p = 0.0079).

Summary

Table XXIV (page 108) contains data relative to administrators' perceptions of the success of their school systems' inservice education program. A majority indicated that the program in general was successful while a relatively small number considered them not successful. As far as meeting personal needs, the inservice programs were perceived by nearly one-half of the administrators to be of maximum benefit. About one-fifth considered the programs to be of no benefit to them personally.

Table XXIII (page 106) includes the results of the chi-square tests results relating to the success of inservice education. Significant relationships were found relative to both general success and in meeting personal needs between degree level and administrators' perceptions. There was also a significant relationship betwee years of experience and perceptions relative to meeting personal needs.

IX. FINDINGS

The findings of the study relate to the question and hypotheses which provided direction for the research. Each question is presented with the appropriate discussion. Since the four hypotheses correspond to the last four parts of question one, no separate consideration for them will be made.

Question 1

What are the perceptions of administrators regarding the purposes, planning, methods, implementation and evaluation of inservice education based on frequency of occurrence and desirability?

Purposes

The majority of administrators (58 percent) responding to the questionnaire based on frequency of occurrence indicated that the improvement of classroom performance was a purpose of inservice education, and half (50 percent) considered professional improvement a purpose. Approximately one-fourth perceived personal development, organizational development, instructional improvement and meeting State Department requirements as purposes of inservice education. Only a few believed the extension of certification was in use as a purpose.

More administrators (84 percent) considered the improvement of classroom performance desirable as a purpose than any other, although a majority (73 percent) considered professional improvement desirable. Personal development, organizational development and instructional improvement were desirable to nearly half of the administrators. Extension of certification and meeting State Department requirements were least desirable.

Planning

The largest number of responding administrators (38 percent) rated the grass-roots planning pattern high in frequency of occurrence,

while a slightly smaller number (31 percent) perceived collaborative planning between faculty members only high in occurrence. Nearly half (48 percent) considered collaborative planning between faculty and outside consultants low in frequency of occurrence.

In terms of desirability, the largest number of administrators (48 percent) rated collaborative planning between faculty members only desirable, but nearly as many (44 percent) perceived the grass-roots pattern to be desirable. Rated low in desirability were collaborative planning between faculty and outside consultants (51 percent) and top-down (35 percent).

Methods

The largest number of responding administrators (37 percent) rated the system-wide or multi-system format high in frequency of occurrence, but the same format was perceived low in desirability by the largest number (39 percent). The small group format was rated high in frequency of occurrence by almost one-third (32 percent) and was considered desirable by the largest number of administrators (47 percent). The individualized format was perceived low in frequency of occurrence by more administrators (48 percent) than any other format; however, it was low in desirability for nearly one-third (30 percent).

More administrators (39 percent) considered their personal role as session leaders to occur less frequently than any other, but it was also rated low in desirability by a larger number (42 percent). One-fourth (25 percent) rated the use of other teachers in the school

high in frequency of occurrence, but the use of other personnel occurred more frequently. The largest number of administrators (49 percent) considered the use of other teachers in the school as desirable.

A majority of responding administrators considered lecture (53 percent) and discussion (70 percent) high in frequency of occurrence as instructional techniques. The largest number of the group (62 percent) rated lecture low in desirability, but discussion was rated high in desirability by more than half (53 percent). A majority of administrators considered simulation (73 percent) and direct classroom assistance (70 percent) high in desirability; however, these two were perceived to occur less frequently than lecture or discussion.

Implementation

Most responding administrators (89 percent) perceived the scheduling of inservice education to be on regular days paid by the state, and this was considered desirable by the largest number of the group (80 percent). Over half (58 percent) indicated that time before and after the normal school day occurred frequently. A smaller number (37 percent) felt that this was desirable. The least number of administrators (8 percent) rated release time during the school day high in frequency of occurrence; however, the group appeared equally split on the desirability of this scheduling pattern. The collegial, ongoing, everyday approach was generally perceived in the same manner as release time. Time scheduled on weekends or during the summer

was obviously not considered very desirable nor did it occur very frequently.

In the area of strategies, workshops and conferences were clearly perceived as the most frequently used and the most desirable. The use of internships occurred least frequently (9 percent), but it was rated low in desirability by the largest number of administrators (41 percent). Conventions, interschool and intraschool visits, college courses and the individualized strategies were all considered higher in desirability than in actual occurrence.

Evaluation

A majority of responding administrators (62 percent) rated the use of questionnaires in evaluating inservice education high in frequency of occurrence, and a comparable number considered this desirable. A combination approach was reated high in desirability by an even larger number (67 percent), but less than half of the group (39 percent) indicated it was frequently used. The participation by State Department of Education personnel was perceived as low in frequency of occurrence by the majority of administrators (65 percent), but an even larger number (73 percent) considered their involvement low in desirability. Knowledge-level tests were about equally considered low in frequency of occurrence (51 percent) and desirability (56 percent). Less than one-fourth of the administrators (23 percent) rated personalized-individual logs high in frequency of occurrence, while nearly twice as many (44 percent) considered their use as desirable.

Question 1 (a)

Do principals and supervisors of varying grade level assignments possess different perceptions of inservice education?

For purposes based on frequency of occurrence, a significant relationship was found relative to the purpose--improve classroom performance. Based on desirability, significant relationships were found relative to the purposes--extend certification and improvement of instruction.

In the area of planning based on frequency of occurrence, a significant relationship was found relative to the pattern--collaborative planning between faculty members only. When desirability was considered, a significant relationship was found relative to the top-down pattern.

The tests for methods based on frequency of occurrence revealed significant relationship relative to the instructional techniques--discussion and simulation. No other significant relationships were found in the area of methods.

Only one other test in this category revealed a significant relationship. This involved the implementation of inservice education based on frequency of occurrence, and it related to the internship strategy. Gravel level assignment was the only category for which no significant relationship was found relative to the support and success of inservice education.

Question 1 (b)

Do administrators in school systems of varying sizes possess different perceptions of inservice education?

The category school system size produced the largest number of significant relationships. For the planning of inservice based on frequency of occurrence, a significant relationship was found relative to the pattern--collaborative planning between faculty and outside consultants.

For methods based on frequency of occurrence, a significant relationship was found relative to the format--small group, and the session leaders--college personnel, teachers or consultants outside the system and building level or central office personnel. When based on desirability, a significant relationship was found relative to the format--small group, and the session leaders--building level or central office personnel.

In the area of implementation of inservice based on frequency of occurrence, a significant relationship was found relative to the strategies--conventions, college/university courses, and internships. For implementation based on desirability, a significant relationship was found relative to the scheduling--release time during school day, and the strategies--conventions and intraschool visits.

The school system size category produced the only significant relationship in the area of evaluation. For the tests based on frequency of occurrence, a significant relationship was found relative

to the item--knowledge-level tests. Based on desirability, there was a significant relationship relative to the items--questionnaires and rating by State Department of Education personnel.

No significant relationship was found in the school system size category for tests regarding success of inservice education. However, a significant relationship was found relative to both financial support and the commitment of central office staff time at the local level.

Question 1 (c)

Do administrators of varying lengths of service in education possess different perceptions of inservice education?

Analysis of the data in the category of years of experience revealed several comparisons in which significant relationships were found with the perceptions of administrators. For planning of inservice education based on desirability, a significant relationship was found relative to the patterns--grass-roots and collaborative planning between faculty and outside consultants.

In the area of methods of inservice based on frequency of occurrence, a significant relationship was found relative to the session leaders--building level or central office personnel, and the instructional technique--direct classroom assistance. When based on desirability, a significant relationship was found relative to the format--system-wide or multi-system, the session leaders--other teachers in the school and you as leader, and the instructional technique--discussion.

Regarding the implementation of inservice based on frequency of occurrence, a significant relationship was found relative to scheduling--weekends or summer, and the strategy--interschool visits. When based on desirability, a significant relationship was found relative to scheduling--release time during school day and collegial, everyday, ongoing, and the strategies--conferences and committee work.

In the area of local support of inservice education, a significant relationship was found relative to commitment of central office staff time. A significant relationship was also found relative to success in terms of meeting personal needs.

Question 1 (d)

Do administrators of varying lengths of training possess different perceptions of inservice education?

In the category of earned college degree, a significant relationship was found relative to the purpose of inservice education based on frequency of occurrence--meet State Department of Education requirements. For purposes based on desirability, a significant relationship was found relative to the purposes--extend certification, organizational development, improve classroom performance and improve professionally.

For implementation of inservice education based on desirability, a significant relationship was found relative to the workshop strategy. No other test involving implementation produced a significant relationship.

In the analysis of the data for support and success of inservice education, no significant relationship was found for either aspect of support. Regarding success, a significant relationship was found for both general success and meeting personal needs.

Question 2

What are the perceptions of administrators concerning the overall inservice education process as a function of their school systems' financial support for and commitment of central office staff time to inservice education?

Less than half of the responding administrators (44 percent) perceived the financial support of inservice education by the local school system to be adequate, while nearly one-third (30 percent) indicated little or no support. Ratings in terms of commitment of time devoted to inservice education by central office personnel were more positive. Almost two-thirds (66 percent) considered the central office staff time to be adequate. Only a few administrators (10 percent) indicated that little or no time was committed to inservice education by central office personnel.

Question 3

What are the perceptions of administrators in Tennessee concerning the success of their school systems' inservice education program in general and as related to their personal needs?

More than half of the responding administrators (63 percent) rated their local inservice education programs as generally successful,

while a small number (10 percent) indicated that the programs were not successful. Approximately half of the administrators (48 percent) perceived the programs to benefit them personally. A little more than one-fifth of the administrators (21 percent) believed their inservice education efforts to be of no personal benefit.

Question 4

What components of inservice education identified in the literature are representative of the program in the school districts of Tennessee?

The identification of these components was based on the results of the data analysis. Ratings based on frequency of occurrence were used as the major factor in the decisions.

Purposes

The largest number of priorities (63 percent) on the state plans related to professional improvement as a purpose of inservice education. One half of the administrators who responded to the questionnaire rated professional improvement high in frequency of occurrence as a purpose. A larger number (58 percent) rated improving classroom performance high in frequency of occurrence, but only a few priorities (4 percent) on the state plans related to that purpose. The judgment was made that the major purpose of inservice education in Tennessee was professional improvement.

Planning

The grass-roots planning pattern was rated high in frequency of occurrence by approximately one-third of the responding administrators (38 percent), and all other patterns were rated high in frequency of occurrence by a smaller number. Therefore, no planning pattern was considered representative of inservice education in Tennessee.

Methods

No selection appeared appropriate for the format or session leader category under methods of inservice education. In the area of instructional techniques, more than half of the responding administrators rated lecture (53 percent) and discussion (70 percent) high in frequency of occurrence. These two items were selected as representative of inservice education in Tennessee.

Implementation

In the area of scheduling patterns, the largest number of responding administrators (89 percent) indicated that regularly scheduled days paid by the State were high in frequency of occurrence. A smaller number (58 percent) rated time before and after the normal school day high in frequency of occurrence.

A majority rated workshops (81 percent) and conferences (67 percent) high in frequency of occurrence as strategies for implementation. Committee work has rated high by slightly less than half (45 percent). The judgment was made that these three strategies and the two

scheduling patterns were representative of inservice education in Tennessee.

Evaluation

A majority of responding administrators (62 percent) rated questionnaires high in frequency of occurrence as the means of evaluation. This method was considered most representative of inservice education in Tennessee.

Question 5

How do these programs compare with the characteristics of effective staff development identified in the literature?

Purposes

The literature supported the concept of improvement of instruction as the overall purpose of inservice education. Less than one-fourth of the responding administrators (23 percent) rated improvement of instruction high in frequency of occurrence as a purpose. Nearly twice as many (43 percent) considered it high in desirability.

The literature stressed the importance of meeting both personal and organizational needs as purposes of inservice education. Approximately one-fourth of the responding administrators rated personal development (24 percent) and organizational development (27 percent) high in frequency of occurrence. Both personal development (46 percent) and organizational development (46 percent) were considered higher in desirability than in practice.

Planning

The literature supported the idea of teacher involvement in planning their own activities as well as collaboration between teachers and administrators or consultants. More responding administrators (38 percent) rated the grass-roots planning pattern high in frequency of occurrence than any other pattern; however, only a few (8 percent) rated collaborative planning between faculty and consultants high. A larger number of administrators considered grass-roots (44 percent) and collaborative planning between faculty and consultants (10 percent) high in desirability.

Methods

The use of individualized and small group approaches as formats for inservice education was supported by the literature. Fewer responding administrators (12 percent) considered the individualized approach high in frequency of occurrence than any other format; however, about one-third (32 percent) rated the small group format high. More administrators considered the individualized approach (24 percent) and the small group (47 percent) higher in desirability than either of the other two formats.

Relative to session leaders, the literature did not provide any clear preference but indicated that the purpose of the inservice played a major role in teachers' preference for leaders. In most situations other teachers were preferable to administrators or outside consultants. The largest number of responding administrators (49

percent) rated other teachers in the school as session leaders high in desirability, but only half that number rated them high in frequency of occurrence. All other choices were rated higher in frequency of occurrence than in desirability.

The literature supported the concept that instructional techniques which utilized any combination of theory, modeling, practice, feedback and coaching for applications achieved maximum effectiveness. Responding administrators considered simulation and direct classroom assistance high in desirability more often than any other technique, although they rated them high in frequency of occurrence less often than the lecture and discussion techniques.

Implementation

The literature indicated that the implementation of inservice through flexible programs which provided release time during the school day was effective. Fewer responding administrators (8 percent) rated release time during the school day high in frequency of occurrence than any other scheduling pattern, although nearly five times as many (37 percent) considered it high in desirability. Regularly scheduled days paid by the State was considered high in desirability (80 percent) and in frequency of occurrence (89 percent) by more administrators than any other scheduling pattern.

Program strategies should accommodate different learner needs according to the literature. This would imply a need for an individualized approach. Less than one-third of the responding

administrators (29 percent) rated an individualized strategy high in frequency of occurrence, but a larger number (44 percent) considered it high in desirability. The largest number of administrators considered workshops and conferences both high in frequency of occurrence and desirability.

Evaluation

The literature indicated the separation of training and evaluation functions was necessary for successful inservice education. The extent to which evaluation of inservice is practiced in Tennessee was not determined in the study. When evaluation techniques are applied, the questionnaire appears to be the most frequently used. The largest number of responding administrators (62 percent) rated the use of questionnaires high in frequency of occurrence, and a comparable number considered it high in desirability. A larger number (67 percent) considered a combination of questionnaires, interviews, observations and ratings high in desirability.

CHAPTER IV

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

I. INTRODUCTION

This chapter includes a summary of the study and the major conclusions which were drawn from it. Recommendations based on the conclusions are stated, and in the final section suggestions are made for further research in the area of inservice education or staff development.

II. SUMMARY

The Problem

Inservice education is mandated for public school personnel in Tennessee, and each school system is required to submit to the State Department of Education a document called the Plan for Inservice Training. Yet the value of these programs remains questionable due to a lack of general information regarding inservice education at the local school level. Since school administrators have major responsibility for these programs, their perceptions of inservice education are a critical part of the information that is needed.

The Purpose of the Study

The purpose of the study was to secure a base of information which could be used in the description of the current state of

inservice education in Tennessee and possible decisions for its improvement. The specific outcomes of the study included:

1. A review of current literature to determine the practices or characteristics of effective inservice education.

2. A summary of information in the Plan for Inservice Training submitted by a sample of school systems in the state.

3. A survey of the perceptions of administrators relative to various aspects of inservice education.

4. An analysis of differences in the perceptions of these administrators based on grade level assignment, school system size, years of experience in education and level of earned degree.

Procedures

A review of literature regarding staff development and inservice education was conducted to provide background information. A general synthesis of the information was utilized in the examination of the State plans and the preparation of items for the questionnaire.

The survey instrument was designed to determine the perceptions of administrators regarding the pruposes, planning, methods, implementation and evaluation of inservice education. Items were also included which related to the support of inservice at the local level in addition to the success of these programs. The questionnaire was reviewed by a panel of experts and field tested with a group of administrators. A test re-test reliability procedure produced a correlation coefficient of .73 before the questionnaire was distributed

to the sample of administrators; however, a further test of reliability was conducted on the actual responses from the sample. In this case, a Cronbach's alpha coefficient of .92 was obtained.

A random sample of 317 schools was drawn from the list included in the Directory of Public Schools. The principals of these schools, the instructional supervisors and the superintendents of the systems in which the schools were located constituted the group of administrators to be surveyed. The sampling of schools also determined the 112 systems whose state plans were examined as part of the study.

Treatment of the Data

A substantial number of respondents did not rank the items on the questionnaire as requested; therefore, it was necessary to categorize the responses in terms of high, neutral and low ratings. The presentation of data in general descriptive form was based on responses in the high and low categories. Both frequencies and percents were included in the tables.

Cross-tabulations of variables were used to determine any differences in administrators' perceptions based on grade level assignment, school system size, years of experience in education and degree level. The chi-square statistic was calculated for each comparison, and a significance level of .05 was maintained.

Findings

Question 1. What are the perceptions of administrators regarding the purposes, planning, methods, implementation and evaluation of inservice education? Further, how do their perceptions relate to their grade level assignment, school system size, length of service and length of training?

Major discrepancies existed between what administrators perceived as the nature of inservice education programs in Tennessee and what they considered desirable practices. In particular they felt that:

1. The overall purpose of inservice education should be the improvement of instruction with appropriate attention given to both personal development of staff and organizational development of the school system.

2. The planning of inservice education should be a cooperative effort of teachers and administrators.

3. The methods and implementation procedures for inservice education should include a variety of approaches that support a flexible program that reflects the individuality of teachers in both their needs and their learning styles.

4. The evaluation of inservice education should be based on a combination of techniques which will contribute in a meaningful way to the general improvement of these programs.

The size of the school system served and the number of years of experience in education were factors which contributed to

differences in the perceptions of administrators relative to inservice education. Grade level assignment and the length of training had much less impact on these perceptions.

Question 2. What are the perceptions of administrators regarding the local support of inservice education?

Administrators did not generally believe that inservice education was adequately supported at the local level. They did consider that sufficient time was devoted to inservice education programs by the central office staff members.

Question 3. What are the perceptions of administrators regarding the success of inservice programs?

Most administrators felt that the inservice programs were generally successful. However, many of them did not feel that their personal benefit from these programs was sufficient.

Question 4. What components of inservice education identified in the literature are representative of the programs in the school districts of Tennessee?

Inservice education programs in Tennessee were characterized in the following ways:

1. The major purpose of the programs was professional improvement.

2. No consistent planning pattern existed in these programs.

3. The programs did not include any consistent format or session leader; however, the instructional techniques of lecture and discussion were very common.

4. Most inservice programs were scheduled as full days of activities, and the number of days did not exceed the minimum required by the State Department of Education. Time before and after the normal school day was often utilized but much less than the full day arrangement. The time was generally structured in the form of workshops, conferences or committee work.

Question 5. How do these programs compare with the characteristics of effective staff development identified in the literature?

There was little compatibility between the characteristics of inservice education in Tennessee and those of effective staff development identified in the literature. The following specific contrasts existed:

1. Whereas the literature supported the improvement of instruction as the overall purpose of inservice education, the major purpose in Tennessee was professional improvement.

2. Collaborative planning between teachers and administrators or consultants was considered an effective approach in the literature; however, that approach was not a common practice in Tennessee.

3. An individualized program of inservice education was considered appropriate, but very few programs in Tennessee included any concern for this approach.

4. According to the literature, instructional techniques which utilized a combination of factors achieved maximum effectiveness. Most programs in Tennessee involved only the lecture and discussion techniques.

5. Inservice programs that included flexible time provisions including release time during the regular school day was proposed as characteristic of effective staff development, but practically no flexibility existed in the programs in Tennessee.

III. CONCLUSIONS

The findings of the study revealed evidence to support these conclusions:

1. Since administrators are in positions of responsibility relative to the planning and implementation of inservice education, they should exercise all possible influence to narrow the gap between what is actually practiced in these programs and what they considered more desirable.

2. The programs of inservice education at the local level are not as effective and productive as they should be since there is inadequate financial support provided at that level.

3. Programs of inservice education must include provisions for the professional growth of administrators as well as teachers.

4. Insufficient efforts have been made to utilize the knowledge and research relative to effective staff development for the purpose of improving inservice education in Tennessee.

IV. RECOMMENDATIONS

The findings and conclusions of the study supported the following recommendations:

1. Efforts must be made at the local and state levels to correct the problems associated with inservice education. The leadership for these efforts should come from the administrative personnel who recognize these serious discrepancies.

2. The Tennessee Department of Education and local educational agencies should provide sufficient financial support for inservice education to make it an integral part of the educational process.

3. A comprehensive plan of staff development should be developed at the local level to better assess the needs of all personnel and provide effective programs to meet these needs. Provisions should be made in this plan for individualization, flexible time scheduling and relevance to actual problems experienced on the job.

4. Information regarding effective staff development practices should be disseminated throughout the State of Tennessee to assist local systems in their efforts to improve inservice education. The State Department of Education should provide greater leadership and assistance in this process.

5. More detailed investigations should be made to better clarify the nature of inservice education at the local level and expand the base of information to which this study has contributed.

V. SUGGESTIONS FOR FURTHER RESEARCH

The present study has added to the base of information which was needed with regard to inservice education in Tennessee. But there are many questions which remain unanswered and need to be addressed in order to expand the knowledge base.

One suggestion for further research relates to the need for data based on observations rather than perceptions. A research project which could consider a narrower view of inservice education would be worthwhile, and such a project might take the form of a field investigation of the inservice practices of one school system or a small group of systems. Naturally, this effort would need to be a long term study possibly covering more than one year.

Experimentation to determine the value of certain practices that were identified in the literature as effective techniques should be conducted. The suggestion that staff development and personnel evaluation should be more closely associated presents an interesting possibility for further research.

The present study found that school system size and years of experience in education contribute to differences in the perceptions of administrators regarding inservice education, but the particular nature of that influence could be the focus of other research studies. Demographic variables not considered in the present study might prove to have impact on perceptions, or there might be interaction of variables which need to be identified.

Finally, if the overall purpose of inservice education is accepted as the improvement of instruction, research must be done to determine the particular elements of staff development programs most directly correlated with the improvement of instruction. Unless inservice education contributes significantly to this primary purpose, it cannot be considered worthwhile.

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APPENDICES

APPENDIX A

INSERVICE EDUCATION QUESTIONNAIRE

ID _____
(1-4)
(5) Card 1

QUESTIONNAIRE
INSERVICE EDUCATION

This questionnaire is designed to gather information regarding your attitudes and perceptions toward inservice education. Please take about 15 minutes to complete.

(6) A. Check one category which best describes the school level(s) in which you have responsibility:

1_____Elementary
2_____Middle-Junior High
3_____Senior High
4_____K-8th Grade
5_____K-12th Grade
6_____Other _____ (specify)

(7) B. Check the size of the system in which you work:

1_____Less than 5,000 students
2_____5,000 - 10,000 students
3_____More than 10,000 students

(8) C. Years of experience in education:

1_____ 0-3
2_____ 4-7
3_____ 8-12
4_____ 13-20
5_____ 20 +

(9) D. Highest Degree Earned:

1_____Less than Bachelors
2_____Bachelors
3_____Masters
4_____Specialist or M.S. + 45
5_____Doctorate

The next four questions should be answered based on your perceptions.

(10) E. Rate your system's financial support of inservice education (1980-81)

No Support 1 2 3 4 5 6 7 8 Adequate Support

(11) F. Rate your system's commitment of central office staff time to inservice education

No Time 1 2 3 4 5 6 7 8 Adequate Time

(12) G. Rate your system's 1980-81 inservice education program

Not Successful 1 2 3 4 5 6 7 8 Very Successful

(13) H. Rate the extent to which your system's inservice education program meets your personal needs

No Benefit 1 2 3 4 5 6 7 8 Maximum Benefit

*General Instructions: Rank the following examples in each section, using consecutive numbers (1 = most, largest number = least). On the left side of the page, rank Frequency of occurrence in your system (1980-1981). On the right side of the page, rank Desirability to you. If an example does not occur in your system, do not rank it under Frequency, only Desirability.

I. Purposes - A committee has been formed in your school system to develop a comprehensive inservice education program. You have been asked to serve on this committee. The committee must decide what the purpose of the inservice education program should be. Rank the following examples which were presented by different members of the committee.

	Rank according to frequency of occurrence in your system (1 = most frequent) (7 = least frequent)		Rank according to desirability (1 = most desirable) (7 = least desirable)	
(14)	_____	A. Inservice education should develop more positive self concepts.	_____	(21)
(15)	_____	B. Inservice education should help meet certification requirements for upgrading or adding endorsements.	_____	(22)
(16)	_____	C. Inservice education should develop positive faculty relationships.	_____	(23)
(17)	_____	D. Inservice education should improve student performance (such as achievement test scores).	_____	(24)
(18)	_____	E. Inservice education should improve teaching skills.	_____	(25)
(19)	_____	F. Inservice education should broaden professional competencies.	_____	(26)
(20)	_____	G. Inservice education should only meet state department requirements.	_____	(27)

II. Planning - One of your system's elementary schools is interested in developing an inservice education program to assist teachers in working with handicapped students. How should your committee plan this inservice education?

	Rank the following according to frequency of occurrence in your system (1 = most frequent) (4 = least frequent)		Rank the following according to desirability (1 = most desirable) (4 = least desirable)	
(28)	_____	A. The committee should plan the inservice education using a nationally known consultant	_____	(32)
(29)	_____	B. The committee should designate school faculties as planners of their own inservice education	_____	(33)
(30)	_____	C. The committee should hire the staff of a special education center to plan the inservice education	_____	(34)
(31)	_____	D. Faculty volunteers should be invited to join the committee for planning sessions	_____	(35)

III. Methods - The inservice education committee has to determine which methods will be used.

1. Format

	Rank according to frequency of occurrence in your system (1 = most frequent) (4 = least frequent)		Rank according to desirability (1 = most desirable) (4 = least desirable)	
(36)	_____	A. Individualized Format	_____	(40)
(37)	_____	B. Small Group Format	_____	(41)
(38)	_____	C. Total School Faculty Format	_____	(42)
(39)	_____	D. System-Wide or Multi-System Format	_____	(43)

2. Session Leaders

	(1 = most frequent) (4 = least frequent)		(1 = most desirable) (4 = least desirable)	
(44)	_____	A. Other Teachers in Your School	_____	(48)
(45)	_____	B. College Personnel, teachers or consultants outside your system	_____	(49)
(46)	_____	C. Building level or central office personnel	_____	(50)
(47)	_____	D. You as leader	_____	(51)

3. Instructional Techniques

	(1 = most frequent) (5 = least frequent)		(1 = most desirable) (5 = least desirable)	
(52)	_____	A. Lecture	_____	(57)
(53)	_____	B. Discussion	_____	(58)
(54)	_____	C. Self Instructional Modules or Professional Reading	_____	(59)
(55)	_____	D. Simulation including any combination of presentation, modeling, practice, feedback	_____	(60)
(56)	_____	E. Direct classroom assistance when applying new skills	_____	(61)

IV. Implementation - The inservice education committee must decide which procedures will be used

ID _____ (1-4)
(5) Card 2

	Rank according to frequency of occurrence in your system (1 = most frequent) (5 = least frequent)		Rank according to desirability (1 = most desirable) (5 = least desirable)	
		1. Scheduling of Inservice Education Activities		
(6)	_____	A. Regularly scheduled inservice education days (The 10 salaried days paid by the State)	_____	(11)
(7)	_____	B. Before & after the normal school day (including faculty meetings)	_____	(12)
(8)	_____	C. Weekends or summer	_____	(13)
(9)	_____	D. Release time during the school day	_____	(14)
(10)	_____	E. Collegial, ongoing, everyday	_____	(15)

	(1 = most frequent) (9 = least frequent)		(1 = most desirable) (9 = least desirable)	
		2. Strategies		
(16)	_____	A. Workshops	_____	(25)
(17)	_____	B. Conferences	_____	(26)
(18)	_____	C. State or National Conventions	_____	(27)
(19)	_____	D. Interschool Observational Visits	_____	(28)
(20)	_____	E. Intraschool Coservational Visits	_____	(29)
(21)	_____	F. College or University Courses	_____	(30)
(22)	_____	G. Committee Work	_____	(31)
(23)	_____	H. Internships (administrative, research, etc.)	_____	(32)
(24)	_____	I. Individualized, Self Determined	_____	(33)

V. Evaluation - The final task facing the inservice education committee is to decide on evaluation criteria.

	Rank according to frequency of occurrence in your system (1 = most frequent (5 = least frequent)		Rank according to desirability (1 = most desirable) (5 = least desirable)	
(34)	_____	A. Your committee should design a questionnaire to be completed after every session to determine attitudes toward the training	_____	(39)
(35)	_____	B. Each workshop leader should construct a knowledge-level test on the content presented	_____	(40)
(36)	_____	C. A state education department official should attend and rate the quality of the workshops	_____	(41)
(37)	_____	D. A combination approach of questionnaires, interviews, classroom observation and offical ratings could be developed	_____	(42)
(38)	_____	E. Personalized--each individual should maintain a log on the effectiveness of inservice education activities	_____	(43)

Thank you!

APPENDIX B

COVER LETTERS TO JURY OF EXPERTS

March 17, 1981

Dr. Gordon Cawelti
Executive Director, ASCD
225 North Washington Street
Alexandria, VA 22314

Dear Dr. Cawelti:

In a few days you will receive a questionnaire from Zulette Melnick, Vicki Dean and Ed Smith, graduate students at The University of Tennessee. They are studying administrator perceptions and attitudes toward inservice education in the State of Tennessee. This instrument has been developed as part of a study which I am helping to direct.

Your prompt attention to the questionnaire will greatly help the study. Many thanks.

Sincerely,

John T. Lovell, Professor
Educational Administration
and Supervision

JTL/mlw

March 26, 1981

Dr. Gordon Cawelti
Executive Director, ASCD
225 North Washington Street
Alexandria, VA 22314

Dear Dr. Cawelti:

As part of a doctoral research project of the Department of Educational Administration and Supervision at The University of Tennessee, Knoxville, a jury of experts has been identified in the area of inservice education. You have been selected to serve on this jury as a result of your expertise and experience in this area.

Enclosed is a questionnaire which has been designed to obtain perceptions and attitudes of public school teachers and administrators toward inservice education in the state of Tennessee. Please examine this questionnaire to determine how well it represents the intended content area. On the questionnaire or a separate sheet indicate any areas which have been omitted, areas which should be deleted, or areas which are not clear. Comments on the instrument construction would be helpful.

Thank you for your participation in this study. We would appreciate your response within the next five days. Enclosed for your convenience is a stamped, return addressed envelope.

After the study is complete, we shall be happy to furnish you a copy of the results if you desire.

Sincerely yours,

Vicki Dean

Zulette Melnick

Ed Smith

Enclosure

APPENDIX C

COVER LETTER AND FOLLOW-UP TO RESPONDENTS

April 16, 1981

Dear Colleague:

As you know, the State Department of Education has adopted a set of inservice education guidelines on a one year trial basis (1980-81). These guidelines will be revised based on feedback from the local education agencies.

As part of our doctoral research at The University of Tennessee, Knoxville, we are conducting a state wide survey of attitudes toward current inservice education practices. We would greatly appreciate your time in completing the enclosed survey within five days. Please return the survey in the attached self-addressed envelop.

The coding found at the top of the survey form is for control purposes only and will be used as a means to identify non-respondents for follow-up contact. No effort will be made to identify the respondents, the schools,nor the school systems in the study.

Sincerely,

Vicki Dean

Zulette Melnick

Ed Smith

DMS/mlw

Attachment

Dear Colleague,

HELP! You received a questionnaire on inservice education several weeks ago (4-20-81). Our records indicate you have not yet responded.

We really need your opinion to make the study truly reflective of Tennessee educators.

THANK YOU FOR YOUR TIME,

Dean, Melnick & Smith
Bureau of Educational Research
University of Tennessee
Knoxville, TN 37916

VITA

Charles Edward Smith was born on January 30, 1940, in Johnson City, Tennessee. He received his public school education in Johnson City and received his Bachelor of Science degree from Middle Tennessee State University in Murfreesboro.

After several years of teaching mathematics and science in both public and private schools, he completed the Master of Mathematics degree at The University of Tennessee, Knoxville, in 1973. While serving as Mathematics Coordinator for the Oak Ridge Schools, he continued to work toward the Doctor of Education degree at The University of Tennessee, Knoxville.

He received the Doctor of Education degree with a major in Educational Administration and Supervision in December, 1981, and was honored as the Outstanding Doctoral Student for 1981 in the department. While completing the degree, he continued his work as Mathematics Coordinator in the Oak Ridge Schools and taught mathematics part time at The University of Tennessee, Knoxville and Roane State Community College.